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THE PREVALENCE AND RECOGNITION OF DEPRESSION IN  
ELDERLY PATIENTS ATTENDING THEIR GENERAL PRACTITIONERS

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A thesis submitted for the Doctorate of Medicine,  
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Based on work carried out at the  
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## DECLARATION

The work presented in this thesis has not been published elsewhere. The author designed and executed the study alone, with advice and guidance from many, and with the assistance of 2 research assistants and a part-time secretary.



**SUMMARY OF THESIS**

This thesis reports an attempt to establish the prevalence of depressive states in elderly attenders at certain general practice surgeries, to examine the accuracy with which depression is recognised by general practitioners, and to throw light on the course of such states in this 'community' sample.

A discrepancy between age-related prevalence rates of non-psychotic disorders in patients admitted to hospital in the United Kingdom and those not admitted is reported from published data. Using depressive states as an example of this type of disorder, suggested reasons for this discrepancy are examined in the light of a review of the relevant literature- including the possibilities that prevalence declines with age, that older people are less likely to be in contact with general practitioners, that these disorders are less likely to be recognised by general practitioners in older patients, and that older patients with depressive states are less likely to be referred for specialist help and therefore admitted.

After consideration of various problems of method, a study of the prevalence of depressive states in 235 attenders over the age of 65 at the surgeries of 12 general practitioners is described. The prevalence of 'significantly depressed states' in this

group was determined as 30.6%, and 82.5% of those with such states were recognised as depressed by their general practitioners, although only 1 was referred to psychiatric care. These states were found to be highly correlated with consumption of psychotropic medication and rates of consultation with general practitioners, and one third of them persisted over a 9-month follow-up period, indicating their importance.

These results are discussed in the light of other work of a similar nature in younger age-groups, and it is concluded that the cost-effectiveness of efforts to improve general practitioners' rates of recognition of depressive states is likely to be limited, whereas efforts to improve selection for specialist referral would be more profitable, especially if improvement in outcome could be shown as a result of such intervention.

SECTION 2.

INTRODUCTION AND REVIEW OF THE LITERATURE

## 1) INTRODUCTION

### a) Definition

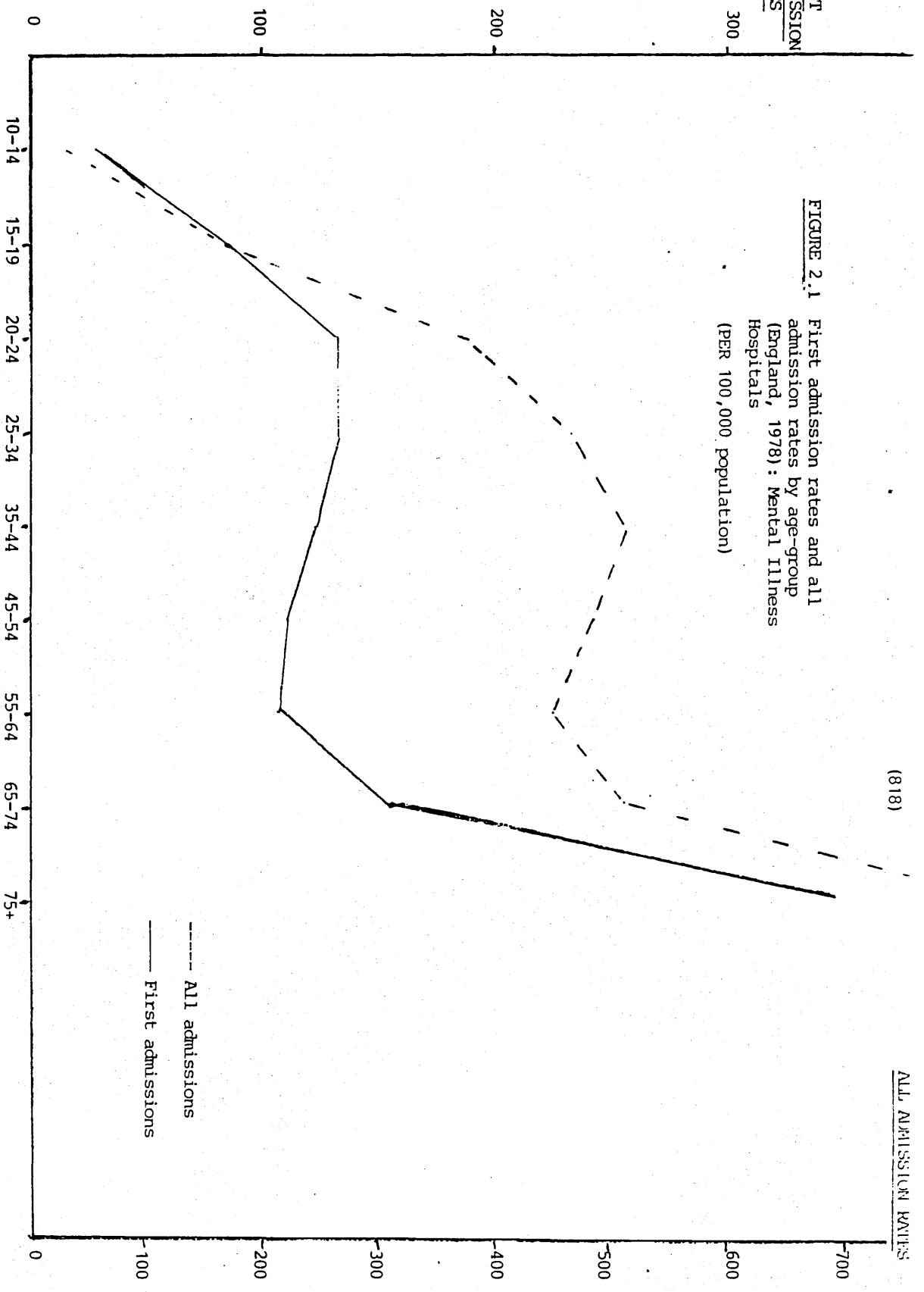
The term 'elderly' will refer, throughout this thesis, to those aged 65 and over. In the past decade there has been a growing reluctance to regard those aged 65-75 as categorically different, at least in terms of physical and psychological morbidity, from those aged 55-65. However, this distinction is reflected in most official statistics and much of the relevant literature, and thus is not challenged in this thesis.

### b) The importance of psychiatric disorders in the elderly

Psychiatric disorder in the elderly is a major public health problem in the United Kingdom. Despite a recent slight decline<sup>1</sup> the rate of admission to psychiatric hospitals in England in 1978 for those aged 65 or over was greater than any other age group - both first admission and re-admissions (Figure 2.1). The suicide rate for those aged 65 or more is almost twice that of those aged 64 or less<sup>2</sup>. The past two decades have seen a rise in the proportion of those

FIRST  
ADMISSION  
RATES

FIGURE 2.1 First admission rates and all admission rates by age-group (England, 1978) : Mental Illness Hospitals (PER 100,000 population)



(818)

ALL ADMISSION RATES

----- All admissions  
—— First admissions

Source: DHSS 4

aged 65 or more in the United Kingdom. Death rates for the elderly continue to fall - and the fall is most prominent in the group aged 75 or more. Anxiety provoked by an awareness of the changing age structure of the population is not new - in the 1940s a Royal Commission was established to examine the health policy implications of these changes- but increasingly strident calls for more realistic funding of the services for the psychiatrically ill elderly is a relatively recent phenomenon.

Those who call for increased attention to these problems emphasise, quite properly, the most disabling conditions such as the dementias and serious functional illnesses. These are the disorders which account for the bulk of elderly psychiatric in-patients and which may, as Christie<sup>3</sup> indicates, be 'pushing out' patients with other conditions, from the wards and day-hospitals into 'the community' (and the care of general practitioners), compared with 20 years ago. However, important as conditions which lead to admission or suicide are, they represent the suffering of a small proportion of those aged 65 and over in this country. Taking psychotic depression as an example, a crude estimate of incidence may be obtained from the first admission rates. In England in 1978, this was less than 0.02% of those over 65 at risk<sup>4</sup>.

If one accepts that suicide may reflect severe depressive states, then, again, despite being most common in those aged more than 65, it is a rare event, also occurring in less than 0.02% of the elderly population in 1980<sup>2</sup>.

In the past few decades there has been increasing interest in psychiatric disorder which does not reach the attention of psychiatrists. The importance of these states lies in their large prevalence: although there is a vast range of estimates, the consensus appears to be that between 15-25% of the population at any one time might be deemed a psychiatric 'case' (see Goldberg and Huxley<sup>5</sup>). Psychiatric admission statistics are seen as but a pale reflection of levels of morbidity in the community, being made up of only the most severe, outrageous or psychiatrically 'interesting' problems from the pool of what has been termed 'minor psychiatric morbidity'. A model of 'filters' has been put forward, describing the processes influencing the selection of patients that achieve psychiatric attention. If this model is as applicable to the elderly as it is to younger age-groups, then one might expect the prevalence of less dramatic psychiatric disorders in the elderly population at large to be considerably greater than that of younger age-groups, given their greater rates



of admission.

So it seems probable that there is a considerable prevalence of less dramatic psychiatric disorders in the elderly in this country, and there are grounds for considering that this prevalence may be greater than that in younger age-groups.

Evidence of this has been sought in a variety of ways: from analysis of admission rates by diagnosis, from studies by general practitioners of their elderly patients, and from studies of the elderly in the community at large. Unfortunately, considerable difficulties arise in the interpretation of these studies due to the nebulous nature of the conditions that are under scrutiny. For as soon as study of less dramatic forms of psychological impairment or distress is attempted, (for instance, in general practice), it becomes very difficult to reliably distinguish between different nosological categories, as well as between the 'normal' and the 'abnormal'. The former difficulty seems to be directly connected to the fact that taxonomies used in such studies are exported from hospitals, where they have been found useful, and applied to quite different populations. It is circumvented by the idea of 'caseness', but with a corresponding decrement of utility: the concept has

little heuristic value<sup>6</sup>. Furthermore, the idea leans heavily on the distinction between the 'normal' and 'abnormal'- a judgement which psychiatrists find difficult and, some argue, they are not competent to make (e.g. Birch<sup>7</sup>).

c) Depressive states as a 'marker' of minor psychiatric conditions in the elderly

The problem is eased if one confines one's attention to a relatively distinct form of psychological distress in the elderly. Depressive states- whether one calls them diseases, conditions, or syndromes, whether characterised as reactive, neurotic or unipolar, whether conceived as a continuum or as separate 'entities'- are widely recognised in elderly populations. It is relatively easy to distinguish between depressive symptoms and those of other forms of psychiatric morbidity- for instance, personality problems. Although there are a large number of methods for assessing the presence of depressive states, they are all similar, and there is a core of agreement as to what constitutes a depressive pattern of symptoms. Furthermore, as described below, the idea of depression, or at least its ancestor melancholia, has a long history and has been closely connected with ageing. This has had the

result that, long before psychiatric disorder in the elderly reached the dismal level of recognition it has now achieved, depressive states were singled out by investigators during studies of the medical aspects of aging.

The following section contains discussion of hospital admission statistics of non-psychotic depressive states, studies by general practitioners, and community studies. The review of surveys will be confined to those of populations in the United Kingdom, and those carried out since the institution of the National Health Service, because the main argument to be made is that the general practitioner's role is central to the understanding of the discrepancies which will become apparent. In terms of populations served, training and attitudes the remit of the modern general practitioner has changed markedly from his pre-1948 predecessor and, as yet, there is no direct equivalent in other countries. However, the starting-point for investigations into the domain of depression in the elderly is undoubtedly influenced by historical attitudes to this type of disorder, and a brief account of some of the more salient features may serve as an introduction to current ideas.

d) The development of present ideas about depressive states in the elderly

Willmuth<sup>8</sup> has demonstrated that the idea of a strong association between advancing age and mental illnesses -particularly affective disorders, is an old one. For instance, Galen (131 - 201 A.D.) saw melancholia as intrinsic to advancing age, and believed it to be most common among the elderly. Nicholas Robinson (1697 - 1775) wrote, of the melancholic temperament: 'people incident to this Constitution, naturally upon the Decline of Life, fall into the Hypochondrick Melancholy, if they have not had a Tincture of it before'. However, modern views have been profoundly affected by the notion that psychological disorders in old age are irrevocably linked to what would now be termed the dementias of old age. For example, Joseph Guislain was credited in the 1850's with the idea that mood disorders in old age were rarely unconnected with the process of dementia. Griesinger had no doubt of the 'general correctness' of Guislain's idea. In cases of senile dementia that did not seem to be depressed he claimed it was only apparently absent because of lower intensity. Victorian physicians began to understand depression in the elderly as a sign of impending dementia. Closely linked to this was the idea of

'degeneration'- occurring within individuals, as well as from generation to generation. This idea was used to explain the change from hypochondriasis into dementia as the individual grew older. By the end of the century the concept of 'senile melancholia' was established as a stage of organic deterioration presenting as depression in the elderly.

Kraepelin (1856 - 1926), both by careful clinical examination and historical detail as to course and family history, described melancholia as an illness found almost exclusively in aging persons - a condition growing out of feelings of inadequacy and failing vitality. He believed that the correlation between age and depression was due to life becoming harder and the individual less adaptable with age. Although he did not discard the idea that depression could be an early stage of senile dementia, he rejected the idea that it was necessarily connected. 'As we have known cases.... in which the manic depressive patients suffer no kind of psychic loss at all in spite of advance age, we must possibly always connect the appearance of a definite dementia of that kind with the addition of a fresh, more or less independent disease'. By dint of careful clinical and long term observation, German psychiatrists at the turn of the century began to establish the elements of

the modern view of depression in the elderly - that of high prevalence, and relative independence from dementia.

Interpretation of the waxing and waning of ideas connected with the modern concept of 'depression' in the elderly is made difficult not only by the inevitable semantic and cultural problems but also by the sort of bias that commentators from Galen to Kendell have, with occasional exception, ignored: the bias that arises from the access of the observer to a peculiar population. For instance, the basic theories of the late 18th and early 19th centuries indicated that strong passions led to melancholic insanity, and melancholia was the first stage of all insanity, chronic insanity degenerating into dementia. The passions - strong emotions such as love, hate, jealousy and ambition, were considered precipitating causes of melancholic insanity. Old people, being beyond passion, and therefore beyond the danger period for melancholia, were less and less regarded as suffering from it. Pinel in 1806 cited the high percentage of 20 to 40 year old patients admitted to the Bicêtre as evidence for the 'known tendency to mental derangement at those periods of life which are most exposed to the instruments of strong passions'. Esquirol likewise reported that melancholia was rare

or absent in the aged.

So to decide whether the shifts in reports of the relationship of age to what is nowadays understood by 'depression' are the result of this and other types of 'bias', semantic or cultural changes, or 'real' changes (for example, commensurate with the increasing expectancy of life in industrial societies, or related to exposure to causal factors) is probably impossible.

e) Present concepts of depression in the elderly

In the middle of the twentieth century, ideas about psychiatric disorders in general began to divide between those loosely held by practising psychiatrists, and those arising from the need, born of more sophisticated research enquiries, to apply rigorous criteria to representative samples of the population.

i) Clinically orientated concepts

As a starting-point, the psychiatrist interested in the problem of depression in the elderly takes into this field all the paraphernalia of long-dead conflicts from the academic arenas of the past.

'Neurotic' and 'psychotic', 'unipolar and 'bipolar', 'endogenous' and 'exogenous', -as ends of something called a 'continuum' or as discrete 'disease entities' - each psychiatrist incorporates these distinctions, more or less idiosyncratically, into a mysterious m $\grave{e}$ lange. To this is added the old idea that the elderly experience specific disorders not found in younger age-groups. The 19th century idea of senile melancholia as a prelude to dementia, for instance, is still a potent influence, either held in pure form, or as a stimulus to an enduring reaction to it. Accepted, more or less, until the middle of the 20th century, enshrined in the International Classification of Diseases, it was challenged by the apparently dramatic effects of new treatments for depression in institutionalised patients. A period of optimistic energy dawned, fuelled by Post's studies on inpatients<sup>9</sup>, leading to great efforts to distinguish the two conditions, based on the now apparent difference in outlook between affective psychosis and dementia. It is this distinction in the elderly patient which pervades current clinical opinion. This optimism, of course, may have been related to the remarkable change, at least in the United Kingdom, in the clientele of clinical psychiatrists at the same time. The first out-patient clinics were appearing, and psychiatrists were exposed to many more



individuals, and to conditions of which they had no previous experience. But they also saw many of the less severe cases of conditions previously familiar to them, and this may well have influenced their optimism about depression, and the subsequent preoccupations with distinctions from the dementias. Recently, however, Jacoby and Levy<sup>10</sup> have found a group of depressed patients with cerebral atrophy, despite no signs of dementia, with a high mortality rate- perhaps an indication that this tide in clinical opinion may be starting to ebb.

ii) Academic concepts

Andreason, Grove and Mourer<sup>11</sup> have reviewed the areas of dissent in the classification of depression as a whole, as a prelude to a discussion of the contribution of mathematical taxonomies. They point to the distinction between the concept of depressive disorders as a single phenomenon with varying degrees of severity, and that of a group of two or more discrete illnesses with differing courses, prognoses, responses to treatment, familial backgrounds, aetiology, and clinical pictures. There are distinctions between differing views of the boundaries between depressive disorder and other conditions, such as anxiety states, schizophrenia, personality

disorders and "normality"- conditions whose own boundaries are hardly agreed. On a general note, they indicate a lack of consensus as to which of a variety of proposed criteria constitute adequate validation of any nosological class- genetic factors, outcome, response to treatment, or neurochemical or neurophysiological markers.

In their review of attempts to apply multivariate statistics to the problem of developing a classification of depressive disorders, they state that "most investigators agree that cluster analysis is the most appropriate method for developing classificatory systems ex nihilo". They highlighted the similarities between their own study, and others which have used 'cluster-analysis' rather than 'factor-analysis'<sup>12,13,14</sup> . Each distinguished 3 or 4 groups, and all have distinguished a group that roughly correspond to the clinical labels 'endogenous' or 'psychotic'. However, there was less agreement about the others. The authors implied that the fact that each of the studies had produced 3 or 4 groups indicated some inherent validity- yet it is obvious that serious selection bias (all the subjects in all the studies were in-patients) was at play, thus explaining the cohesion of the studies on the cluster of serious depression, and the lack of consensus on

the others. Furthermore, despite their disclaimer, the choice of methods of mathematical taxonomy, of discriminating variables, of mathematical measures of distance between groups, and the decisions as to the 'cut-points' on such measures is by no means agreed<sup>15</sup>. From a firmer epidemiological base, Gurland<sup>16</sup> has also examined the position, in a discussion of the age distribution of depression. He surveyed the research evidence in terms of the operational definition of depression, the detection and measurement of levels of depression, and, most importantly, the selection of the population that was studied. He distinguished between two sorts of assessment: those based on diagnosis and those based on symptoms. He pointed out that research diagnoses of depressive disorders by psychiatrists were, by and large, more frequent in subjects between 25 and 65 years of age, whereas studies in which symptoms (not necessarily assessed by psychiatrists) were the material for analysis, the highest rates of depression are to be found in the oldest age group - above 65 years of age.

Gurland was unable to resist the temptation to produce a classification of depressive states in the elderly, but of particular interest is his fourth category: depressive symptoms or symptom clusters. The inclusion of this category has as its source the

conviction that any, even ad hoc, classificatory system should be capable of allowing subjects from all populations to be assigned to a category if any light is to be shed on the nature of the disorder rather than the "careers" of patients in the health care system of the day. It follows that systems derived from the study of inpatients, or even out-patients, are inadequate, and yet even Kendell<sup>17</sup>, while acknowledging this, failed to distinguish between these studies and those of the population at large in his well-known review of the classification of depressive disorders. Unless one has an extraordinary grasp of the complex interaction of the social forces, demographic trends, and administrative systems that govern changes in the sorts of patients that are to be found in institutions, comparisons of different in-patient studies at relatively short intervals are of limited value in illuminating the nature of depression itself. This continues to be ignored- see, for instance a recent discussion on the classification of depressive conditions<sup>18</sup>.

## 2) THE PREVALENCE OF NON-PSYCHOTIC PSYCHIATRIC DISORDERS AS REFLECTED IN ADMISSION STATISTICS

If the ratio of severe to less dramatic psychiatric disorders is similar across all ages, then one would expect that the excess rate of elderly patients admitted to psychiatric units would reflect an equivalent excess of the less prominent conditions. However, if all conditions not diagnosed as 'psychosis' or dementia are removed from the admission statistics, then the relative rates of admission for different age-groups appear very different (see Figure 2.2). It would appear that the excess rate of admission of the elderly is entirely made up of serious disorders, especially the dementias. Of course, one cannot ignore the cavalier nature of the methods whereby official diagnoses are recorded for such tabulations, but if this alone was to explain the discrepancy one would have to suggest the operation of a very powerful differential bias related to age, rather than the more likely circumstance of a tendency to high, non-specific, casual 'error'-rate. Every indication from careful study of elderly admissions is that, in fact, there is a preponderance of serious illness. (For a review of this as a problem, see Christie<sup>3</sup>.)

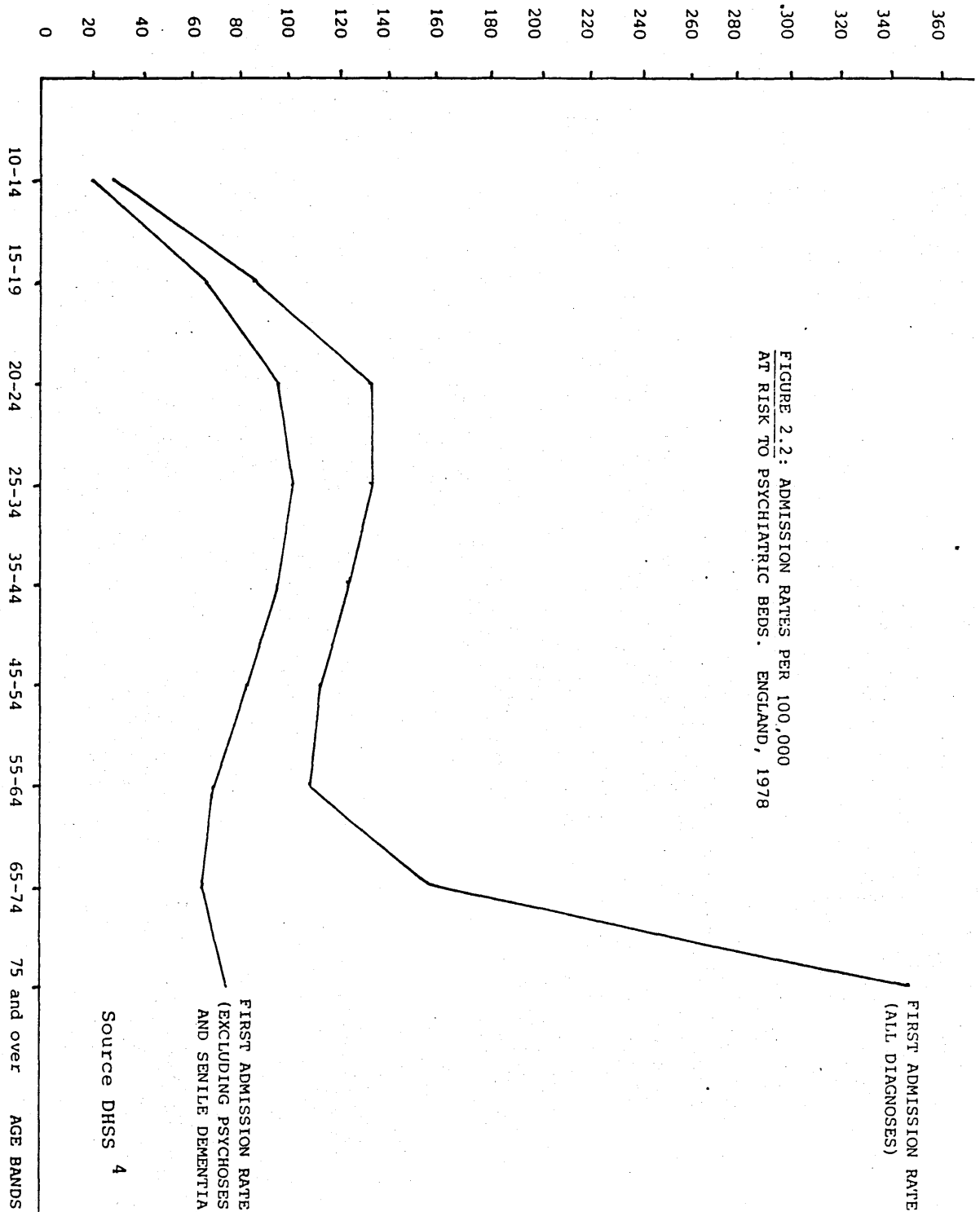


FIGURE 2.2: ADMISSION RATES PER 100,000 AT RISK TO PSYCHIATRIC BEDS. ENGLAND, 1978

Source DHSS 4

Accepting that this is a very crude indication of a discrepancy, there appear to be two explanations: either the rate of 'milder' or less dramatic psychiatric disorders in the elderly is actually lower than that of younger age-groups, or the rate is as high, or higher, but is not manifest in admission to hospital. Examination of studies carried out outside hospital- in 'the community' or in general practice- using depressive states as a marker where possible, might serve to clarify the relative likelihood of these possible explanations.

### 3) STUDIES OF PSYCHOLOGICAL DISORDER IN THE COMMUNITY ELDERLY

These studies have been carried out with many different methods of identification of disorder—unstructured or systematic psychiatric interview, questionnaire or diagnosis by general practitioner—and, inevitably, concomitant problems of interpretation arise.

Sheldon<sup>19</sup> undertook, in 1948, a medical survey of patients who had been enrolled in a large study of the elderly at home in Wolverhampton. He studied men aged 65 and over, and women aged 60 and over, obtaining his sample from the Wolverhampton Register of Ration Cards. Every thirtieth card was selected from the files, and if the date of birth fell within the prescribed limit, that person was sampled. 583 names and addresses were collected; 186 men and 397 women. 477 interviews were carried out successfully. 13 of these were of a spouse of a subject who had died. A further 21 died without any opportunity for information, 22 moved away, 17 could not be contacted and there were 13 refusals. Two subjects were too demented for interview. The degree of mental impairment was assessed by a questionnaire designed by Aubrey Lewis, and it reflects the taxonomic



preoccupations of the time. It enabled the subjects to be categorised into five classes ('fully normal', 'faculties slightly impaired', 'forgetful, childish - difficult to live with', 'demented - very difficult to live with', and, finally, 'eccentric in habits but otherwise intelligent'). The assessment of mood was categorised as either "Contrary, cantankerous", "Outbursts of temper", "Often terrified, scared", "Resentful, suspicious", "Miserable, depressed", "Dislikes being left alone", "Easily moved to tears or laughter", or "Normal". 9 men and 69 women were categorised as "miserable, depressed", representing 16.3% of the sample. There was a relationship between the tendency to this symptom and the higher ratings of mental impairment. Sheldon felt that depression was a state of mind to which old people were peculiarly subject, for even among the "fully normal" approximately 10 per cent were liable to attacks of depression.

In 1962 Meyrick<sup>20</sup> published the result of a questionnaire survey he carried out in his urban general practice. Of a list of 3,000, he found 461 (15.3 per cent) were over the age of 65. He sent them a questionnaire on social and medical items, and, he obtained a response rate of 86.1 per cent. In a rather idiosyncratic way, he analysed the response to

the questionnaire and pronounced that 5.5 per cent could be regarded as suffering from 'psycho-neurotic disorders'.

In 1964, Kay, Beamish and Roth<sup>21</sup> reported the study in which 1,780 names had been selected at random from the Electoral Roll at Newcastle-upon-Tyne. A letter was sent to each one, asking if they were over the age of 65. Only 23 (1.3 per cent) of this sample could not have their age assessed. 309 subjects over 65 were then randomly sampled from those who qualified. 6 refused interview, and 12 were excluded because they were in institutions. 291 subjects were thus interviewed in 1960 by a psychiatrist. A consensus clinical classification was used, and the workers found a point prevalence rate of 10 per cent for organic conditions, and 26 per cent for affective disorders and neuroses combined. The majority of subjects considered to be psychiatrically ill fell into the group of "minor functional disorders". About 20 per cent of these were considered to be new cases of recent onset, whilst the remainder were considered to be due to a recrudescence of long standing personality traits.

Also in 1964, Williamson and his colleagues<sup>22</sup> published the result of their well-known survey of old

people at home. The research team included geriatric physicians and a psychiatrist, and they took a random sample of people aged 65 or more on the lists of three general practitioners in Edinburgh. Of those approached for interview 'some' were already dead or had left the area, and a further 59 could not participate, including one who was closely related to the research psychiatrist. 200 subjects were examined by a clinical examination, and a screening interview by the research psychiatrist. This consisted of a semi-structured interview, and brief psychological testing. Taken together they estimated that the prevalence of neurosis and depression in this group to be 27 per cent. Of this number of psychologically unwell elderly, 66 per cent were unknown to their general practitioner. Unfortunately, those who refused and were not examined were disproportionately more likely to be single or widowed women and this may well have affected their result.

Parsons<sup>23</sup>, in 1965, randomly sampled 381 names of those aged more than 65 from the Electoral Rolls of Swansea. He took a further random, sample of 271 from these. Of these, 228 (84.1 per cent) agreed to an examination at an unheralded home visit. A psychiatric history was taken, and the Paired Association Learning Test and the Maudsley Personality

Inventory were also given. No specific diagnosis of depressive disorder was made, but, on a 5-point scale of 'neurosis' 34 (14.9 per cent) scored 4 or 5.

Parsons stated that, of the 9.2 per cent of persons who were markedly handicapped by psychiatric conditions, the general practitioner was aware of approximately half. He estimated that, for every person aged more than 65 in hospital at that time, with serious psychiatric disorder, 10 were living in the community with equivalent levels of disability.

Freedman et al<sup>24</sup> carried out a pilot study preparatory to a major survey of the elderly on the lists of a group practice of 9,000 patients. In the main survey, of the 1,098 patients aged more than 65 on the lists, 682 were traced, and not already examined in the pilot study. These were asked to fill in a 9-page self-rating questionnaire including a psychiatric scale, and were then given a medical examination. Only two cases of 'depression' were disclosed by this procedure, representing a prevalence rate of 0.3 per cent.

In 1976, research teams based at the Institute of Psychiatry in London and Columbia University in New York carried out a comprehensive survey of a random sample of elderly people living at home in both

cities<sup>25</sup>. Of the 448 elderly interviewed in London, 13% were found to be suffering from a significantly depressed state, an assessment made on the basis of a consensus incorporating face-to-face psychiatric diagnosis, and the scores on the depression items of the 'Comprehensive Assessment and Referral Evaluation'- an extended version of the 'Geriatric Mental State' schedule.

#### Conclusions from studies of the UK elderly in the community

Of these studies, the two indicating the lowest prevalence<sup>20,24</sup> were those which used questionnaires rather than interviews to assess the presence of depressive or related states. In neither case was there any attempt to ensure that the questionnaire bore any relationship to then current concepts of depression, probably because the surveys involved were not primarily designed for the study of psychological problems in the elderly.

Otherwise, the evidence reviewed suggests that there is a substantial number of elderly people in the community suffering from depressive states of one sort or another: between 13%<sup>25</sup> and 27%<sup>22</sup>. Low rates of admission of the elderly with non-psychotic depressive

states to hospital cannot be explained by low rates of disorder in the community. The remaining explanations are that the depressed elderly do not come to the attention of the primary care services- particularly general practitioners- or that their depression is not recognised by general practitioners, or that they are not referred for hospital care even if depression is recognised. To examine the first of these, studies of the prevalence of depression in the elderly, made by general practitioners are reviewed.

#### 4) STUDIES OF 'CONSPICUOUS PSYCHIATRIC MORBIDITY' - AS PERCEIVED BY GENERAL PRACTITIONERS

The essence of these studies is that the ascertainment of morbidity is made by general practitioners themselves, and the population under scrutiny are those elderly under their care- that is, those with some sort of health problem.

Logan and Cushion<sup>26</sup>, in 1958, published some of the results of the first National Morbidity Study carried out in general practice. As indicated by general practitioners, the total rate of consultation for 'mental, psychoneurotic and personality disorders' was 0.13% for patients aged between 0 to 15, 0.60% from the ages of 15 to 45, 0.67% for those aged 45 to 65, and 0.48% for those aged 65 and over. However, another category, 'symptoms, senility, and ill-defined conditions' showed a distinct predominance, as one might expect, in elderly patients. 'Depression' showed no differential rate of consultation by age.

One of the pioneers of the study of psychiatric morbidity in general practice, Kessel, introduced the concept of 'conspicuous psychiatric morbidity' in 1960<sup>27</sup>. This was defined as attendance at a general practitioner for one or more illnesses in which an

important psychiatric component had been detected by the general practitioner. It was considered that there were three modes of presenting psychiatric morbidity in general practice: some patients pointed the way explicitly, by complaining of psychological distress, some patients presented somatic symptoms which could not be adequately explained by physical illness, and, thirdly, some patients demonstrated psychological reactions to indisputable physical illness that were in some way abnormal. The team with whom he worked randomly sampled all patients over the age of 15 years in a London general practice, and monitored all attendances, for preventative or administrative purposes as well as clinical problems, at the surgery. Routine antenatal, or postnatal attendances were omitted. Of the 911 adults, 253 males and 367 females attended during the year. Each patient who consulted the doctor was the subject of a discussion between the psychiatrists and the general practitioner, during which the case was examined in detail. Excluding those with abnormal personality, he found that the prevalence rate, in attenders, of conspicuous psychiatric morbidity rose in mid-life and fell after the age of 60. The overall prevalence of psychiatric morbidity as a percentage of all attenders in the study year was 14 per cent. As a percentage of all registered, it was 9 per cent.



Watts<sup>28</sup> studied the general practitioner diagnosis in 261 practices, with a population list of 1,007,720. Aggregating many diagnostic categories as 'mental disablement' he showed a continuous rise in the prevalence, as indicated by general practitioners, with age. Although overall rates were low, at almost all ages females showed a higher prevalence than males. For instance, in the age range 75 plus, females had a rate of 1.6 per cent and males a rate of 1.05 per cent. The diagnostic categories were those of major psychiatric disorders: senile dementia was the most common diagnosis in this group, accounting for 32.8 per cent of the morbidity. 'Manic depressive depression' accounted for 31.5 per cent, whereas 'anxiety states' accounted for 10.1 per cent.

When Shepherd et al reported some of the findings of their large scale survey of psychiatric morbidity in general practice in 1964, they paid particular attention to four aspects of their study: the selection of doctors, the recording and classification of psychiatric disorders, the estimated prevalence of and distribution of psychiatric morbidity, and the problem of inter-practice variation in reported morbidity rates<sup>29</sup>. They carried out a survey in 46 practices of 80 general practitioners in Greater

London. They were unable to secure the agreement of sufficient numbers of a random sample of general practitioners. They therefore used volunteers, hoping to secure as representative a group as possible. They also attended to the problem of recording and classification. The standard classification of psychiatric morbidity available at that time was notoriously unsatisfactory for the minor disorders which bulk so large in the G.P. case load. They therefore evolved a classificatory system unique for that survey. This consisted of two main groups - formal psychiatric illness, and psychiatric-associated conditions. Distinction was made between physical illnesses and symptoms, and the idea of psychological mechanisms being important in the cause of the condition, versus that of the elaboration of physical disorders for psychological reasons. There was an additional category for other psychological social problems. This comprised cases where the patient manifested transient psychological disturbance not amounting to illness, related largely to social or inter-personal difficulties for which medical help was sought. The general practitioners accepted this system of classification, and they were the sole arbiters in the choice of appropriate categories. This, then, was a study of 'conspicuous psychiatric morbidity'.

The overall result of the study was that, in 1,500 patients on the lists of 80 general practitioners over a year, minor psychiatric disorders were diagnosed in 14 per cent of the population at risk, by their general practitioners<sup>30</sup>. The authors concluded: "Neurotic illness was most prevalent among middle aged females and proved to be an important cause of chronic illness." When analysed by age, the patient consulting rate for psychiatric morbidity showed peaks at 30 to 40, and 50 to 60 years of age. The latter peak was found to be related to an accumulation of chronic cases - the highest rate of 'new cases' was between the ages of 30 and 40. There was no indication that the prevalence in attenders of conspicuous psychiatric morbidity was higher in those aged 60 or over - in both all and new cases it was lower than in the middle years.

As part of a controlled trial of imipramine in the treatment of depression in general practice, Porter<sup>31</sup> examined 93 consecutive cases of depressive illness in a Surrey general practice. Refreshingly, he made no attempt to categorise the type of depression: patients were admitted to the study when they suffered from a sustained affective illness in which depression of the mood was prominent. In addition, he did not attempt to exclude patients who

had symptoms of anxiety. However, he excluded those patients with extreme anxiety, phobias and somatic symptoms who would not admit to any depression of mood. Somewhat uncharitably, he commented on his own procedure as 'conventional, probably illogical, and certainly arbitrary'. The diagnosis of depression was made by the author himself. Of the 93 patients so selected, 79 (85 per cent) were women. He found the age distribution of women with depression was comparable with the age distribution of women in the practice as a whole: thus he concluded that there was no support to any idea that depression was more common in older patients.

The Royal College of General Practitioners, OPCS and DHSS collaborated in the second National Study of Morbidity in General Practice<sup>32</sup>. The diagnostic schema used was that produced by the Royal College, closely related to the International Classification of Diseases (8th revision). In the year of study (1970 to 1971) a total of 196,262 patients consulted at the 54 practices involved in the study. The prevalence of 'mental disorders' as a whole, as reflected in the rates of consultation per 1,000 population, was highest in the age range 45 to 65 years of age. The rates for affective psychoses and depressive neurosis were also highest in this group. Senile and

pre-senile dementia, organic psychoses, and 'insomnia' were the only 'mental disorders' which had a higher prevalence in old age.

Conclusions from studies of 'conspicuous psychiatric morbidity' in the elderly

Without exception, these studies have indicated no excess of depressive, or 'neurotic' states in the elderly, as compared with younger patients. Furthermore, those which have given some indication of prevalence suggest rates which are far lower than those produced by the community studies reviewed above. This would suggest that either the elderly with psychological disorders are not in contact with their general practitioners, or that their disorder is not recognised by general practitioners.

Some indication that the former is not the case comes from a survey described by Harwin<sup>33</sup>. District nurses attached to a convenience sample of general practitioners in London were asked to complete questionnaires on all the elderly patients under their current supervision- all of these patients were referred by general practitioners. Of the 165 patients cared for by four nurses working in liaison with 11 general practitioners, 75 per cent were over

65 years of age. All patients reported by the district nurses as showing psychiatric symptoms were interviewed, in addition to 34 of the 80 reported as normal. The psychiatric assessment was an early version of a Clinical Interview Schedule, designed for the assessment of psychiatric disorder in community settings<sup>34</sup>. This was adapted for psychogeriatric use, and included various cognitive tests. All 44 patients reported by the district nurse as showing psychiatric symptoms were subsequently confirmed, at interview, to be psychiatric 'cases'. In all, treating the district nurses as psychiatric screening instruments (the criterion being the Clinical Interview Schedule) they did remarkably well. The sensitivity (proportion of 'true' cases correctly identified) was 91.6 per cent and their specificity (proportion of 'non-cases' correctly identified) was 100 percent. Harwin indicated that there was a strikingly high psychiatric morbidity amongst this group of patients: his minimum estimate was 38 per cent as suffering from a formal psychiatric diagnosis classifiable by the International Classification of Diseases. Two thirds of this morbidity was considered to be functional neurotic disorder and, in all, 30.7 per cent of the sample were found to be suffering from a depressive disorder.

On the other hand, the idea that general practitioners are insufficiently aware of psychological problems in their patients, even when confronted by them, has attracted Goldberg and his team<sup>35</sup>, who have emphasised the distinction, in general practice, between 'conspicuous' and 'hidden' psychiatric morbidity, as revealed by a combination of the General Health Questionnaire (GHQ) and Standardised Clinical Interview. Unfortunately, the use of self-rating questionnaires in the community elderly is in its infancy, and it is not possible to be confident about the use of the GHQ for study of depression in the elderly.

The final explanation of low rates of hospital admission of the elderly with non-psychotic disorders is that there is a low rate of referral of these patients, as opposed to younger patients with similar disorders, to specialist services by their general practitioners. This has received no direct attention in this country, but two studies that allude to this topic are now considered.

## 5) RATES OF REFERRAL BY GENERAL PRACTITIONERS

In answer to the question "do general practitioners have different 'referral thresholds'?", Cummins, Jarman and White concluded, from a study of a London general practice, that they did<sup>36</sup>. Details of every consultation from 1974 to 1978 were analysed, and a referral rate expressed as referrals to hospital outpatient departments per 100 consultations were analysed in terms of age, sex, social class, diagnosis, occupation group, and a number of other variables. After standardisation for age, sex and marital status there was a considerable effect of social class - an inverse relationship between social class and rate of referral. Referrals for all diagnoses peaked in the decades 20 to 30 and 30 to 40, and they declined thereafter. They were only able to analyse differential rates of referral by diagnosis for problems which occurred with sufficient frequency. Amongst these was the diagnosis 'neurosis'. Again, they found marked and significant differences between the five doctors in the practice both before and after standardisation for age, sex, and social class. However, the authors were primarily interested in the difference between doctors, rather than between different patient age-groups.



Rawnsley and Loudon examined the factors influencing the referral of patients to psychiatrists by general practitioners<sup>37</sup>. They studied 8 general practitioners in Wales, serving a population of 27,000. They enumerated all patients referred directly to mental health services by each doctor or partnership, and conducted a structured interview with each general practitioner about his attitudes to the local mental health service. They included referrals that were indirect - for instance, via other hospital departments. They found considerable variations in the rates of referral; they could not explain this by any of the demographic characteristics of the population served by each general practitioner. In particular, there seemed to be no relationship between the patient's age - when divided between those aged under 40 and those aged 40 or over - and rate of referral to the psychiatric services. They did not attempt to correlate the results of interview of individual general practitioners with the differential rates of referral.

## 6) CONCLUSIONS FROM THE REVIEW OF THE UK LITERATURE ON DEPRESSION IN ELDERLY PATIENTS

This review has examined four possible explanations- by no means mutually exclusive- of the low U.K. admission rates of elderly patients with non-psychotic disorders as compared with younger patients, using, where possible, depressive states as a 'marker' of these conditions.

The first possibility- that the prevalence of depression in the community elderly is lower than in younger people- cannot be supported by the evidence from interview studies.

The second- that the elderly with depression are less likely to consult their general practitioners than younger patients- has received no direct attention, but Harwin's study suggests that it is unlikely<sup>33</sup>.

The third possibility- that depressive states in elderly patients who are in contact with their general practitioners are 'missed' more often than in younger patients- has, again, remained unresearched. The 'missing' of minor psychiatric morbidity in younger patients is now accepted as a problem, but if the low

rate of admission of elderly patients reflects a yet lower rate of recognition still, then this would represent a much more serious problem in this age-group.

Similarly, evidence for the fourth possibility- that even when recognised as depressed by their general practitioners, elderly patients are less likely to be referred for specialist care than younger patients- is scarce. Given the very low rates of referral of younger patients with psychiatric disorder<sup>29</sup> referral rates for the elderly with depression would have to be very low indeed to account for the discrepancy in admission rates.

Shulman and Arie have pointed out a recent fall in the admission rate of old people to psychiatric hospital care<sup>1</sup>. Of the various explanations that they suggested for this trend, they preferred the idea that psychiatrists were becoming increasingly reluctant to admit patients to hospitals, largely because of inadequate provision of services. If they are correct, and if this trend is true for psychiatric disorders other than the dementias, it is clear that the general practitioner's role is likely to become even more important in the management of the less 'dramatic' forms of psychological disorder in the

elderly than it is at present. To strengthen the general practitioner's role is a matter of urgency: yet, as this review suggests, there are large gaps in our understanding of psychiatric disorders in elderly patients in general practice.

The choice of how best to strengthen general practice requires that some of these gaps be filled. A number of pertinent questions arise:- for instance, on the assumption that there is a high prevalence of depression in the community elderly, should screening programmes be instituted to detect depressive states in elderly patients who are not in contact with their family doctor? Should methods be developed to assist the doctor in recognising depression in elderly patients with whom there is contact? Finally, should methods be developed to assist in the selection from elderly patients, recognised by the general practitioner as depressed, of those for whom specialist (medical or non-medical) referral would be of most benefit?

Some progress towards examination of the relative merits of these approaches to the problem would be afforded by a study of the prevalence of depressive states in elderly patients in contact with their general practitioners, together with assessments of

the rate of recognition of these states by general practitioners, and the assessment of outcome, especially the enumeration of referral rates.

Such a study is described below, but certain problems of method are first considered.

SECTION 3.

PROBLEMS OF METHOD

## PROBLEMS OF METHOD

### Introduction

The preceding review of the literature on depression in old age in general practice has indicated several important problems of method for any one wishing to study this field- particularly in the choice of population and choice of assessment. There are, however, further, equally important issues which have hitherto been neglected. These are now considered in more detail.

1. The assessment of depression in elderly patients in general practice. This includes such problems as the nature of depression in elderly community subjects, the issue of 'caseness', the distinction between a syndromic and disease-orientated approach, the validity and reliability of any chosen assessment, and the distinction between depression and dementia in old age.

2. The assessment of the recognition of depression by general practitioners. This includes the 'sensitisation' of general practitioners to the condition under study by virtue of the presence of the research procedures in the practice, and the problem

posed by general practitioners, who, whilst refusing to avow depression in their patients, prescribe antidepressants.

3. The assessment of outcome. This includes the problems of gathering data on use of resources, as well as difficulties in the assessment of patients over time.

4. The sampling method. This includes the relative numbers of general practitioners and subjects, and the practical problems of sampling in general practice settings.



# 1) THE ASSESSMENT OF DEPRESSION IN ELDERLY PATIENTS IN GENERAL PRACTICE

## Introduction

The word 'depression' (or a derivative) is, of course, in constant lay use as well as being banded about by psychiatrists. Ironically, it is in its lay use, as a description of unhappiness or discontent, that the word has its clearest meaning. This can be contrasted with the picture painted by Fish of the semantic chaos that surrounds this word in professional use<sup>38</sup>.

Given, however, the requirement of a means of assessment suitable for use in a sample of elderly attenders in general practice, there are practical constraints to be satisfied before consideration of the theoretical issues that this confusion hides.

## Practical Constraints

There are certain over-riding requirements of any assessment of depression chosen for a survey of elderly attenders in general practice. First, it cannot take up too much of the subject's time. The method demands assessment immediately after the

consultation with the general practitioner, often after the subject has experienced considerable delay prior to the consultation. Secondly, it should be acceptable to the subject despite its brevity- certain assessments of cognitive function, for instance, can be found offensive by elderly subjects without lengthy introduction and explanation. Thirdly, it should be feasible for an elderly sample- there exist, for example, insufficient data on which to base any confidence in the ability of such samples to complete self-administered questionnaires. Fourthly, it should be capable of use for those without specialised medical education- quite apart from the financial implications of this point, this is necessary for future development of the assessment measure as a means of assisting the recognition of depression by general practitioners.

These constraints indicate the need for a brief, rater-administered assessment. The format of such assessments can be described as either unstructured, semi-structured or structured, reflecting the degree of compulsion applied to the rater, with attendant gradations of the likelihood of acceptable levels of validity and inter-rater reliability, discussed later in this section. A fifth constraint arises from this- the fact that the use of more than one rater in the

study demands high levels of inter-rater reliability, more likely to be achieved by semi-structured or structured interview.

Some of the issues in the choice of such an interview are now discussed further- the definition of depression, the question of categories and dimensions, and the relevance of current interviews to elderly subjects.

a) Definitions of Depression

For the purposes of this thesis, it seems helpful to define the various uses of the word 'depression' in the following way:

1. Depression as a symptom. By using the word in this way, one is describing depressed affect as a phenomenon, distinct from other phenomena, and not confined to any specific duration. Thus the word may equally apply to the unhappiness caused by a traumatic farewell, grief, a downswing of the labile mood in dementia, or the mood in more prolonged states.

2. Depression as a syndrome. Used in this way, depression describes a symptom cluster or pattern of phenomena, of which depressed mood is usually one.

Implicit is a sense of duration: syndromes are not fleeting, random mixes of phenomena, but more predictable, and lasting more than a few days.

3. Depression as a disorder. In this way the word is used to describe a syndrome of depression, co-existing with impairment of function - either social, psychological, or physical- implied by the term 'disorder'. Used in this way, the word depression implies a duration of longer than a few days.

4. Depression as a disease. Used in this way, depression implies a disorder which is prolonged, (that is, more than a week or so), with a recognisable course, outcome and response to 'treatment'.

The following discussion of this issue will be confined to the use of the word to imply disorder or disease.

When considering the literature on depression a further, important qualification emerges- that of the distinction between depression as a continuum of severity, and depression as a category. An excellent example of this sort of distinction is to be found in the discussion of that between 'neurotic' and 'psychotic' depression. There is a view, held by

workers like Kay, Roth, Carney, Garside and Kerr, (the 'Newcastle Group'), which regards the distinction between patients diagnosed as suffering from 'neurotic' depression and those diagnosed as suffering from 'psychotic' depression as categorical, and that overlap in the symptomatology between the two groups as more the result of inadequacies in differential diagnosis than the presence of any continuum. The contrary view, the so-called 'severity hypothesis' holds that the distinction between patients with these two diagnoses is one of severity and that these diagnoses represent different parts of a continuous distribution. This view is held by George Brown and his colleagues, and is the modern equivalent of views originally expressed by Lewis and Mapother<sup>17</sup>. At present, the controversy seems to be centred on the place of modern multivariate analytic techniques (factor analysis, discriminate analysis, cluster analysis, etc.) as generators of evidence for and against the two positions- are they the only way forward for psychiatric taxonomy or merely a lazy substitute for lucid thought? Even on the assumption that they have a place at all, there is no consensus about the right sort of multivariate technique to use in order to disentangle this problem, and even when one particular method - discriminant analysis - is accepted by both sides, there is disagreement about

the sort of variables that should enter into the analysis.

The fact that all the arguments, complex analyses and re-analyses of the data are based on a small number of studies, of small numbers of in- and out-patients, in psychiatric hospitals, in different parts of Britain and even in the United States, over a period spanning approximately 30 years, tends to undermine both positions. For, as has been argued earlier in this thesis, the selection of people from the community or admission to an inpatient unit for referral to an outpatient department is governed by complex social and demographic effects which, at the very least, are very difficult to analyse.

By way of illustration, over the period of these studies, in the United Kingdom, the general practitioner has been the primary 'route of access' to specialised psychiatric care. His or her diagnostic practice has a profound effect on the selection of people for referral. In the second National Morbidity Survey in General Practice, great differences in diagnostic habits between practices in different parts of the country were found<sup>32</sup>. Patient consulting rates per 1,000 population for the diagnosis of all psychoses ranged from 19.9 per thousand in the north

to 3 per thousand in the West Midlands. The equivalent figure for depressive neurosis varied from 42.8 per thousand in East Anglia, to 27.4 in Yorkshire and Humberside. Of course, these figures are unlikely to represent real differences in prevalence - they more probably reflect the great variation in diagnostic habits between general practitioners (as shown, for example, by Jenkins et al<sup>39</sup>). This finding, coupled with possible differences in the 'referral threshold' between G.P.s <sup>36,37</sup>, explains most discrepancies between inpatient studies carried out in different parts of the country.

The trend towards the study of subjects in the 'community'- that is, those who have not sought specialised psychiatric help- represents an awareness of this fundamental difficulty. However, here a new problem arises- the problem of 'caseness'.

Given, by definition, that they were dealing with disorder or disease, the task set themselves by early students of patients was the careful description of symptoms, in the hope of achieving some sort of taxonomy of symptomatology. Underlying this was the well-established idea that similar symptoms or symptom clusters ('syndromes') have similar outcome and similar response to treatment, and perhaps similar

etiology- the disease concept<sup>40</sup>. The success of this approach- for instance, in the distinction between affective and schizophrenic syndromes- has been considerable, and of practical value. This very success has, however, created reliance on a 'categorical' approach which has led researchers into psychiatric phenomena in community 'subjects' to attempt the distinction between 'normal' functioning on the one hand, and disease or disorder on the other, a distinction already made for the early, hospital-based phenomenologists. For while studies of in- and out-patients are, by definition, studies of 'cases' (people somehow identified as being in need of some service), this is not the position with random samples of the population ('subjects')<sup>41</sup>.

There have been difficulties with this approach, largely because there is no consensus about how one allocates 'caseness' to community subjects. Recent studies from Edinburgh have shown considerable difference in 'prevalence' of various disorders using different criteria, (such as the Feighner criteria, the Research Diagnostic Criteria, the Index of Definition and CATEGO systems based on the Present State Examination, and the Bedford College team approach) even on the same population<sup>42</sup>.



It would seem wise, therefore, to select as a measure of depression an interview developed in such a way that allows it to be used as a dimensional index as well as an albeit arbitrary nominator of 'caseness'. Such a decision reduces the usefulness of such interviews as the Present State Examination<sup>43</sup>, and the Geriatric Mental State<sup>44</sup>, since their emphasis is on categorisation, with only crude estimates of severity. Criteria such as those of Feighner et al<sup>45</sup>, the Research Diagnostic Criteria<sup>46</sup>, and, indeed, the International Classification of Diseases (9th edition) and the DSM- III diagnostic categories make no pretence at a dimensional approach at all.

A further consideration is that the interview should have been developed for use with the elderly. There is abundant evidence that the elderly are more prone to physical illness than younger age groups<sup>47</sup>, and the so-called 'somatic' symptoms resulting from these disorders may confound those measures of depression designed for use with younger age-groups<sup>16</sup>. Thus, despite their capacity to reflect a non-categorical approach, measures such as the Hamilton Rating Scale<sup>48</sup>, and the Clinical Interview Schedule<sup>34</sup> are probably best avoided in a study of this type.

The Comprehensive Assessment and Referral Evaluation (CARE<sup>49,50</sup>) method approaches the requirements set out above. It is based on over 1000 items specifically chosen, from a variety of sources, for application to the problems of the elderly, rated on randomly-selected community samples of 830 subjects aged more than 65 in London and New York<sup>25</sup>. By a combination of the judgement of the investigators, tempered by mathematical estimates of homogeneity, 32 'scales' were derived, covering various aspects of the health and social functioning of the sample. Each scale had high levels of internal consistency, and afforded, by means of very simple, additional counting, a measure of severity of the underlying construct- depression, organic brain syndrome, etc.. A 'latent-structure' model<sup>51</sup> was invoked to address the possibility of categories. In this model, the scale scores, although recorded as levels of severity, are seen as fallible indicators of underlying (latent) membership of classes. Mathematical techniques are applied to assign individuals to these classes, as well as testing the 'goodness of fit' between the model and the observed results. Naturally, this method suffers from all the difficulties of model-fitting, but high levels of agreement were achieved between the latent class categorisations and

attempts at consensus diagnostic assignments. Indeed, in the case of depression, the former were better predictors of outcome, as measured by consumption of medication and service use, than the latter<sup>52</sup>. The latent-class model allowed the computation of 'hit-max' cut-points on the homogenous scales which maximised distinction between the postulated, latent classes in these large samples.

The scale for depression comprises 26 items, takes about 15 minutes to administer, and results in a score of up to 30 points. A similar, brief scale of Organic Brain Syndrome, derived in the same way, was also used in the preliminary stages of the study described below.

b) The Reliability of the assessment of depression

Though the notion that the development of valid and reliable measures in psychiatry has led to advances in our understanding of psychiatric disorders is widely held, it contains various questionable assumptions. One is the issue of reliability.

The moral overtone of the correct term 'reliability' may be accidental but the use of the word 'reliable', a categorical statement, seems to rest too heavily on this. Technically, reliability is merely the quantification of the agreement between two assessments of the same phenomenon. Various types of reliability have been discerned as important. The 'inter-rater' reliability of an assessment of depression is the quantification of agreement between two raters using the same assessment of depression at the same time on the same subject. As it is impossible to carry out two interviews on the same subject simultaneously, co-rating exercises, sometimes with elaborate precautions to minimise unconscious cues between raters, are usually employed in order to estimate it. Of course, one would expect agreement between two raters to occur by chance alone, and thus the results of most co-rating exercises are expressed in such a way that accounts for this chance effect.

The result is expressed in terms of a figure - a co-efficient such as Cohen's Kappa which ranges from 0, implying that any agreement is entirely due to chance, to 1 in which there is absolute and total agreement, or -1, indicating absolute and total disagreement<sup>53</sup>. (These coefficients can, of course, also be arrived at by chance<sup>54</sup>). It can be seen that the idea that an assessment is 'reliable' implies a dichotomy between reliable and unreliable assessments, whereas, in fact, reliability is more correctly regarded as a dimension.

The phrase 'reliable measures' also assumes that reliability lies, in some way, within the assessment, rather than in its use. Although there are obviously factors in the design of an interview that affect the likelihood of any given level of inter-rater reliability (largely proportional to the degree of compulsion imposed on the interviewer), the idea that reliability is an attribute of the chosen instrument itself merits some further attention.

In a study in which two or more raters are working, and in which comparison is to be made between groups perhaps assessed by different raters, it is, of course, desirable that inter-rater reliability of an assessment be maximised. The aim of such a

'maximising' approach must be to strengthen the research findings. However, it is all too frequently the case that co-rating exercises are carried out at the beginning of a study, when raters are freshly trained in the use of a procedure, and well attuned to its underlying philosophy. There is no guarantee, of course, that reliability estimates gained in this way are of lasting value- the possibility arises that ratings 'slip' away from the original constraints as the study progresses, either due to lapses of memory or due to the occurrence of phenomena during the rest of the study that were not encountered during the preliminary phase. This deficiency occurs when it is considered that reliability is somehow invested in the measure rather than in its use by particular raters, in a particular population sample, over a given period of time. Given the fallacious basis of this convenient assumption, it would seem wise to carry out inter-rater reliability estimations throughout the study, with the population sample under scrutiny, and in the same circumstances as those in which the bulk of the assessments are made. However, since it is desirable to maximise inter-rater reliability, efforts should also be made to ensure that as little 'slippage' of the type described above occurs, by regular, frequent 're-training' of the raters. Such a procedure is described in Section 4 of the thesis.

The definition of a generally acceptable level of inter-rater reliability is difficult, and probably unnecessary. The results of the study as a whole can be interpreted in the light of the results of co-rating exercises during its course: only if inter-rater reliability coefficients are of a level that threatens the main results of the study need further account be taken of them.

Another type of reliability is 'test/re-test' reliability. This, again, is a mathematical expression of the agreement between assessments made on the same subject at two or more points in time. Once more, it is usually expressed as a co-efficient, taking into consideration the effects of chance, but its importance centres on the assumption that the phenomenon being assessed is static between the points in time chosen. This, of course, is a matter for judgement depending on the nature of the phenomenon under study, and the time intervals chosen. Unfortunately, little is known of the 'day-by-day' progress of the psychiatric conditions in the community, and tautology arises when one attributes this lack of knowledge to the absence of procedures with satisfactory test/re-test reliability.

c) The Validity of the assessment procedure

Again, difficulties arise when one considers the term 'valid' as a statement about an assessment procedure. The correct term 'validity' is a mathematical expression of the agreement between the measure in use and some other, independent criterion which seems to be related to the underlying phenomenon which is being studied.

The various qualifications of the term 'validity' that have been described -face validity, construct validity, predictive validity etc- are not so much discrete types of validity as manifestations of different ways of strengthening ('validus', Latin, meaning strong<sup>55</sup>) the results obtained with the assessment chosen. There are, of course, related problems- first, in choosing criteria with which to compare any assessment and, secondly, in defining acceptable levels of agreement with them. (Using the term 'valid' as equivalent to 'true' does not so much fudge the issue of what is an acceptable, mathematically-expressed level of validity as subvert it: the idea of 'truth' is axiomatically categorical.) The latter problem, like the definition of acceptable levels of inter-rater reliability, can sometimes be resolved by examining the findings of the study in the



light of the levels of validity achieved during it. The former problem is not so easily disposed of.

Given the absence of any absolute criterion with which to compare assessments used in psychiatric research, a number of strategies have evolved. The most important include comparing the assessment with independent, 'blind' clinical diagnosis, or with other assessments of a similar nature. Unfortunately, the choice of clinician, or alternative assessment, is naturally governed by the following question: in whose eyes are the results to be seen as strengthened? For example, those who assert that there is a useful distinction between the phenomena of anxiety and those of depression will not consider the result strengthened if the clinician, or the philosophy underlying the comparative assessment, does not. Furthermore, it seems obvious that any structural similarity between the two measures, be they clinical or research-orientated, is likely to account for a proportionate amount of the agreement between them, and the use of such comparisons may not strengthen the findings in any defensible way.

The main purpose of the delineation, in clinical populations, of disease categories was, and is, utilitarian- at first to divine prognosis, and then to

indicate treatment and stimulate investigation<sup>56</sup>. ('Diagnosis' is a term stemming from a word meaning to discriminate). Similarity in outcome between people with similar syndromes is the cornerstone of the 'medical model'. It follows that the most satisfactory validation of any assessment that attempts the reproduction of diagnosis, (albeit in a formal, structured way that increases the chances of high inter-rater reliability levels) is not achieved by comparison with the idiosyncratic, fallible clinician, but with outcome. If this categorical, 'medical' approach is taken, the validity of a measure is proportional to the degree with which groups identified as 'cases' have a palpably different outcome from those not so identified. This principle also applies when a 'dimensional' approach is taken: validation is carried out by the correlation of initial scores on the measure with outcome. Problems of the assessment of outcome are dealt with later in this section of the thesis.

## 2. THE ASSESSMENT OF DEPRESSION BY THE GENERAL PRACTITIONERS

An objection to the method of enquiry chosen by Goldberg and his team<sup>57</sup> in their studies of the recognition of psychiatric morbidity by general practitioners has been the use of a 5-point scale of 'psychiatric disturbance' for completion by the general practitioners. It can be held that G.P.s are unlikely to nominate as 'psychiatric cases' patients who, though undeniably distressed, seem to warrant neither referral, treatment, or recall for longer consultation. These responses are implicit in the designation, and to nominate such patients as 'cases' implies a contradiction.

In the study of the recognition of depression, however, this difficulty might be avoided by the very vagueness of the term and its implications for the G.P.. Although it seems a more specific term than 'psychiatric disturbance', it lacks the same implications of necessary action by the G.P.. It is generally acceptable to regard a patient as depressed without taking action- for instance, using the word merely as a description of an 'every-day' variant of mood.

Nevertheless, the possibility of defining the term for the general practitioner's assessment must be considered, although such a task is by no means easy. Furthermore, one runs a very real risk of artificially reducing the rate at which general practitioners recognise depression by restricting the definition of depression. Of course, in leaving it to the G.P.s to decide what is meant by depression one is less clear about what has been recognised, but this can be examined in the analysis of the data gathered.

A further problem arises on examination of the idea of 'recognition' itself. In the end, it is quite difficult to distinguish between the concept of 'recognition' and 'response' - and such a distinction has little practical value. It would seem sensible, then, to try to assess the general practitioner's response, in terms of prescription of psychotropic drugs, referral etc, to elderly patients, as well as their recognition, or willingness to record an appreciation, of any depression itself.

Any study of this sort runs the risk of alerting general practitioners to the possibility of depression in their patients, and thus changing their 'recognition' and 'response' styles in an artificial way. The only possible way for avoiding this

difficulty would be not to inform the general practitioners of the condition or type of condition under study. This is obviously not practicable, but by continuing the study over a fairly long period of time, this problem can be minimised: the general practitioners would become used to the research procedure, and less likely to alter their behaviour in response to it. Furthermore, a long period of research would enable the result to be analysed for evidence of a secular trend in the rates of recognition (either specificity or sensitivity against the measure of depression chosen). Whatever the strength of such an effect overall, one would expect general practitioners to be relatively sensitive, but lacking in specificity, in the initial stages of a study, but that this would tend to reverse later on in the study. Such a contrast would become evident if the agreement between the assessment of depression and the general practitioner assessment in the first and second halves of the initial survey were compared.

### 3. THE ASSESSMENT OF OUTCOME

The assessment of outcome of a group of subjects is usually expressed in terms of mortality, morbidity, use of services, and consumption of treatment over the period of time following the initial contact. There are, however, considerable difficulties in carrying out such an assessment, both theoretical and practical: in particular the choice of period of outcome, measures of outcome, and general problems of outcome studies. These will now be discussed.

#### a) The period of outcome

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At first it might seem desirable to assess outcome as far into the future from the initial assessment as possible. However, an elderly sample has a relatively high risk of new, independent physical, psychiatric or social problems which might seriously cloud the comparison between groups over time. On the other hand, if the period of outcome is too short, the rates of mortality, service use and consumption of medication will be too low to allow meaningful comparison. A judgement, therefore, has to be made, weighing up these possibilities in the light of previous work in the field. In the case of depressive symptoms in a non-hospitalised sample over

the age of 65 little guidance is available in the literature, so a follow-up period of 6 months to 1 year would seem an appropriate, if somewhat arbitrary choice of interval, although such a choice would be less likely to show any differences in mortality than in morbidity and service use. The expected rate of mortality for such a group in the UK would be about 3% in a year<sup>2</sup>.

b) Measures of outcome

i) Mortality is the 'hardest' of the outcome measures-being the least ambiguous. However, in a sample of moderately disabled elderly, of whom a proportion were non-institutionalised, mortality over a year seemed independantly related to the 'quality of life', rather than symptoms of depression<sup>58</sup>. However this effect was most prominent in the institutionalised, and need not be considered further at this stage.

ii) Morbidity can be described as continuing or new disorder, both physical and psychiatric, and the problems of the measurement of these are compounded by the need to determine change over time. The issues of reliability and validity apply to the ability of assessment procedures to detect such change

independently of their performance at any one juncture. An unfortunate difficulty arises when one considers the problem of depressive symptoms and the validity of the assessment of change in them. For the attempt to use, as an outcome measure, a procedure whose validity as a 'state' measure is itself being estimated against outcome invokes an unavaiodable circularity. Although change in depressive symptomatology is best assessed by some other means, in practice there may be no alternative to the original assessment.

Physical disorder in the elderly can be assessed in a number of ways, but there are no structured or even semi-structured methods applicable to a community population that attempt direct measurement of this. One approach is a clinical judgement of the severity of life-threatening illness, as used by Piper and Hodkinson<sup>59</sup>, but many of the data on which such judgement is based are absent in normal survey circumstances. The notion of 'dependency' is employed more widely, however, and measures of impairment of the 'Activities of Daily Living' (ADL) are available. These are, in fact, based on assessments by the subject, an informant<sup>60</sup>, or performance tests<sup>61</sup>. Unfortunately, there is disagreement about comparisons of these types of assessment. Kuriansky et al found



discrepancies which could not be readily explained<sup>61</sup>, but Pfeffer et al found a high correlation between self-ratings and informant ratings<sup>62</sup>. Recently, Little et al have found low correlations between all three types of assessment<sup>63</sup>.

Another index that appears useful at first sight is the physician's diagnosis- in this case, the general practitioner's diagnosis. Unfortunately, there is no widely-accepted taxonomy of physical disorders in general practice- for instance, the W.H.O. and Royal College of General Practitioner's schemas, closely related to the International Classification of Diseases, are used on a day-to-day basis by only a handful of G.P.'s, and their use would have to be imposed for the duration of the study, with consequent problems of co-operation, validity and reliability.

iii) The use of services is a frequently-encountered measure of morbidity, although it cannot be regarded as a particularly direct assessment. In a general practice sample of patients, the services likely to be used more by those with higher levels of depressive symptomatology are those of the general practitioners themselves (consultation, receipt of prescribed medication) and of hospital-based services, via referral. There are practical difficulties in

gathering data on the use of these services. For instance, the relatively simple matter of counting subjects' consultations with general practitioners depends on accurate recording of these events in the practice; if there is doubt about this, a new system of recording has to be 'imposed' on the practice, which would be time-consuming and difficult. These difficulties are increased when counting referrals; unless it is possible to gain access to all the agencies to whom a practice might refer, one must rely on practice records entirely. One solution to these difficulties is to obtain information on attendance, treatment and referral both from the patient, and from the general practice records. When the two sources of information disagree, a judgement can be made based on knowledge of the patient and an assessment of the accuracy of the records.

c) The problems of outcome studies

These problems, in particular the number of repeated assessments that should be carried out, and whether or not a 'lead-in' period should be incorporated, have received some attention (see, for instance, Baltes and Willis<sup>64</sup>). The principal risk of multiple repeated assessment is the occurrence of the

'practice effect'- the assessments themselves affect either the actual phenomenon under study, or the response to subsequent assessments. A neglected, additional difficulty lies in the paucity of methods for the analysis of the large quantities of 'within-subject' data gathered- in particular, in distinguishing 'noise' from secular trends. Many methods of analysis, (subsumed under the general term 'time series analysis'<sup>65</sup>) make assumptions about the nature of trends which are questionable. Furthermore, if the selection of subjects for follow-up is made on the basis of a measure, such as an assessment of depression, whose validity is not unity, the effect of misclassification rates are compounded.

Although a 'lead in' period of study is generally useful when comparing groups of subjects over time, its utility is greatest when evidence of the practice effect, and related difficulties, is least<sup>64</sup>. Furthermore, when the study includes examination of the recognition of disorder by the general practitioner, in as 'normal' circumstances as possible, such a 'lead-in' is not feasible because the initial determination of depressive symptomatology by the research method might well change the chances of the subject volunteering symptoms to his or her G.P..

#### 4) THE SAMPLING METHOD

##### a) The sampling of general practitioners

The aims of a sampling method are to satisfy the requirements of statistical tests of similarity and difference- both between sub-samples, and when extrapolating from the sample to the population from which it has been drawn. An additional, neglected aspect of sampling method is that of a validation (strengthening) of the results of the study, either by virtue of a high sample-to-population ratio, or, more commonly, by the demonstration of patent similarity between the sample and the population from which it has been drawn. Simple probability sampling subordinates and may subvert this 'validating' function: it is quite conceivable, for instance, that even quite a large sample of general practitioners could be selected in a random manner, and yet be obviously different, in some relevant characteristic, from general practitioners in general. This is of some comfort to those who embark on studies in general practice itself, (rather than studies of subjects enumerated via general practice records) since a successful attempt at probability sampling of general practitioners has yet to be published.

A variety of methods of recruiting general practitioners have been described, but these are of little interest, since the validity of any method, once probability sampling is foregone, lies in the comparison of the characteristics of the sample, however achieved, with such as are known of general practitioners as whole. This is dealt with in the sections entitled 'Method' and 'Results'.

b) The sampling of subjects

Again, practical constraints undermine attempts at probability sampling of elderly surgery attenders. For instance, random rotation between surgeries sampled would be required, so that different days of the week would be represented in different surgeries. There is often space for interviewing on only one or two days of the week, however, even in multi-practice health centres. This difficulty affects the sequential sampling of elderly attenders, for it is impossible to carry out an interview and sample recently-arrived subjects without the use of a second researcher- one whose presence would most often be superfluous.

For these reasons, a simple method of non-probability sampling seems desirable, together

with efforts to gather data that allow comparison between the sample and the elderly attenders who could have been sampled, on a number of measures.

c) Number of general practitioners and subjects in the sample

A balance must be struck between sampling a larger number of general practitioners, having each been consulted by a small number of subjects, or vice versa. The former has the advantage of allowing a closer approximation to 'representativeness' of the general practitioners chosen, but reduces the possibility of elucidating factors which affect the recognition of depression since, for each G.P., this is based on only a few patients. In addition, the 'habituation' of the G.P.s to the research procedure is less likely to occur with the less frequent contact that the former method would ensure, with a consequent increase in the risk, alluded to earlier in this thesis, of 'sensitising' the doctors to depression in their elderly patients.

## 5) CONCLUSIONS

The preceding discussion suggests that the method for a study of this problem might follow certain guidelines:-

- \* A brief, rater-administered interview capable of both dimensional and categorical analysis, specifically designed for elderly community subjects, should be used.
  
- \* Continuous assessment and maximisation of the inter-rater reliability, as well as estimation of criterion and outcome validity, of the interview as a procedure with the study population should take place.
  
- \* G.P.s should be invited to acknowledge depression but the term should not be defined for them, and response to patients should be assessed.
  
- \* A convenience sample could be taken of G.P.s selected for a range of attributes, but as close as is feasible to a probability sample of patients for each practitioner.
  
- \* Data on use of services and medication should be gathered from the patients as well as general practice

records.

\* The period of outcome should be approximately 9 months. No lead-in study is feasible.

These guidelines were used to design the method of the main study, but some of the lesser issues were examined in the light of an initial, pilot study. This is now described.



**SECTION 4.**

**DESCRIPTION OF METHOD**

## 1) PILOT STUDY

A pilot study was carried out in order to explore the influence of some of the previously-discussed problems of method, and this is considered here.

### a) Description of Pilot Survey

Two group practices, (two partners and one trainee in one practice, three partners in the other), operating from the same health centre were approached and agreed to take part in the pilot study. The general practitioners were told that a study of depressive states in the elderly was to be undertaken, and that they would be asked to complete a small form during their consultation of those elderly sampled in the study. The possibility of the implication of a response, even in the relatively open term 'depression', had not been dismissed at this stage, so a fairly complex form was used in an attempt to obtain first an assessment of the general practitioner's recognition of the degree of 'emotional problems' in the patient. It was considered that this term had less direct service implications. He or she was then asked to assess the degree of 'depression', and then asked to rate the degree with which any emotional problem or depression present was, in their view,

liable to respond to treatment or professional help.

A copy of this form can be found in Appendix I.

Over a period of six months, 51 attenders, whose age was recorded as 65 or more on the general practitioner's records, were identified prior to their consultation, and the form inserted into the general practitioner's note. These elderly subjects were sampled from all those attending the surgeries, on the basis of convenience. Both morning and evening surgeries were sampled. Very often, the first elderly person at the surgery was seen, and subsequent elderly subjects at convenient intervals. Not all surgeries were sampled during the six month period - again, this was done on the basis of convenience.

At the end of the consultation, the general practitioner completed the form inserted into the notes, and then asked the patients if they would allow a research interview in connection with a health survey. They then introduced the patient to the interviewer, and the interview was conducted in another room. A schedule including at least 26 items from the depression scale of the Comprehensive Assessment and Referral Evaluation (CARE<sup>49,50</sup>), items from the Organic Brain Syndrome Scale of the same instrument, questions on their reasons for attendance,

and some demographic items, was used. During the course of the six months, various alterations and changes were made in the interview. After the interview, the form completed by the general practitioner was retrieved from the patient's notes, and the notes examined for any evidence of diagnosis, both physical and psychiatric.

b) Feasibility of the method

It was found that attendance at evening surgeries was much less than at morning surgeries - largely because of practice policy in encouraging non-working patients to attend in the morning. Of the 51 patients approached, one refused, and the G.P. form was not completed for one further patient. No complaints about the interview were made to the general practitioners, although some subjects were slightly annoyed by the questions on memory and orientation. Thus the procedure seemed acceptable to both patient and general practitioner.

It became clear that, as expected, there was space for interviewing on only one or two days of the week, even in the multi-practice health centre used for the pilot study.

**TABLE 4.1** Characteristics of Pilot Study Sample

	Males	Females	Total
No.:	16	34	50
Mean Age	73.34	73.3	73.3
[S.D]	5.5	5.1	5.2
Living alone	3 (18.8%)	14 (41.2%)	17 (34.2%)
Organic Brain Syndrome			
Score: 0	11 (68.7%)	21 (61.8%)	32 (64.0%)
1	2 (12.5%)	9 (26.5%)	11 (28.0%)
2	3 (18.8%)	4 (11.7%)	7 (14.0%)
≥3	0 -	0 -	0 -
Depression Scale			
Score 0-9	13 (81.3%)	25 (73.5%)	38 (76.0%)
≥10	3 (18.7%)	9 (26.5%)	12 (24.0%)
Assessed as depressed by G.P	3 (18.8%)	15 (45.5%)	18 (36.8%)

As the main purpose of the pilot study was to develop a feasible method, and as there were frequent changes in the interview during its course, little weight can be given to the findings, except insofar as they influenced the design of the main study. They are now briefly summarised.

The characteristics of the 50 patients interviewed are displayed in Table 4.1. It will be seen that no patients were suffering from any significant degree of memory or orientation impairment (i.e. with a score of 3 or more). One patient showed some clinical signs of possible early dementia, which had been recognised by the general practitioner.

The general practitioners recognised 40 per cent of the sample as suffering from slight or significant 'emotional problems', and 36 per cent as suffering from slight or significant 'depression'. In only six cases was there evidence that these two questions were not treated identically by the general practitioner; two patients were said to be suffering from no emotional problems but were depressed, and in four cases the reverse was true. Thus there seemed to be little distinction between the idea of 'emotional problems' and 'depression'.

**TABLE 4.2 Pilot Study: The relationship between the G.P. assessment of depression and the Depression Scale Score (n=49: 1 G.P assessment not completed)**

<u>GP assessment:</u>	<u>Depression Scale Score</u>		<u>Total</u>
	0-9	≥10	
No depression	29	2	31
Mild or moderate depression	8	10	18
<u>Total</u>	37	12	49

Kappa 0.53  
 Misclassification rate 22.4%  
 "Sensitivity" of G.P.s as screen 83.3%  
 "Specificity" of G.P.s as screen 78.8%

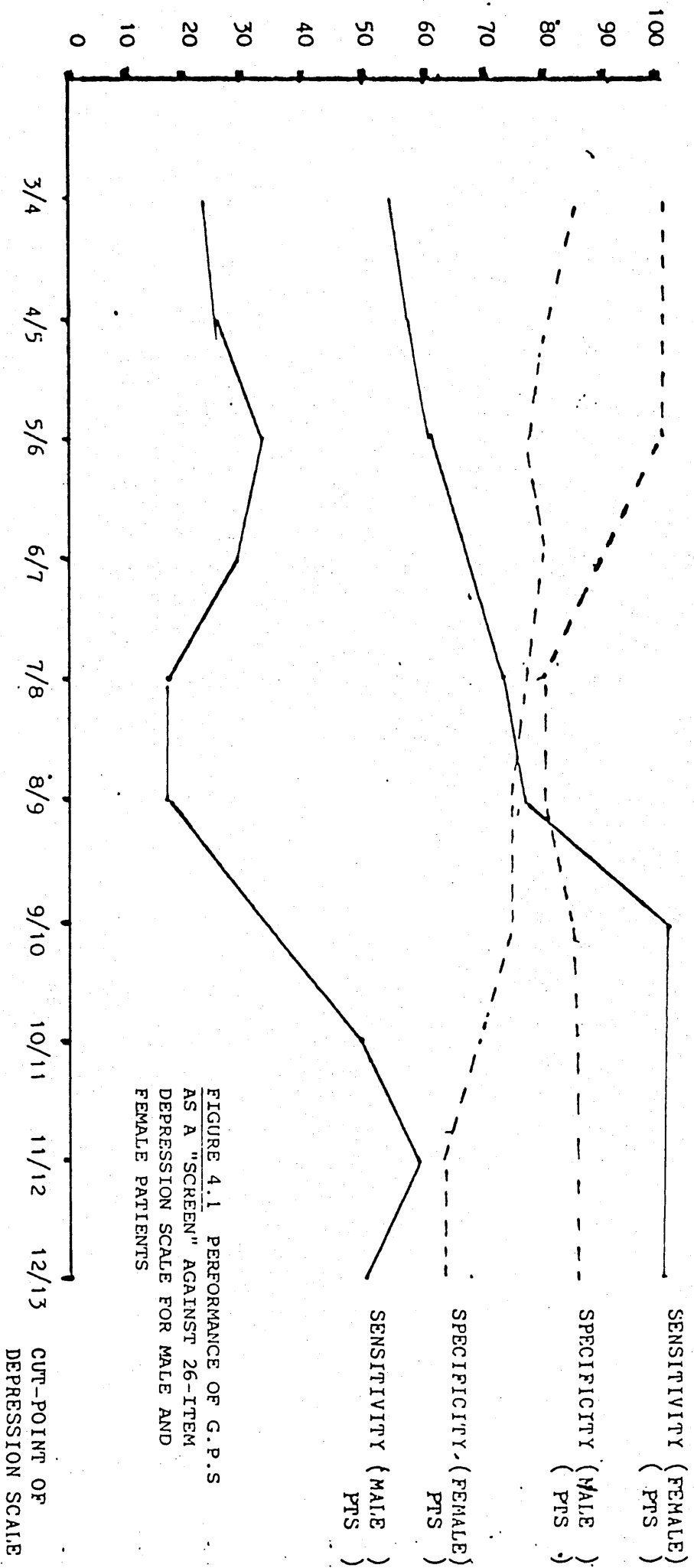


FIGURE 4.1 PERFORMANCE OF G.P.S. AS A "SCREEN" AGAINST 26-ITEM DEPRESSION SCALE FOR MALE AND FEMALE PATIENTS

CUT-POINT OF DEPRESSION SCALE



24 per cent of this sample had scores above the cut-point of 9/10 on the 26 item depression scale that was common to all subjects in the pilot study. It will be seen from Table 4.1 that the rates, as assessed by this method, were greater for women than for men.

Figure 4.2 shows the relationship between the general practitioner's assessment of mild or moderate depression against the score on the 26-item depression scale. This shows reasonable agreement between the general practitioners and the research instrument. The apparent tendency for general practitioners to diagnose depression more frequently than seems justified (by the level of symptomatology) raised the possibility that, because they knew that a study of depression was being carried out in their surgeries, they were 'sensitised' to it, with a consequent decrease in their 'specificity'. If this were the case, then one would expect this effect to be most marked in the early stages of the study, and to 'tail off' over the six month period. Analysis of the completed general practitioner questionnaires, using the 'moving averages' method, showed remarkable stability in the prevalence of depression as recognised by the general practitioners over the six month period of the study: evidence that such

sensitisation, if it took place, was consistent and persistent.

The questionnaire filled in by the general practitioners provided for the possibility that general practitioners might respond to a depressed patient, by recall for interview, prescription of medication or referral, without wishing to identify the patient as depressed or suffering from an emotional problem. Of the four cases identified in this way by general practitioners, the only action in three of them was a prescription of hypnotic, while the fourth also received regular consultation for an emotional problem without, apparently, actually suffering from such a problem.

Although the prevalence of depression, as indicated by the 'cut-point' on the 26-item scale, was lower in elderly men than in women, there was also a tendency for general practitioners to underestimate depression in elderly men. Abandoning, for the moment, the use of a 'cut-point' to divide the cases into depressed and non-depressed groups, and treating the general practitioner assessments as 'screening tests' (a more complete explanation of this can be found in the section describing the results of the main study) it can be seen from Figure 4.1 that, at

any given level of depressive symptomatology admitted by patients at interview, general practitioners were more ready to identify elderly women as depressed than elderly men, but when they did make such an identification, it seemed to be more in keeping with depression scale scores in men than in women.

There was little evidence of physical or psychiatric diagnosis in the records made by the general practitioners at the time of the consultation, which raised the problem of how an assessment of physical disorder could be made, since physical examination would not be possible during the main study. After consideration of a number of possible strategies to meet this problem, it was decided that a simple check-list of physical problems of the type common in general practice, with some assessment of the degree with which they interfered with the subject's life, would be used.

c) Conclusions from the pilot study

The findings that touched on the method chosen for the main study were as follows:

- \* The method was feasible, if somewhat time-consuming
- \* The general practitioners completed a high proportion of the forms placed in their notes
- \* The elderly were more likely to attend morning than evening surgeries
- \* Probability sampling of elderly attenders was not feasible because of restriction on space available for interviews
- \* The general practitioners did not seem to distinguish between 'emotional problems' and 'depression', nor was there any great discrepancy between assessing patients as suffering from either and their response.
- \* There was a very low prevalence of risk of dementia in the elderly surgery attenders, as measured by the O.B.S. scale of the C.A.R.E.

- \* Physical and psychiatric diagnosis by the general practitioners was infrequent.
  
- \* There seemed to be little evidence of the 'sensitisation' of general practitioners to depression over the course of the pilot study.

## 2) THE MAIN SURVEY

### a) Selection of Practices

Practices were chosen from three areas of South London.

The first area was some eight miles from the city centre, largely of a residential character. The houses were mainly terraced cottages built around the turn of the century, although the practice encompassed more affluent areas to the north and south, with housing built in the 1930's and 1970's respectively. Much of the housing was privately owned, although for the elderly a considerable proportion was privately rented. The prices were such that many owners were 'first-time buyers' - thus there was considerable turnover of the younger population. There were no major shopping areas in the vicinity, although local, small retailers abounded. There was little high-rise building in the vicinity.

The second area was approximately three miles from the city centre; an area comprising both high-rise building, decaying small and medium sized terraced properties, and industrial units, factories and warehouses. Apart from limited local retailers,

there were no major shopping areas in the vicinity. Much of the accommodation in the area consisted of privately rented, multi-occupier residences, as well as high-rise publicly-owned buildings.

The practice also served a slightly more prosperous area to the south west, where slightly better, smaller houses rubbed shoulders with larger properties in the process of 'gentrification'. Both types in this area were generally privately owned.

The third area was just two miles from the city centre and included both high quality, mansion-block flats overlooking a pleasant park, and very low quality, old council accommodation, as well as a series of high-rise blocks. Some of these were in good condition and well maintained, and some were badly vandalised, uriferous and in very poor repair. There was an industrial estate, and one or two other industrial areas, but largely the area was residential. There was no major shopping centre in the area, but a string of local shops, on one road, served as such.

One group practice in each of these areas was selected for the study.

In area 1, two principals and a trainee working in a purpose-built health centre were approached and agreed. The two principals had participated in the pilot study, and had a long history of connections with the General Practice Research Unit of the Institute of Psychiatry, London. Although they had not carried out any research themselves, they were familiar with the exigencies of research, and one had written extensively about elderly patients in general practice. There were two other practices in the same health centre. The trainee in the selected practice changed at six month intervals - such a change occurred in the study.

In area 2, a practice without accreditation for training of general practitioners was approached and agreed to the study. This practice consisted of four principals. At the start of the main study, one of these principals had given notice of resignation. He was not included in the survey, but his successor was. The practice worked from very small, purpose-built premises on the end of a row of terraced houses, and used some of the latter as well. After waiting in the waiting area, patients had to emerge into the street



again to consult two of the four doctors - one by means of a steep external staircase. None of the general practitioners had any academic connection, although one had considerable experience of the problems of alcohol dependence in general practice patients, and worked a weekly session at a local psychiatric hospital outpatient department.

In area 3, a practice from a purpose-built health centre was selected. There were two other practices in the centre. The selected practice consisted of two principals and a trainee. One of the principals had, for a time, pursued a career in psychiatry, and the other held a post in academic general practice at a local teaching hospital. The trainee left during the survey, and her successor was recruited into the study.

The characteristics of the general practitioners who participated in the study are described in the RESULTS section.

b) Conduct of the Survey

(For convenience, the practices will be nominated 1, 2 and 3, corresponding to the areas described above in which they work).

After explaining the purposes of the study to each of the general practitioners individually, morning surgeries were visited in rotation by the research interviewers. The days on which visits took place to each surgery was determined by the availability of a free room in each practice, for the conduct of the interviews. Because of the different organisation of the practices, the method was rather different for practice 3.

In practice 1 and 2 the procedure was as follows: Before the start of each surgery sampled, the interviewer listed all those patients due to attend who were more than 65 years old. From this list, and the spacing of the appointments, the research interviewer decided how many interviews could be carried out. The following table indicates the way in which this was done:

Number of interviews

Sampling procedure

possible

- |   |  |
|---|--|
| 1 | First patient sampled  |
| 2 | First and last patients sampled  |
| 3 | First, last, and patient whose<br>appointment was closest to<br>half- way in-between sampled |

No more than three patients were seen at any one surgery.

In practice 3, the receptionists did not draw out the records of the patients before the surgery; they only drew records when the patients actually arrived at the surgery. Thus there was no means of assessing the age of a patient prior to the start of the surgery. When the patient arrived, however, the notes were placed in a special rack outside the general practitioner's room. The receptionist informed the research assistant whenever anyone aged more than 65 was attending; in addition the research interviewer checked the records in this special rack. In this way the first elderly person attending was sampled, interviewed, and, as soon as the interview was finished, the next elderly person to attend was sampled. Details were noted of any elderly person who

arrived and was seen by the general practitioner while the research interviewer was speaking to another patient, but the patient was not interviewed.

In all three practices, patients who had already been sampled in the survey were not reinterviewed if they attended again. This included patients in practice 1 who had been seen in the pilot survey.

In each case, a small form was inserted into the notes of the patients sampled, to be completed by the general practitioner and retrieved afterwards. A copy of this form is to be found in Appendix II. The general practitioner then informed the patient about the possibility of an interview as part of a survey of health in the practice, obtained their consent for the interview and, in most cases, introduced the interviewer to the patient. The general practitioners were asked to mention neither psychiatry nor depression. The interview was then carried out immediately after the consultation.

The survey of surgery attenders started in September 1982, and ended in September 1983, and the follow-up interviews were completed by June 1984.

c) The Initial Interview

The interview included 30 items of the Depression scale of the Comprehensive Assessment and Referral Evaluation<sup>49,50</sup>, various demographic items, items concerned with the reason for attendance and current physical health problems, enquiries as to current use of medication, and a modified version of the Standardised Assessment of Personality<sup>66</sup>. The latter was converted from an informant interview to that of the subject, and also made retrospective to the same age period of each patient- between age 30 and 40. In addition, the interview allowed permission for any follow up interview to be obtained, and various information necessary to trace the patient in the subsequent nine months. A copy of the interview used in the main study is to be found in Appendix III.

d) Inter-rater Reliability

Three research interviewers took part in this survey; the author and two part-time research assistants, each working for six months. The author and each of the research assistants carried out a number of co-rating exercises, the positions of interviewer and co-rater being alternately exchanged. During the course of the survey, 50 subjects were

co-rated in this way. Elaborate precautions against the undue influence of facial expressions, intonation, and gesture were not considered feasible in this setting.

e) Follow-Up Study

All subjects were asked if they would agree to be re-interviewed at their homes, at some time after the initial assessment. Of those that agreed, all those scoring more than 9 on the depression scale of the CARE were contacted, approximately nine months after their initial interview. In addition, an equal number of randomly selected subjects who scored less than 10 on the depression scale were also included in the follow up sample. A letter was sent to all the others, thanking them for participation in the survey, and intimating that their help would no longer be required.

At an interval of approximately nine months, then, a sub-sample was re-contacted by telephone or by letter, and asked for an appointment for a re-interview. Those that accepted this, (and all had previously agreed), were visited at home by the author, and a further, follow-up interview was carried out. This consisted of the Depression Scale of the

'CARE', open-ended items about 'life-events' and changes in health status in the intervening nine months, items on use of services and of medication, and items on aspects of physical health that had been used in the initial assessment. In addition, the general practitioner records for each of these patients were studied, and the number of consultations, the reasons for treatment offered, and background and health information was recorded. This information was post-coded at the completion of this part of the study.

f) Interviews with the General Practitioner

As and when each general practitioner involved in the survey left the practice, or at the end of the initial survey, each general practitioner was interviewed by the author, and details of education, age, size of practice, number of clinics, post-graduate qualifications and interests and opinions about various aspects of the care of the elderly in old age was ascertained. A copy of the interview used in this procedure is found in Appendix IV.

g) Validation of the method

This was carried out in two stages. Fourteen subjects who had been interviewed by the research assistant during the initial survey were interviewed again, at their homes, by the author, who was blind to their score on the depression scale. These 14 were selected from consecutive series of attenders seen by the research assistant in the following way. All those scoring 5 or more on the depression scale were referred for validation if they agreed to the subsequent interview at home. An equal number of those scoring less than 5 were also referred, with the same constraints.

The interview carried out at home was an open-ended, unstructured psychiatric assessment concentrating on the mental state in the past month. In particular, several questions about the patient had to be answered by the validating psychiatrist (in this case, the author), and global ratings of the severity of any kind of depressive state were made. A copy of the schedule used by the validating psychiatrist is found in Appendix V.

A similar procedure was carried out during the follow up study. After completing the follow up



interview in the subject's home, the author referred a series of subjects to one of five independent psychiatrists, who visited the patient at home within a week and carried out the same open-ended procedure as the author used in the first part of the validation study.

### 3) DATA ANALYSIS

Data was entered directly from the schedules into a Sinclair Spectrum (48K) computer with twin microdrives, using data-analysis programs written by the author.

**SECTION 5.**

**RESULTS**

## 1) RESULTS OF THE SAMPLING PROCEDURE

### a) Derivation of the sample

The sampling is summarised in Table 5.1. One hundred and sixty nine surgery sessions were attended during the sample year, at which there were approximately 4,470 attendances of all age groups. Of these, 669 (14.97%) were of patients aged over 65, and 263 were approached for interview, following consultation with their general practitioner. One of these, at interview, told us that she was actually younger than 65, but had stated an older age when migrating to this country. The remaining 262 patients approached for interview represented 39.2% of the attendances. The other 406 represented either patients not sampled, or attendances by patients already included in the study.

Of the 262 approached for interview, 20 refused. Their reasons for doing so are listed in Table 5.2. They were mostly due to considerable delays in being seen by the general practitioner, with consequent reluctance to spend yet more time in the surgery after the consultation. One patient was a private patient, and two were not attending on their own behalf, but on behalf of a relative. Two hundred and thirty nine

TABLE 5.1 The sampling procedure

169 morning surgeries attended over study year

Approximately 4470 attendances

669 aged more than 65 (14.97% of attendances)

406 not sampled

1 sampled, interviewed, and found to be aged less than 65

262 approached for interview (39.2% of elderly attenders)

20 refused

1 private patient

2 relatives attended instead of patient

239 interviews (35.7% of elderly attenders)

1 G.P. was unrecruited locum

3 interviews abandoned (1.2% of interviews)

235 successful initial interviews (35.1% of elderly attenders)

TABLE 5.2 Reasons for refusal of initial interview  
(n=20)

<u>AGE</u>	<u>SEX</u>	<u>REASON</u>
77	F	Taxi waiting
75	F	Husband waiting at home
75	F	Husband waiting outside
73	F	Wanted to go home for lunch (G.P. was very late)
67	F	Wanted to go home (G.P. was very late)
66	F	Not feeling well enough
72	F	Too busy
73	M	No time
68	F	No time
65	M	'Couldn't wait'
77	F	Going to visit someone immediately
65	F	No time
85	F	No time
82	M	Claimed had already been interviewed in study (had not)
73	F	'Couldn't wait'
71	F	No time
81	F	No time
79	M	No time
71	F	Husband waiting
72	F	'Couldn't wait'

	<u>MALES</u>	<u>FEMALES</u>	<u>TOTAL</u>
No.:	4 (20%)	16 (80%)	20 (100%)
Mean Age:	74.8	73.0	73.4
[S.D.]	7.5	5.4	5.7

**TABLE 5.3** Comparison of successfully interviewed sample, non-interviewed sample and all attendances over study year

	Successfully Interviewed	Non- Interviewed	All Approached	Total Attendances
<u>Males</u>	83 (35.7%)	7 (25.9%)	90 (34.7%)	220 (32.9%)
<u>Females</u>	152 (64.3%)	20 (74.1%)	172 (65.3%)	449 (67.1%)
<u>Mean Age</u>	73.1	73.9	73.2	72.9
<u>[S.D.]</u>	5.7	5.5	5.7	5.7
<u>Total</u>	235 (100%)	27 (100%)	262 (100%)	669 (100%)

**TABLE 5.4** Characteristics of sample who were not interviewed successfully (n=27)

	MALES	FEMALES	MEAN AGE [S.D.]	TOTAL	
<u>Refused</u>	4	16	73.4 [5.7]	20	
<u>Interview abandoned</u>	0	3	}	3	
<u>Relatives attended</u>	2	0		2	
<u>Private patient</u>	1	0		75.3 [5.2]	1
<u>G.P. was unrecruited locum</u>	0	1		1	
<u>Total</u>	7	20	73.9 [5.5]	27	

interviews were carried out, but one was excluded from the study because the general practitioner was, unexpectedly, a locum who had not been informed about this study and three interviews were abandoned. Details of these are to be found in Appendix VI(a).

b) Characteristics of all attenders

Two hundred and thirty five attendances, then, resulted in successful interview (35.1% of all attendances). The demographic characteristics of the successfully interviewed group, and those not interviewed, all those approached, and that of total attendances are shown in Table 5.3. It can be seen that there is very little difference in the characteristics of those finally interviewed and all attendances.

Table 5.4 compares the characteristics of those who refused with those who were not interviewed for other reasons - again there is no clear evidence of any bias in operation.

Table 5.5 shows the demographic characteristics of the successfully interviewed sample, broken down by the three practices participating in the study. The following points will be noted:



Table 5.5 DEMOGRAPHIC CHARACTERISTICS OF SAMPLE n = 235

AGE	PRACTICE 1			PRACTICE 2			PRACTICE 3			ALL PRACTICES		
	MALES n	FEMALES n	TOTAL n	MALES n	FEMALES n	TOTAL n	MALES n	FEMALES n	TOTAL n	MALES n	FEMALES n	TOTAL n
65-69	7 (36.8%)	12 (27.2%)	19 (30.1%)	4 (16.0%)	12 (20.6%)	16 (19.2%)	13 (33.3%)	22 (44.0%)	35 (39.3%)	24 (28.9%)	46 (30.3%)	70 (29.7%)
70-74	4 (21.0%)	13 (29.5%)	17 (26.9%)	14 (56.0%)	19 (32.7%)	33 (39.7%)	15 (38.5%)	14 (28.0%)	29 (32.5%)	33 (39.8%)	46 (30.3%)	79 (33.6%)
75-79	6 (31.5%)	13 (29.5%)	19 (30.1%)	5 (20.0%)	14 (22.1%)	19 (22.8%)	8 (20.5%)	9 (18.0%)	17 (19.1%)	19 (23.0%)	36 (23.6%)	55 (23.4%)
80-84	1 (5.3%)	3 (6.8%)	4 (6.3%)	2 (8.0%)	12 (20.6%)	14 (16.8%)	2 (5.1%)	1 (2.0%)	3 (3.4%)	5 (6.0%)	16 (10.5%)	21 (8.9%)
85-89	1 (5.3%)	2 (4.5%)	3 (4.8%)	0 (1.7%)	1 (1.2%)	1 (1.2%)	0 (0.0%)	4 (8.0%)	4 (4.5%)	1 (1.2%)	7 (4.7%)	8 (3.4%)
90+	0 (0.0%)	1 (2.3%)	1 (1.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (2.6%)	0 (0.0%)	1 (1.1%)	1 (1.2%)	1 (0.7%)	2 (0.9%)
MEAN AGE [S.D.]	72.7 [5.83]	74.0 [5.99]	73.6 [5.92]	73.0 [4.37]	74.5 [5.64]	74.1 [5.31]	71.8 [5.60]	72.1 [6.22]	72.0 [5.92]	72.4 [5.28]	73.6 [5.99]	73.1 [5.77]
MARRIED	12 (63.1%)	18 (40.9%)	30 (47.6%)	17 (68.0%)	14 (24.1%)	31 (37.3%)	26 (66.7%)	20 (40.0%)	46 (51.6%)	55 (66.3%)	52 (34.2%)	107 (45.5%)
SINGLE	0 (0.0%)	9 (20.4%)	9 (14.2%)	1 (4.0%)	6 (10.3%)	7 (8.4%)	4 (10.3%)	6 (12.0%)	10 (11.2%)	5 (6.0%)	21 (13.8%)	26 (11.0%)
WIDOWED	7 (36.8%)	15 (34.0%)	22 (34.9%)	7 (28.0%)	38 (65.5%)	45 (54.2%)	3 (7.7%)	21 (42.0%)	24 (26.9%)	17 (20.5%)	74 (48.7%)	91 (38.7%)
SEPARATED OR DIVORCED	0 (0.0%)	2 (4.6%)	2 (3.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (12.8%)	3 (6.0%)	8 (9.0%)	5 (6.0%)	5 (3.3%)	10 (4.3%)
UNKNOWN/ REFUSED	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (2.6%)	0 (0.0%)	1 (1.1%)	1 (1.2%)	0 (0.0%)	1 (0.4%)
LIVING ALONE	4 (21.0%)	13 (29.5%)	17 (26.9%)	6 (24.0%)	34 (58.6%)	40 (48.1%)	9 (22.5%)	19 (38.7%)	28 (31.4%)	19 (22.6%)	66 (43.7%)	85 (36.1%)

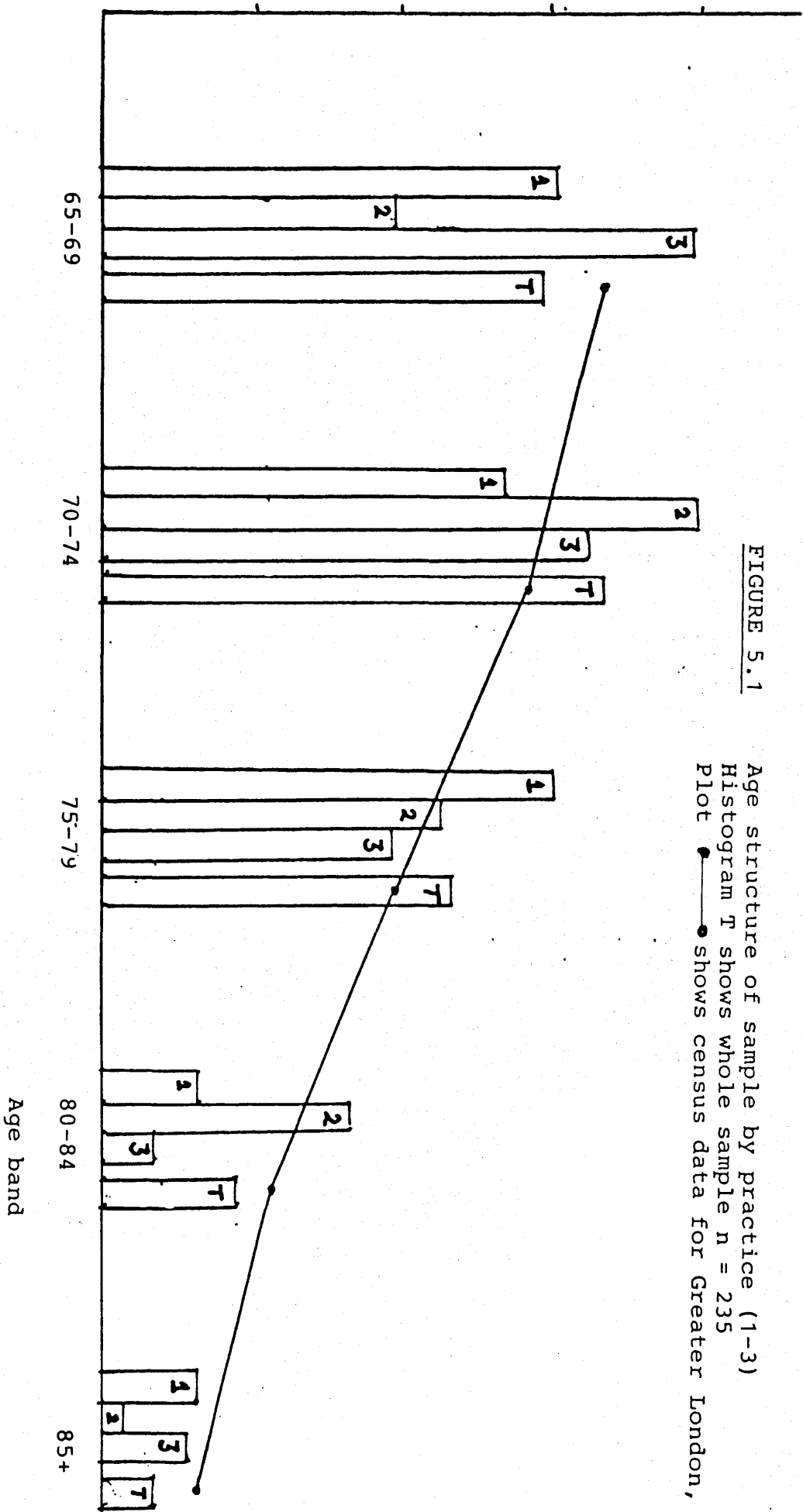


FIGURE 5.1

Age structure of sample by practice (1-3)  
 Histogram T shows whole sample  $n = 235$   
 Plot shows census data for Greater London, 1981

1. There are clear differences in the age range of the sample between the three practices. Practice 2 had a much lower proportion of those in the youngest age band than the other two practices, but an appreciably larger proportion than in the band aged 70-74 than the others.

2. Widows were over-represented in Practice 2 as compared with the others, despite the mean age of women being barely greater than the others. Linked to this is the higher proportion in Practice 2 of those living alone - especially women - than in the other practices.

Thus there is considerable variation between the three practices in demographic characteristics. When the total sample for all three practices is compared with census data for Greater London<sup>67</sup> in Figure 5.1, it can be seen that, within the age range 65-90, the lower and upper extremes of the range are under-represented in surgery attenders, while those in the mid-range (70-79) are over-represented.

TABLE 5.6 Characteristics of the general practitioners

ACTICE	G.P.	PRINCIPAL OR TRAINEE	FULL TIME	SEX	AGE	YEARS IN GENERAL PRACTICE	POST-GRAD QUALIFICATIONS	TRAINING IN PSYCHIATRY	PRACTICE LIST SIZE	NO. OF PATIENTS IN STUDY
1	1	P	+	M	62	>10	+	+		29
	2	P	+	M	41	>10	-	-		25
	3	T	+	M	42	<1	+	-		6
	4	T	-	M	28	<1	+	+	5400	3
2	1	P	+	M	60	>10	-	+		26
	2	P	+	M	46	>10	+	+		40
	3	T	+	F	28	<1	+	-		14
	4	T	-	F	25	<1	-	-	4000	3
3	1	P	+	M	71	>10	-	+		34
	2	P	+	F	43	1-5	+	-		20
	3	P	+	M	43	6-10	+	+		23
	4	P	+	F	31	<1	+	-	7200	12

**TABLE 5.7** Comparison of the characteristics of general practitioners involved in the study with those of general practitioners in England in 1981.

	STUDY GPS	ALL G.P.s IN ENGLAND IN 1981*
Mean Age [S.D.]	43.3 [14.7]	45.4 [11.7]
% Females	33.3%	18.3%
% Males	66.7%	81.7%
% Born outside U.K. and Ireland	16.7%	22.3%
% Trainees	33.3%	3.5%

\*source DHSS68

c) Characteristics of the general practitioners

Table 5.6 summarises the information obtained at interview with the 12 general practitioners taking part in the sub-study. Eight (66.7%) were principals, and ten (83.3%) were full-time. Four (33.3%) were females and the mean age of the general practitioners was 43.3 (S.D. 14.66). Four (33.3%) had no post-graduate qualifications, and six (50%) had received any training lasting more than half a day in psychiatry. Table 5.7 compares the characteristics of the general practitioners in the study with those of all general practitioners in the U.K.<sup>68</sup>.

d) Characteristics of subjects participating in the study of reliability and validity

Twenty-eight interviews were co-rated by two interviewers over the course of the study. Eighteen subjects had independent psychiatric interviews within three days of the research interview, at two points in the study: at the third month of the initial interviewing, and at the sixth month of the follow-up interviews. The characteristics of these two sub-samples are compared with the total sample in Table 5.8. There is little difference in the mean ages or the numbers widowed, but there was a tendency

TABLE 5.8 Characteristics of special subsamples compared with whole sample

	Reliability Sample			Validity Sample			Total Sample		
	n = 28	n = 18	n = 28	n = 4	n = 14	n = 18	n = 83	n = 152	n = 235
Males	n = 10	n = 18	n = 28	n = 4	n = 14	n = 18	n = 83	n = 152	n = 235
Females									
Total									
Mean Age	70.5	74.1	72.8	77.7	74.9	75.5	72.4	73.6	73.1
% Widowed	20.0%	50.0%	39.3%	50.0%	50.0%	50.0%	20.4%	48.6%	38.7%
% Living alone	10.0%	61.1%	42.9%	25.0%	71.4%	61.1%	22.8%	43.4%	36.1%

**TABLE 5.9** Inter-rater reliability of depression scale score (n=28)

A) RATER 1 (principal investigator) with RATER 2

		<u>RATER 2: Depression Scale Score</u>		
		<u>≤9</u>	<u>≥10</u>	Total
<u>RATER 1:</u>				
Depression Scale Score	<u>≤9</u>	0	1	1
	<u>≥10</u>	0	17	17
	Total	0	18	18

Agreement 94.4%      Kappa -

A) RATER 1 (principal investigator) with RATER 3

		<u>RATER 3: Depression Scale Score</u>		
		<u>≤9</u>	<u>≥10</u>	Total
<u>RATER 1:</u>				
Depression Scale Score	<u>≤9</u>	3	0	3
	<u>≥10</u>	1	6	7
	Total	4	6	10

Agreement 90.0%      Kappa 0.78

A) RATER 1 (principal investigator) with RATER 2 and RATER 3

		<u>RATER 2 + RATER 3: Depression Scale Score</u>		
		<u>≤9</u>	<u>≥10</u>	Total
<u>RATER 1:</u>				
Depression Scale Score	<u>≤9</u>	3	1	4
	<u>≥10</u>	1	23	24
	Total	4	24	28

Agreement 92.8%      Kappa 0.71



for both special sub-samples to have a higher proportion of people living alone than in the whole sample.

## 2) RELIABILITY AND VALIDITY OF THE METHOD

### a) Reliability

Table 5.9 shows the correlation between depression scale scores obtained by the principal investigator compared with each of the two research interviewers who assisted in the data collection in the surgeries. Unweighted kappa agreements were calculated on these figures, but they were limited by the very small number of high scorers in this subsample. The reliability assessments were carried out routinely throughout the survey: by chance, on the days allocated for this exercise, there was a lower rate of high scorers.

Leaving aside, for the moment, the cut-point on the depression scale indicated in Table 5.9, the maximum difference in scale scores between the principal investigator and the other two raters was 2 points- plus or minus 0.6%. It seems unlikely that inter-rater reliability would seriously have affected the results of this survey. Nevertheless, the effect

**TABLE 5.10** Validation of the use of the Depression Scale Score against independent psychiatric assessment

INDEPENDENT PSYCHIATRIC ASSESSMENT  
OF DEPRESSION

		None	Some	Total
Depression Scale Score	≤9	6	1	7
	≥10	2	9	11
Total		8	10	18

Agreement 83.3%      Kappa 0.66

of the possible error induced by this is discussed below (page 133).

The inter-rater reliability of the retrospective personality assessment is discussed later in this section.

b) Validity

During the two periods of validation, 18 patients (11 with scale scores of 10 or more, and 7 with lower scale scores) were independently interviewed by a psychiatrist within three days of the CARE interview, and the psychiatrist's assessment is compared with the depression scale score in Table 5.10. Once again an unweighted kappa was used as a co-efficient of agreement, and a satisfactory level (0.66) was achieved.

**TABLE 5.11** The prevalence of those with high Depression Scale Scores in elderly surgery attenders (n=235)

	MALES	FEMALES	TOTAL
No.:	83	152	235
Low scorers ( $\leq 9$ )	67 (80.7%)	96 (63.2%)	163 (69.4%)
High scorers ( $\geq 10$ )	16 (19.3%)	56 (36.8%)	72 (30.6%)

### 3) PREVALENCE OF DEPRESSION IN ELDERLY ATTENDERS IN SURGERIES

Table 5.11 shows the proportion of male and female elderly attenders at the surgeries during the study year who scored 10 or more on the Depression Scale Score. 19.3% of 83 males, and 36.8% of the 152 females scored above the cut point of 9. This represented an overall prevalence of a high risk of being identified as depressed of 30.6 per cent.

As the Depression Scale Score ranged from a possible zero to 30 points it can be viewed as an 'interval' scale, and so statistics like means and even standard errors of means are of interest. The mean scale score for men was 6.65 (S.D. 4.01) and that for women was 8.46 (S.D. 4.70). In order to examine the distribution of scores among elderly male and female attenders at the surgeries, a frequency plot was constructed, but this was very irregular due to the wide range of scores (0 to 26), and a moving average technique was used to 'smooth' the distribution. This is shown in Figure 5.2. For each depression scale score, the points represent the average number of people scoring anything from 2 points less to 2 points more. These values are expressed as a proportion of males and females, so

TABLE 5.12

DEMOGRAPHIC CORRELATES OF A HIGH DEPRESSION SCALE SCORE AND/OR A GP ASSESSMENT OF DEPRESSION

	DEPRESSION SCALE SCORES n=235						GP ASSESSMENT OF ANY DEPRESSION n=219					
	MALES		FEMALES		TOTAL		MALES		FEMALES		TOTAL	
	Low Score n=	High Score n=	Low Score n=	High Score n=	Low Score n=	High Score n=	None n=	Some n=	None n=	Some n=	None n=	Some n=
MEAN AGE [S.D.]	72.3 [5.58]	72.8 [3.90]	72.9 [5.76]	74.7 [6.26]	72.6 [5.68]	74.3 [5.85]	72.0 [5.71]	73.1 [4.83]	72.9 [6.72]	74.7 [5.38]	72.5 [6.31]	74.2 [5.25]
WIDOWED	9	8	42	32	51	40	9	8	30	39	39	47
LIVING ALONE	14	5	38	28	52	33	9	9	30	31	39	40
PRESENTED: ACUTE PROB.	38	11	53	33	91	44	27	21	31	44	58	65
PSYCHOLOG. COMPLAINT	9	4	18	18	27	22	5	6	9	23	14	29
MEDIAN SOCIO-ECONOMIC GROUP:	22	33	34	35	33	34	33	21	34	34	34	34
	13.4%	24.9%	18.7%	32.0%	16.5%	30.5%	10.8%	18.1%	13.6%	31.0%	12.5%	27.0%

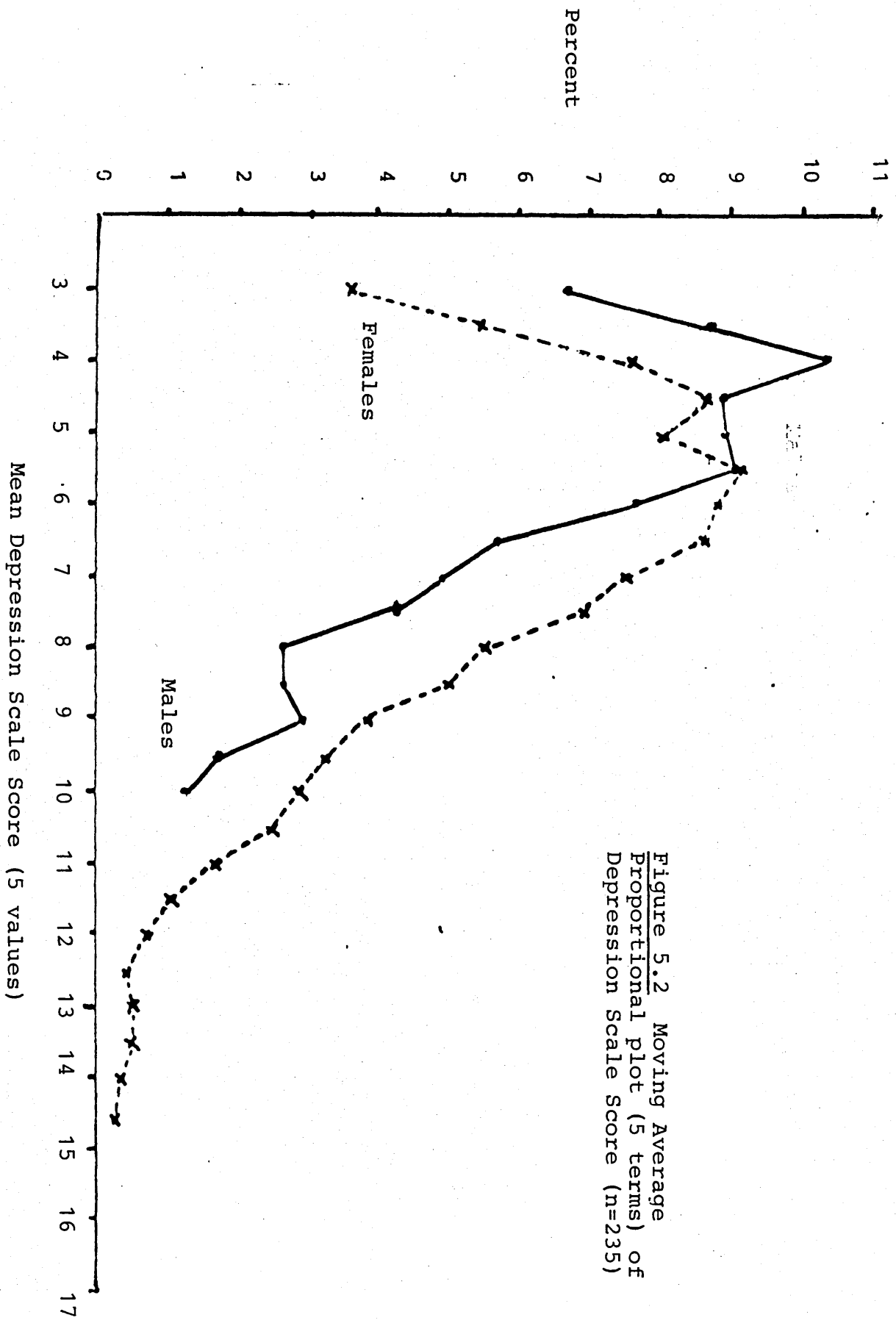


Figure 5.2 Moving Average  
Proportional plot (5 terms) of  
Depression Scale Score (n=235)

that the areas under the plots are equal. It will be seen that plots for both men and women have certain common characteristics - a 'spike' at very low depression scale scores, and a further spike or bulge at relatively higher scale scores. However the most important feature is a general shift to the right of the female scale scores as opposed to the males.

Some of the correlates of the initial depression scale score are shown on the left of Table 5.12. There is an association for both males and females of widowhood, and of living alone, with a high depression score. Patients who, when asked why they had attended their general practitioner, spontaneously mentioned a psychological complaint were more likely to have a high depression scale score than those who did not. Finally, there was a higher mean age amongst women with a high depression scale score than those without, although this was not true for men.

Further associations, including those between the depression scale score, physical symptoms complained of at interview, and the retrospective self-assessment of personality are to be found on the left of tables 5.13 and 5.14. Certain aspects of the patients' self-description of previous personality were correlated with depression scale scores, but there



TABLE 5.13

CORRELATES OF A HIGH DEPRESSION SCALE SCORE AND/OR A GP ASSESSMENT OF DEPRESSION n=235/219

	DEPRESSION SCALE SCORES						GP ASSESSMENT OF ANY DEPRESSION							
	MALES			FEMALES			TOTAL		MALES		FEMALES		TOTAL	
	Low Score n=	High Score n=	Score n=	Low Score n=	High Score n=	Score n=	None	Some	None	Some	None	Some	None	Some
Joint Pain:	44 65.6%	9 56.2%	68 70.8%	48 85.7%	112 68.7%	57 79.1%	27 58.6%	24 72.7%	46 69.6%	60 81.0%	73 65.1%	84 78.5%		
Headache or breathlessness	38 56.7%	12 75.0%	39 40.6%	30 53.5%	77 47.2%	42 58.3%	28 60.8%	19 57.5%	29 43.9%	36 48.6%	57 50.9%	55 51.4%		
Primary prob.:	25 37.3%	8 50.0%	31 32.2%	23 41.0%	56 34.4%	31 43.0%	17 36.9%	15 45.4%	23 34.8%	28 37.8%	40 35.7%	43 40.2%		
Impairment:	35 52.2%	9 56.2%	51 53.1%	36 64.2%	86 52.7%	45 62.5%	22 47.8%	20 60.0%	37 56.0%	45 60.8%	59 52.6%	65 60.7%		
PHYSICAL SYMPTOMS : S.D.]	1.92 [0.89]	2.13 [0.88]	1.65 [1.00]	2.10 [0.93]	1.77 [0.97]	2.11 [0.91]	1.80 [0.86]	2.18 [0.85]	1.67 [0.97]	1.98 [0.98]	1.72 [0.92]	2.05 [0.95]		

TABLE 5.14

CORRELATES OF A HIGH DEPRESSION SCALE SCORE AND/OR A GP ASSESSMENT OF DEPRESSION n=235/219

	DEPRESSION SCALE SCORES:						GP ASSESSMENT OF ANY DEPRESSION					
	MALES		FEMALES		TOTAL		MALES		FEMALES		TOTAL	
	Low Score n=	High Score n=	Low Score n=	High Score n=	Low Score n=	High Score n=	None	Some	None	Some	None	Some
solitary	16 23.8%	4 25.0%	39 40.6%	28 50.0%	55 33.7%	32 44.4%	11 23.9%	9 27.2%	25 37.8%	34 45.9%	36 32.1%	43 40.2%
d, warm	5 7.5%	2 12.5%	31 32.2%	17 30.3%	36 22.1%	19 26.4%	2 4.3%	5 15.1%	21 31.8%	23 31.0%	23 20.5%	28 26.2%
scientific	21 31.3%	2 12.5%	33 34.3%	17 30.3%	54 33.0%	19 26.4%	16 34.7%	7 21.2%	22 33.3%	26 35.1%	48 42.9%	33 30.8%
et, reserved	8 11.9%	3 18.7%	11 11.4%	8 14.2%	19 11.7%	11 15.3%	6 13.0%	5 15.1%	3 4.5%	13 17.5%	9 8.0%	18 16.8%
going, lively	33 49.2%	10 62.5%	55 57.2%	24 42.8%	88 54.0%	34 47.2%	24 52.1%	17 51.5%	42 63.6%	32 43.2%	66 58.9%	49 45.7%
complaining	30 44.7%	2 12.5%	45 46.8%	14 25.0%	75 46.0%	16 22.2%	21 45.6%	9 27.2%	23 34.8%	31 41.8%	44 39.2%	40 37.3%
interview, rily lonely!	1 1.5%	6 37.5%	6 6.3%	30 53.5%	7 4.3%	36 50.0%	1 2.2%	6 18.1%	6 9.1%	26 35.1%	7 6.3%	32 29.9%

TABLE 5.15: COMPARISON OF THOSE FOR WHOM NO ASSESSMENT OF DEPRESSION WAS MADE BY GENERAL PRACTITIONER WITH THOSE WHO WERE ASSESSED

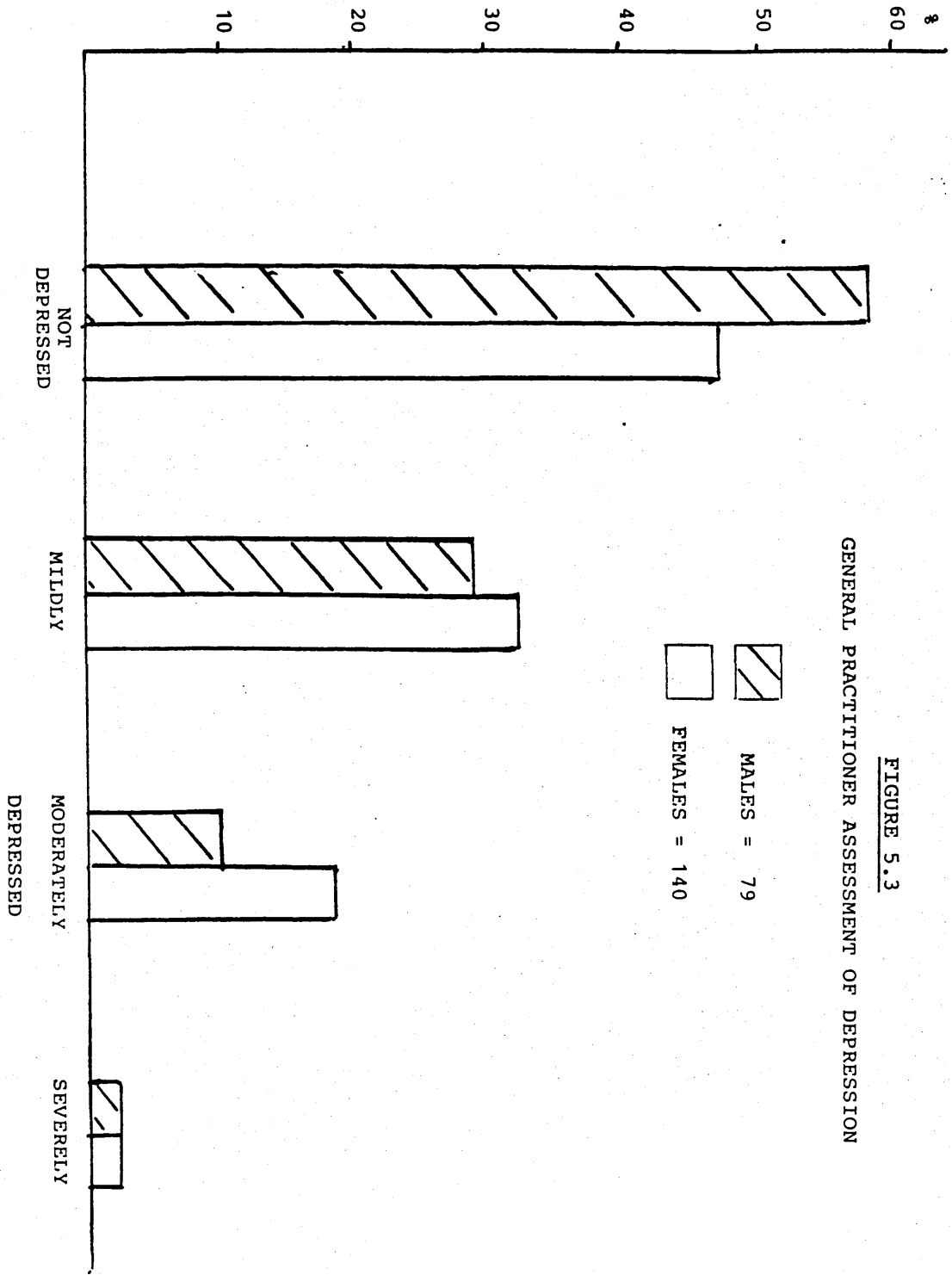
	No Assessment Made	Assessment Made	Total
	n=16	n=219	n=235
MEAN AGE [S.D]	70.4 [3.18]	73.4 [5.86]	73.1 [5.77]
% MALES	25.00	36.0	35.3
% WIDOWED	31.2	39.2	38.7
% LIVING ALONE	37.5	36.0	36.1
% Presenting with spontaneous psychological complaint	37.5	19.6	20.8
% With Depression Scale Score greater than 9	25.0	31.2	30.7
MEAN DEPRESSION SCALE SCORE [S.D]	6.88 [3.98]	7.89 [4.58]	7.82 [4.54]

were sex differences in the degree, and- in the case of the category 'conscientious and tidy'- the direction of this relationship. Again, there was a difference in the degree of apparent association between the depression scale score and physical symptoms between men and women. There was a striking association between reported loneliness and high depression scale scores in both men and women.

#### 4) THE GENERAL PRACTITIONERS' ASSESSMENT OF DEPRESSION

The general practitioners failed to complete an assessment in 16 (6.8%) of the patients seen. The characteristics of these patients are shown in Table 5.15.

Of the remaining 219 assessments, the general practitioners assessed 107 (48.9%) as suffering from some degree of depression. There was a marked difference between their assessment of depression in males and females - this is shown by the histograms in Figure 5.3. It can be seen that, just as for the scale scores of depression, those for females are shifted to the right of those for males. However there was no difference in the proportion of males and females assessed by the general practitioners as



suffering from 'severe' depression.

The correlates of general practitioners' assessments of any depression are shown on the right of Tables 5.12 to 5.14. There seemed to be a strong association between a general practitioner assessment of depression and spontaneous psychological complaints at the consultation. Many of the other apparent correlations were greater either for men or for women, but not both: for instance, a higher proportion of men living alone were assessed as depressed by their general practitioner, but this was not true of women. There were marked sex differences in the way that self-description of certain categories of previous personality correlated with general practitioner assessments of depression.

Comparison of the right and left parts of Tables 5.12, 5.13 and 5.14 show that the correlations of general practitioner assessment on the one hand and a high initial depression scale on the other are different both in degree and direction, as well as in their relationship between the gender of the patient. For instance, whether or not the patient was living alone seemed to be correlated with the depression scale score in both males and females. However, it was only related to general practitioner assessments

TABLE 5.16

INTER-RATER RELIABILITY AND FREQUENCY OF RETROSPECTIVE PERSONALITY ASSESSMENTS

	INTER-RATER RELIABILITY SAMPLE n = 28		FREQUENCIES : WHOLE INTERVIEWED SAMPLE n = 235		
	% Disagreement	Kappa (Unweighted)	Males n = 83	Females n = 152	Total n = 235
M					
, easily upset by people	0%	1.0	20 (24.0%)	67 (44.0%)	87 (37.0%)
ided going out					
d, generous, warm	10.7%	0.75	7 ( 8.4%)	48 (31.5%)	55 (23.4%)
scientious, Perfectionist, bborn	17.9%	0.64	23 (27.7%)	50 (33.0%)	73 (31.0%)
et, Solitary, Reserved	7.1%	0.63	11 (13.2%)	19 (12.5%)	30 (12.7%)
going, Lively, ed company	21.4%	0.57	43 (51.8%)	79 (51.9%)	122 (51.8%)
ilent, Tough, Uncomplaining	21.4%	0.54	32 (38.5%)	59 (38.8%)	91 (38.7%)
dy, Up and Down	14.3%	0.29	13 (15.6%)	22 (14.4%)	35 (14.9%)
orn Worrier, never relaxed	21.4%	- 0.12	16 (19.2%)	44 (28.9%)	60 (25.5%)
Missing Data:			2 ( 2.4%)	0	2 ( 0.9%)

in males, but with a tendency for a relationship for females in a direction contrary to the relationship with the depression scale score. This, and other comparisons, seems to indicate that, whatever the difference in threshold between the two assessments (discussed below), there were other differences between the two types of assessment.

#### 5) INTER-RATER RELIABILITY AND FREQUENCY OF RETROSPECTIVE SELF-ASSESSMENTS OF PERSONALITY

At the initial interview, subjects were asked to describe themselves when they were between the ages of 30 and 40, using a number of compulsory questions together with any other questions that the interviewer thought appropriate, in order to assess the presence or absence of certain 'personality traits' and to estimate the degree with which such 'traits' interfered with the subjects' life. The inter-rater agreement for these 'traits', as volunteered by those subjects participating in the reliability exercises throughout the study and ordered by the relevant kappa value, are shown in Table 5.16, together with the frequency with which they were rated in all subjects. Of interest is the very low inter-rater reliability of the category 'A born worrier, never relaxed'.



The relationship between the self-reports of personality with greatest inter-rater reliability and depression scale scores and general practitioner assessments of depression are shown in Table 5.14. There were differences in the direction and degree with which self assessments were related to the scale score and general practitioner assessments: in particular, the category 'Resilient, tough, uncomplaining' was, as one might have expected, inversely related to depression scale score, but differed between men and women in its relationship to general practitioner assessments.

6) RELATIONSHIP BETWEEN A GENERAL PRACTITIONER  
ASSESSMENT OF DEPRESSION AND THE INITIAL  
DEPRESSION SCALE SCORE

A bald comparison of the depression scale score and general practitioner assessment, using the cut point of the former validated against independent psychiatric diagnosis, and dividing the general practitioner's assessments into those of any depression whatsoever and none at all is shown by means of a scaled Venn diagram, Figure 5.4. (A scaled Venn diagram is arranged so that the area bounded by circles and arcs is directly proportional to the

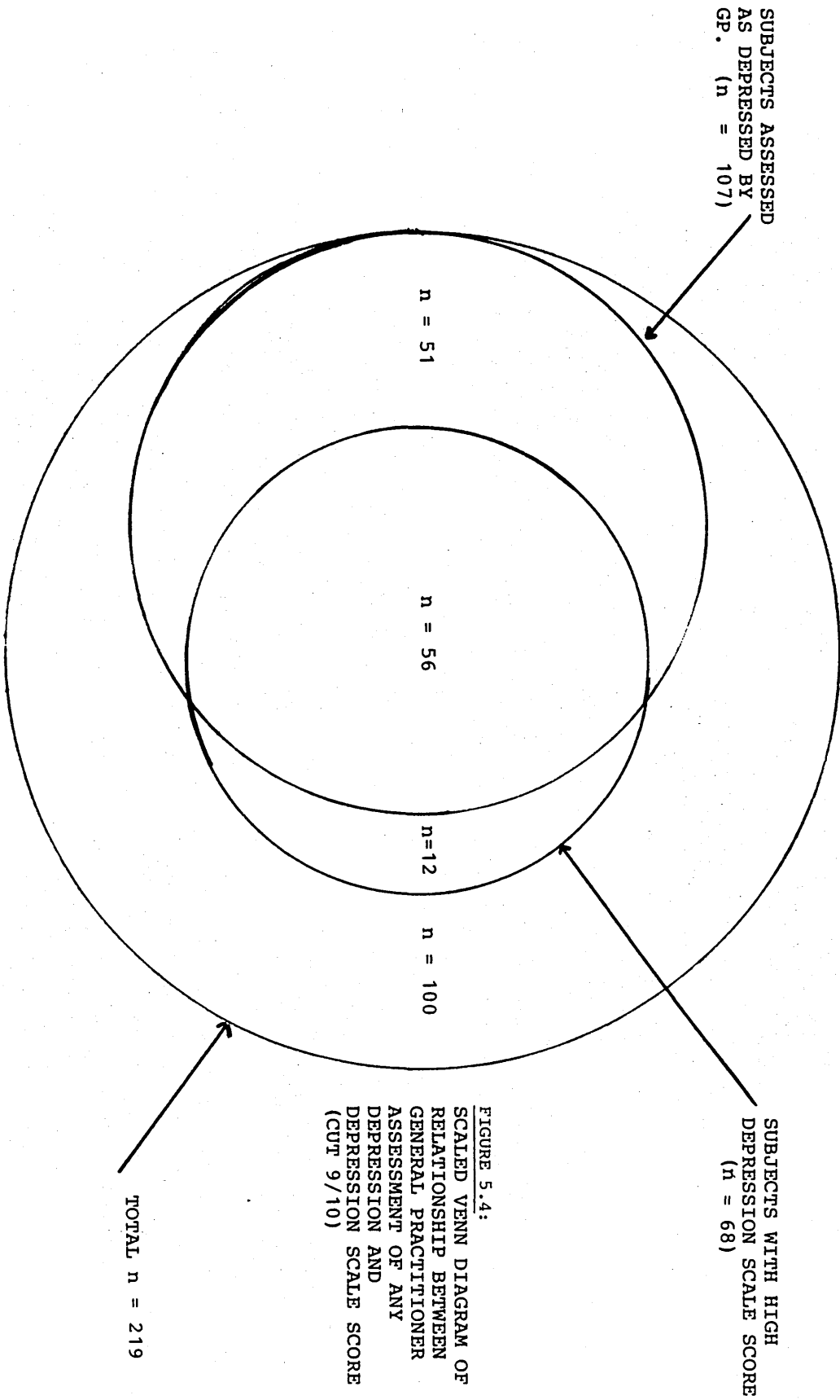
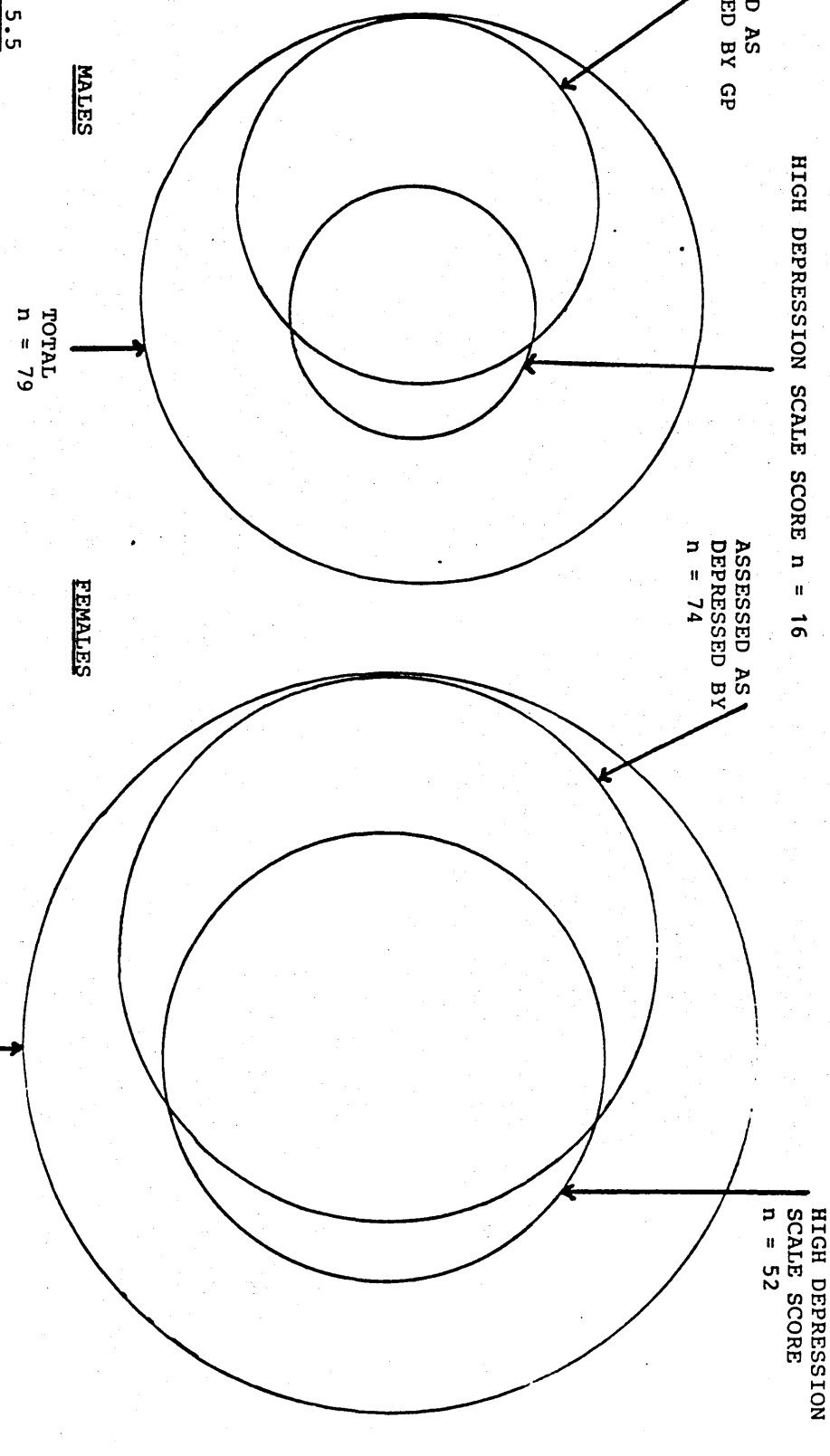


FIGURE 5.4:  
 SCALED VENN DIAGRAM OF  
 RELATIONSHIP BETWEEN  
 GENERAL PRACTITIONER  
 ASSESSMENT OF ANY  
 DEPRESSION AND  
 DEPRESSION SCALE SCORE  
 (CUT 9/10)

**FIGURE 5.5**  
SCALED VENN DIAGRAM OF  
ASSOCIATION BETWEEN GP ASSESSMENT OF  
ANY DEPRESSION AND HIGH DEPRESSION SCALE SCORE



numbers represented.) The agreement rate was 71.2%, and of the remaining disagreement 80.9% was due to a general practitioner assessment of depression in subjects with a low depression scale score.

The equivalent relationship between general practitioner assessment and depression scale score for men and women separately is shown in the scaled Venn diagrams in Figure 5.5. The overall misclassification rate was 31.6% for men and 27.1% for women. The proportion of the misclassification accounted for by general practitioners assessing as depressed those with low depression scale scores was 84% for men, and 78.9% for women.

These results suggest that, somewhat surprisingly, the tendency of general practitioners to 'miss' depression in elderly attenders is much less than their tendency to assess elderly people as depressed despite the low depression scale scores.

The depression scale score was validated against an independent psychiatric assessment of the presence of any significantly depressed state in the past month warranting further investigation or treatment. The general practitioner assessment of depression was left to his or her discretion. Any difference between the

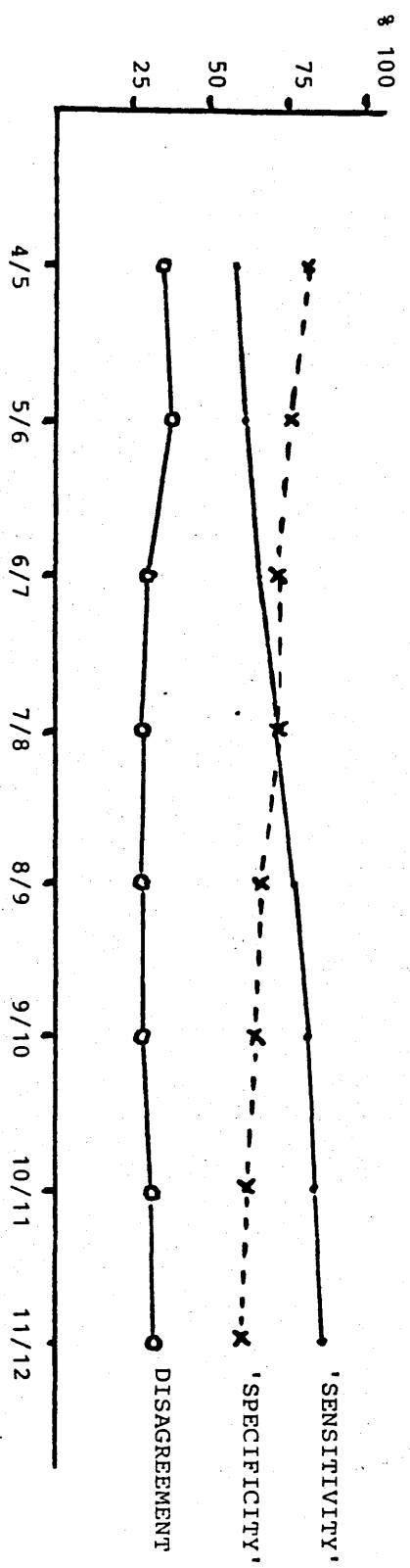


FIGURE 5.6.a  
 VARIOUS CUTS ON DEPRESSION SCALE SCORE VS G.P.  
 ASSESSMENT OF DEPRESSION (NONE VS ANY DEPRESSION)

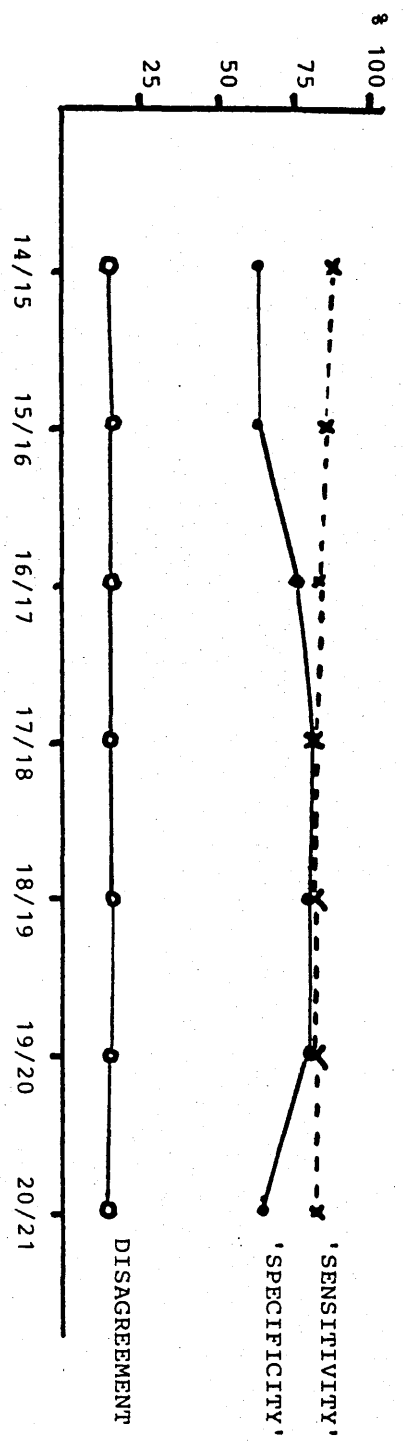


FIGURE 5.6.b  
 VARIOUS CUTS ON DEPRESSION SCALE SCORE VS G.P.  
 ASSESSMENT OF DEPRESSION (NONE OR MILD VS MODERATE OR SEVERE DEPRESSION)

two assessments may be conceived of as differences of criteria or threshold, or both. The possibility that the disagreement between the two assessments is the result of a difference in threshold between the two assessments is difficult to examine because of the necessarily restricted scale of possible responses available to the general practitioner, (no depression, mild, moderate or severe- a range of 4 ordinal ratings) but attempts were made to do so by examining the agreement between the two indices using different cut points on the depression scale, and different cut points on the scale of 1 to 4 (none, mild, moderate, severe) of the depression assessment made by the general practitioners. A series of cross-tabulations of every permutation of general practitioner assessment and depression scale score cut-point was made, and indices of agreement extracted. Some of these are illustrated in Figure 5.6.a and b. These graphs show the sensitivity (proportion of high depression scale scores identified as depressed by the general practitioner) and specificity (proportion of low depression scale scores identified by the general practitioner as not depressed) of the general practitioner assessment against the depression scale score as if the general practitioners represented a 'screening test' for depression as indicated by the scale score. The proportion in which there was

disagreement between the general practitioner assessment and Depression Scale Score is also shown in these figures.

Figure 5.6.a was based on dividing the general practitioner assessments into either no depression on the one hand or mild, moderate or severe on the other: that is, a cut between GP assessments of 1 and 2. Sensitivity, specificity and misclassification rates are shown for various cut-points on the depression scale score. Figure 5.6.b shows the equivalent graph when dividing the general practitioner's assessments into either no depression or mild depression on the one hand, and moderate or severe depression on the other: a cut between GP assessments of 2 and 3. It will be seen that sensitivity and specificity rates are better in Figure 5.6.b than in 5.6.a, and that there is also low disagreement rate. So it would seem that, when a general practitioner assessed a patient as having any depression as opposed to none, he was reflecting a threshold which was somewhat lower than that represented by the validated cut-point of the depression scale. However, indicating a patient as either moderately or severely depressed correlated well with a much higher cut point on the Depression Scale Score.

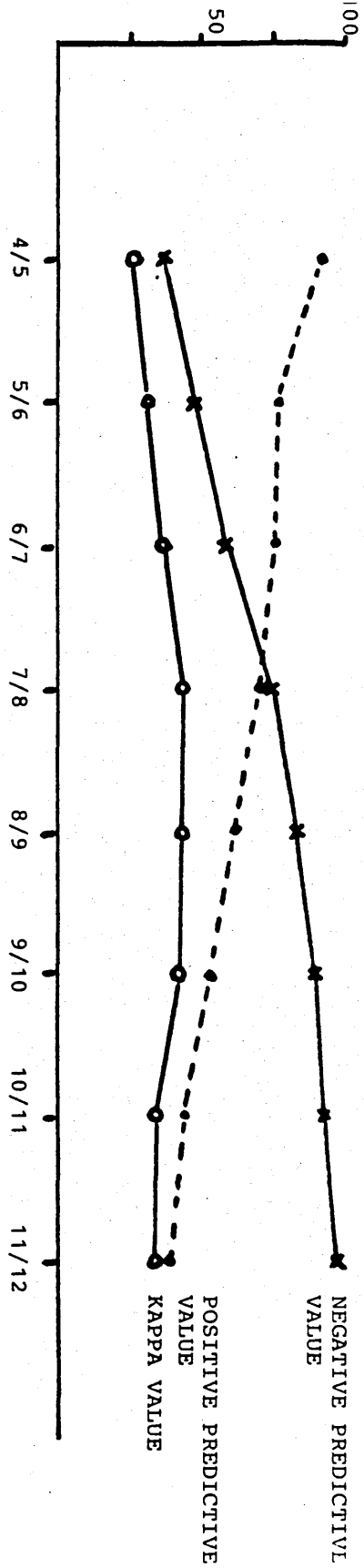


FIGURE 5.7.a VARIOUS CUTS ON DEPRESSION SCALE SCORE VS G.P. ASSESSMENT OF DEPRESSION (NONE VS ANY DEPRESSION)

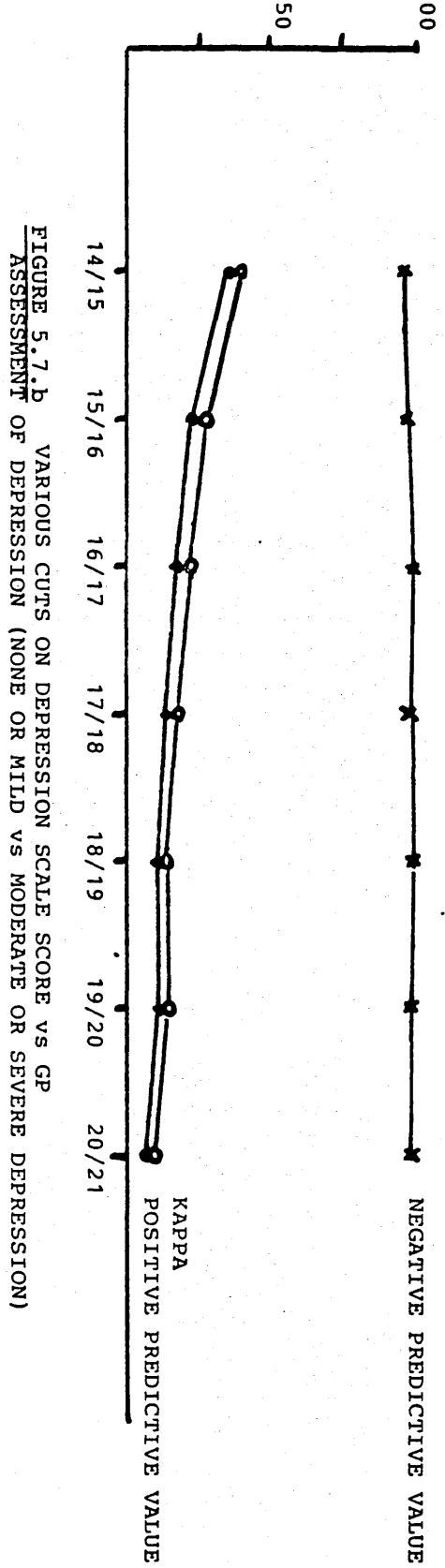


FIGURE 5.7.b VARIOUS CUTS ON DEPRESSION SCALE SCORE VS GP ASSESSMENT OF DEPRESSION (NONE OR MILD VS MODERATE OR SEVERE DEPRESSION)



Sensitivity and specificity are parameters which are independent of criterion prevalence, and are often used in assessing the value of screening tests in two-stage epidemiological surveys, but they are of limited practical value when screening for disorders for which treatment or some action may be contemplated. Continuing, for the moment, to regard the general practitioners as screening tests, the 'predictive values'<sup>69</sup> are of more importance than sensitivity and specificity. These describe the proportion of subjects identified by a general practitioner as either depressed or not depressed, who have high or low Depression Scale Scores- positive and negative predictive values respectively. These values for the two ways of cutting the general practitioner's scale of depression are shown in Figure 5.7.a and b. In addition, the agreement statistic kappa is shown for the various permutations of cut-point. It can be seen that, although dividing the general practitioner assessment between those with mild and moderate depression gives good values for sensitivity and specificity and a low disagreement rate against a high Depression Scale Score cut point, this is bought at the expense of an extremely low positive predictive value, and a low kappa value.

These figures suggest that a distinction between a general practitioner assessment of no depression on the one hand, and mild, moderate or severe on the other, is that which correlates best with the Depression Scale Score. Nevertheless, it would appear that the cut point of 9/10 is higher than that which would give best values of sensitivity, specificity and predictive values for the general practitioners' agreement.

Lowering the cut point reduces the validity coefficients against independent psychiatric assessment: for instance, lowering it to 7/8 -which would appear to afford the best agreement with the general practitioner assessment- would imply, for the validation sample, a misclassification rate of 22.2% and a kappa of 0.45.

Whether or not the identification, by general practitioners, of subjects as depressed and a high depression score represent distinctly different approaches, there seems to be no escaping the conclusion that independent psychiatric assessment of the presence of any significant depressed state, as mediated by the Depression Scale Score from the interview, has a different threshold from the general practitioners' assessment of any depression.

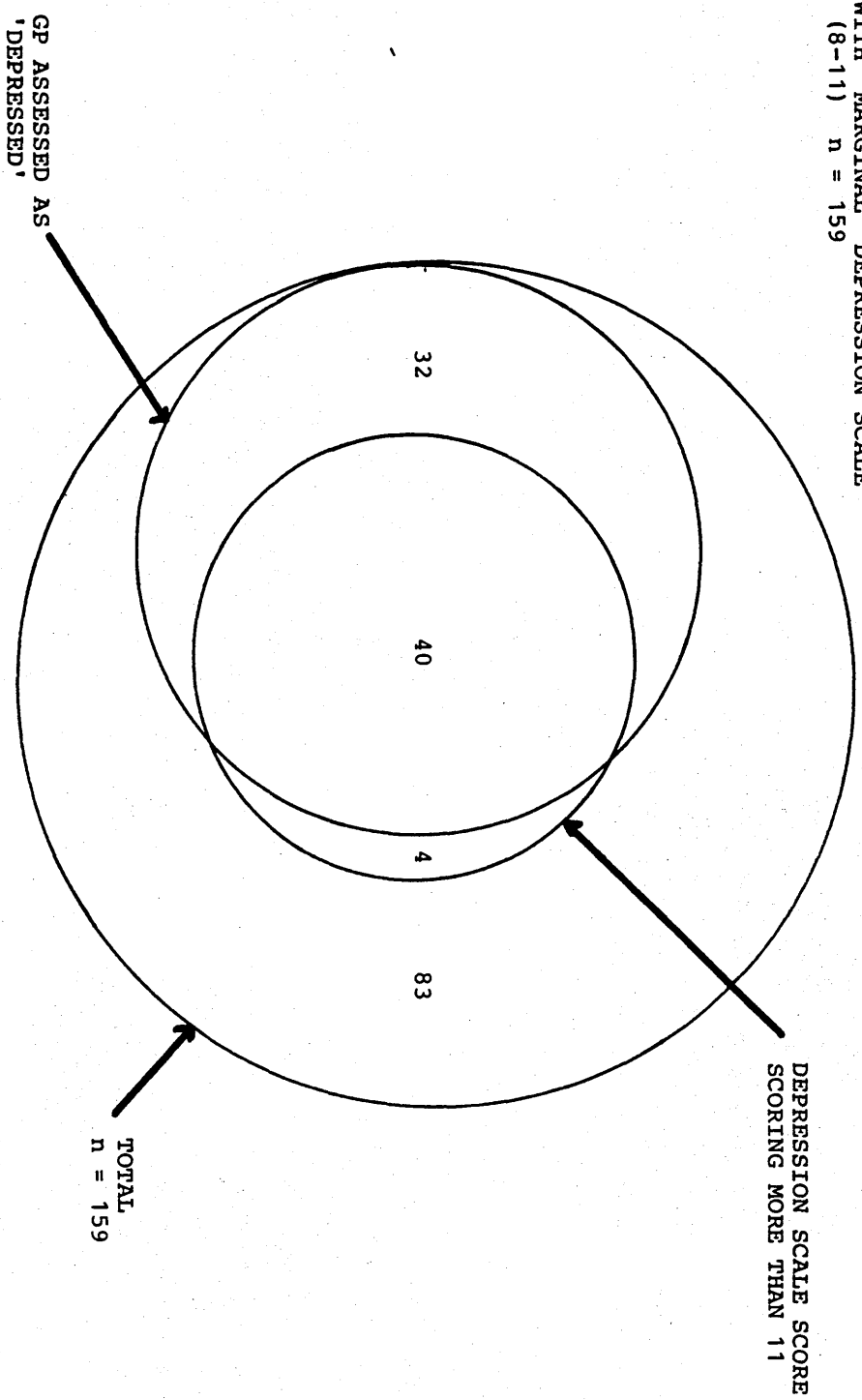
7) CHARACTERISTICS OF SAMPLES ABOUT WHOM THERE WAS  
DISAGREEMENT BETWEEN GENERAL PRACTITIONER  
ASSESSMENT AND DEPRESSION SCALE SCORE

Using the cut point of the depression scale score that was best correlated with psychiatric assessment of some significantly depressed state, (9/10) and using the general practitioner assessment of any depression as implying recognition, the sample is divided into the four groups shown in Figure 5.4. Now a proportion of these appear in any one group only by virtue of a what might be termed a 'marginal' Depression Scale Score: i.e. a score which was closer to the cut-point than the maximum error possibly produced by inter-rater unreliability. As the latter, for the sub-sample participating in the reliability exercise, was plus or minus two points, subjects scoring between 8 and 10 inclusively might have been misclassified, and the inclusion of this group in the analysis of the reasons for disagreement might well obscure any special characteristics of these four groups. These cases were therefore excluded, and the four groups, about whose classification on the depression scale there could now be little doubt, are shown in Figure 5.8. It can be seen that the

TABLE 5.17 CHARACTERISTICS OF SAMPLE OF WHOM ANY GP ASSESSMENT OF DEPRESSION WAS MADE, BROKEN DOWN BY AGREEMENT/DISAGREEMENT WITH DEPRESSION SCALE, EXCLUDING THOSE WITH 'MARGINAL' DEPRESSION SCALE SCORES (8-11)

GP Assessment of Depression	Depression Scale Score		
	LOW	HIGH	
None	n = 83	n = 32	n = 40
'Agreed non-depressed'	46 (55.4%)	13 (40.6%)	10 (25.0%)
	28 (33.7%)	6 (18.7%)	28 (70.0%)
Living Alone	27 (32.5%)	10 (31.2%)	20 (50.0%)
	72.5 [ 6.33]	73.0 [ 5.17]	76.0 [ 5.53]
Mean Age [S.D.]			

FIGURE 5.8:  
SCALED VENN DIAGRAM OF AGREEMENT BETWEEN  
G.P. ASSESSMENT OF DEPRESSION, AND  
DEPRESSION SCALE SCORE, EXCLUDING  
CASES WITH 'MARGINAL' DEPRESSION SCALE  
SCORES (8-11) n = 159



exclusion of these 'marginal' cases increases that proportion of the disagreement produced by assessments of depression by general practitioners in persons who have low depression scale scores- from 80.9% to 95.4%- with a concomitant reduction in the proportion assessed as not depressed by the general practitioners but with a high depression score; the so-called 'missed' depressions.

Table 5.17 shows the demographic characteristics of the sample, excluding those with 'marginal' depression scale scores, broken down by whether or not there was agreement between the general practitioner assessment of depression and Depression Scale Score. (The number of those assessed as not depressed by the general practitioners but with a high depression score was too small for useful comparison, and they were excluded from this table.) In terms of age and sex-ratio, the sample about whom there was disagreement occupied a position intermediate between the 'agreed non-depressed' and 'agreed depressed' groups, but the 'disagreement' group had fewer widowed subjects than either of the others.

Table 5.18 shows various factors that appeared to be related to the disagreement between general practitioner assessments of depression and the scale

TABLE 5.18 FACTORS ASSOCIATED WITH AGREEMENT OR DISAGREEMENT BETWEEN GENERAL PRACTITIONER ASSESSMENT OF DEPRESSION AND DEPRESSION SCALE SCORE: CHARACTERISTICS OF SAMPLE ABOUT WHOM ANY GP ASSESSMENT WAS MADE, EXCLUDING 'MARGINAL' SCALE SCORES (8-11)

Depression Scale Score	LOW		HIGH	
	None	Mild/Moderately Severe	Mild/Moderately Severe	Mild/Moderately Severe
Presented with psychological complaint	7 ( 8.4%)	5 (15.2%)	14 (35.0%)	
Presented with acute complaint	42 (50.5%)	21 (65.6%)	26 (65.0%)	
GP thought pain a cause of depression	-	24 (75.0%)	20 (50.0%)	
Looked sad at interview	4 ( 4.5%)	4 (12.5%)	20 (50.0%)	
3 or more physical symptoms at interview	15 (18.0%)	10 (31.3%)	16 (40.0%)	
On any psychotropic medication	11 (13.2%)	5 (15.6%)	20 (50.0%)	
On antidepressant	1 ( 1.2%)	1 ( 3.1%)	6 (15.0%)	
Mean number non-psychotropic medication [S.D.]	1.73 [1.32]	2.46 [1.43]	1.87 [1.45]	

'Agreed non-depressed'  
n = 83

'Disagreed'  
n = 32

'Agreed depressed'  
n = 40

score. The features which distinguish the group about which there was disagreement include taking a high number of non-psychotropic drugs, and a general practitioner assessment of depression caused by pain or physical illness. This group occupied a position intermediate between the 'agreed non-depressed' and 'agreed depressed' groups in terms of the proportion presenting with a spontaneous psychological complaint, looking sad at interview, taking psychotropic medication (and antidepressants), and in the number of physical symptoms elicited at interview; but it was comparable with the 'agreed depressed' group in terms of the proportion presenting with an acute problem.

8) THE RESPONSE OF GENERAL PRACTITIONERS TO THE PATIENTS AT INITIAL CONSULTATION

a) Medication being taken by the subjects

The numbers of drugs taken by the whole sample as of the day of consultation - that is, including drugs both previously taken and newly prescribed by the general practitioner at the consultation- are shown in Table 5.19. All categories of medication except topical preparations and mouth washes were included. The mean number of medications taken were 2.02 for



**TABLE 5.19** Numbers of prescribed or non-prescribed medications being taken on day of initial consultation (includes new prescriptions given at initial consultation)

	MALES	FEMALES	TOTAL
NIL	9 (10.8%)	16 (10.5%)	25 (10.6%)
1	24 (29.8%)	36 (23.6%)	60 (25.5%)
2	23 (27.7%)	36 (23.6%)	59 (25.1%)
3	16 (19.2%)	36 (23.6%)	52 (22.1%)
4	7 (8.3%)	17 (11.1%)	24 (10.2%)
5	2 (2.4%)	6 (4.0%)	8 (3.4%)
6	2 (2.4%)	5 (3.3%)	7 (2.9%)
<b>TOTAL</b>	<b>83 (100%)</b>	<b>152 (100%)</b>	<b>235 (100%)</b>

**TABLE 5.20** 10 most common categories of medication being taken at initial consultation (includes new prescriptions) (n=235)

CATEGORY*	NO TAKING MORE THAN ONE DRUG IN CATEGORY	NO TAKING ANY DRUG IN CATEGORY	% OF SAMPLE
Analgesic	2	53	23.4
Diuretic	3	49	20.8
Non-steroid anti-inflammatory	0	49	20.8
Oral bronchodilator	6	31	13.2
Benzodiazepine Hypnotic	0	30	12.8
Antibiotic	1	26	11.1
Antacid, anti-ulcer	2	25	10.6
Benzodiazepine (day-time)	1	25	10.6
Beta-blocker, anti-arrythmic	0	21	8.9
Anti-hypertensive	1	18	7.7

\*see appendix VII for list of all categories

**TABLE 5.21** NUMBERS TAKING PSYCHOTROPIC MEDICATION  
AS OF DAY OF INITIAL INTERVIEW

	MALES n=83	FEMALES n=152	TOTAL n=235
No psychotropic	68 (81.9%)	152 (73.6%)	235 (76.1%)
Major tranquilliser	0 (- %)	0 (- %)	0 (- %)
Antidepressant	2 (2.4%)	11 (7.3%)	13 (5.5%)
Benzodiazepine (day)	7 (8.3%)	17 (11.1%)	24 (10.2%)
Benzodiazepine hypnotic	9 (10.7%)	21 (13.9%)	30 (12.8%)
Other hypnotic, narcotic, barbiturate	1 (1.2%)	3 (1.9%)	4 (1.7%)
Any psychotropic medication	15 (17.9%)	41 (27.0%)	56 (23.9%)

males and 2.26 for females: in all 2.18. Females were more likely to be on four or more medications at the day of consultation than males. Changes in prescriptions, and new prescriptions, are described below.

Medication was classified according to the Monthly Index of Medical Specialities categories<sup>70</sup> but certain categories were expanded or collapsed according to the frequency with which they had to be used. A list of the categories, of which at least one subject was taking one member, is to be found in Appendix VII. The ten most commonly used categories in the whole sample, as of the day of consultation, are shown in Table 5.20. Details of psychotropic medication taken by this sample is to be found in Table 5.21. It will be seen that, although the most frequently used psychotropic category - benzodiazepine hypnotics - were taken by 12.8% of the sample, overall just under one quarter of the sample were taking some form of psychotropic medicine. There was a marked sex difference in the use of psychotropic medication in the sample.

The relationship between the use of this psychotropic medicine and the scores on the depression scale on the one hand, and general practitioner

TABLE 5.22 PATIENTS TAKING PSYCHOTROPIC MEDICATION AS OF DAY OF CONSULTATION

	DEPRESSION SCALE SCORE		GP ASSESSMENT OF DEPRESSION	
	Low n = 163	High n = 72	None n = 112	Mild/moderately/ Severe n = 107
Benzodiazepine, Hypnotic	14 ( 8.6%)	16 (22.2%)	10 ( 8.9%)	18 (16.8%)
Day Benzodiazepine	8 ( 4.9%)	17 (23.6%)	5 ( 4.5%)	18 (16.8%)
Antidepressant	6 ( 3.7%)	7 ( 9.7%)	5 ( 4.5%)	7 ( 6.5%)
Any psychotropic medication	26 (15.9%)	30 (41.7%)	18 (16.1%)	34 (31.8%)

**TABLE 5.23** Characteristics of patients on antidepressant medication at interview (n=13)

MALES	2	(15.3%)
FEMALES	11	(84.6%)
MEAN AGE [S.D.]	75.5	[7.21]
WIDOWED	7	(53.8%)
LIVING ALONE	8	(61.5%)
HIGH DEPRESSION SCALE SCORE	7	(53.8%)
ASSESSED AS DEPRESSED BY G.P.	7	(58.3%*)

\* of all patients whose assessment was completed by G.P.

assessments of depression on the other, are shown in Table 5.22. Those subjects with a high Depression Scale Score were three times as likely to be taking any benzodiazepine, and just under three times as likely to be taking any psychotropic medication, than those with a low score. They were also taking, on average, more medications generally. However, subjects with a high Depression Scale Score were taking less non-psychotropic medication than those with a low score, so this excess of medication was entirely made up of psychotropic drugs. This contrasted with a difference between those subjects whom the general practitioners assessed as depressed and those who were not so assessed: there was an excess of non-psychotropic medications in the former group as well as psychotropic medication.

The characteristics of the 13 subjects (5.5% of the sample) taking antidepressants at the initial consultation are shown in Table 5.23. It will be seen that only half had a high depression scale score, and slightly more were assessed as depressed by the general practitioner. Those taking antidepressants represented 12.5% of those with a high depression scale score.

TABLE 5.24 CHANGES IN MEDICATION MADE BY GENERAL PRACTITIONERS AT INITIAL CONSULTATION  
N=235

Number of subjects		
- with 1 or more extra (additional) prescription :	59	(22.2%)
- with 1 or more medication stopped:	2	(0.8%)
- with dose change only:	1	(0.4%)

Frequency of new prescriptions by category of medication

Antacids, anti-ulcer	12	(16.4%)
Antibiotics	11	(15.1%)
Analgesics	11	(15.1%)
Non-steroid anti-inflammatory	8	(11.0%)
Oral bronchodilators, expectorants	5	(6.8%)
Tonics, placebos	5	(6.8%)
Benzodiazopine (day)	4	(5.5%)
Antidepressants	3	(4.1%)
Beta-blockers, anti-arrythmics	3	(4.1%)
Other drugs	11	(15.1%)
<hr/>		
TOTAL	73	(100%)



a) CHARACTERISTICS OF PATIENTS NEWLY PRESCRIBED  
PSYCHOTROPIC MEDICATION AT INITIAL CONSULTATION  
n = 6

MEAN AGE            77.3   [7.55]

Males            1 (16.7%)

Females        5 (83.3%)

Low Depression Scale   2 (33.3%)

High Depression Score   4 (66.7%)

GP Assessment of No Depression:   1 (16.7%)

   Mild Depression:   3 (50.0%)

   Moderate Depression:   2 (33.3%)

b) PATIENTS NEWLY PRESCRIBED ANTIDEPRESSANTS AT  
INITIAL CONSULTATION            n = 3

	Patient 1	Patient 2	Patient 3
Age	80	83	86
Sex	F	F	F
Depression Score	14	14	13
GP Assessment of Depression	Moderate	Mild	Moderate
Looked Sad at Interview	No	Yes	Yes

b) Changes in medication made by general practitioners at initial consultation

These are shown in Table 5.24. The great majority of these changes involved the addition of medication- in only 3.2% of subjects with any change was this a reduction. The frequency of the more commonly used categories of additional medication is shown below: psychotropic drugs accounted for a small proportion of these.

The characteristics of the few patients receiving one or more new psychotropic drugs, and the three patients receiving a new prescription of antidepressants, are shown in Table 5.25. All the latter were elderly females with high depression scale scores, whereas the prescription of new psychotropic drugs in general related less strongly to depression scale scores.

c) Referral and other action taken by general practitioners at initial consultation

Table 5.26 shows the principal changes initiated by the general practitioner at the initial consultation, for the interviewed sample, based on the patients' account. No patient was referred outside

TABLE 5.26 CHANGE IN TREATMENT AND REFERRAL INITIATED BY G.P. (N=235)

	MALES	FEMALES	TOTAL
NONE	46 (55.4%)	89 (58.5%)	135 (57.4%)
Change of medication only	25 (30.1%)	41 (27.0%)	66 (28.0%)
Non-psychiatric referral only	2 (2.4%)	8 (5.3%)	10 (4.3%)
Psychiatric referral only	1 (1.2%)	0 ( - )	1 (0.4%)
Paramedical referral only	0 ( - )	4 (2.6%)	4 (1.7%)
Investigation (e.g. X-ray) only	5 (6.0%)	6 (4.0%)	11 (4.7%)
Surgical procedure (dressing change only)	2 (2.4%)	1 (0.7%)	3 (1.3%)
Information not recorded	2 (2.4%)	2 (1.3%)	4 (1.7%)
ANY CHANGE	37 (44.6%)	63 (41.5%)	100 (42.6%)

TABLE 5.27 CHANGE IN TREATMENT AND REFERRAL INITIATED BY GP AT INITIAL CONSULTATION

	Depression Scale Score		GP Assessment of Depression	
	Low n = 163	High n = 72	None n = 112	Mild n = 107
NONE	97 (59.5%)	38 (52.7%)	70 (62.5%)	55 (51.4%)
Change of medication only	47 (28.8%)	19 (26.3%)	29 (25.8%)	34 (31.7%)
Non-psychiatric referral only	4 (2.5%)	6 (8.3%)	4 (3.6%)	5 (4.7%)
Psychiatric referral only	1 (0.6%)	0 -	0 -	1 (0.9%)
Investigation (eg X-ray) only	7 (4.3%)	4 (5.6%)	4 (3.6%)	7 (6.6%)
Information not recorded	2 (1.2%)	2 (1.2%)	1 (0.9%)	3 (2.8%)

TABLE 5.28 CHANGES IN TREATMENT AND REFERRAL INITIATED BY GENERAL PRACTITIONER AT INITIAL CONSULTATION, EXCLUDING 'MARGINAL' DEPRESSION SCALE SCORES BY AGREEMENT/DISAGREEMENT BETWEEN ASSESSMENT OF DEPRESSION AND SCALE SCORE

Depression scale score	LOW		HIGH	
	None	Mild/Moderately Severe	Mild/Moderately Severe	Mild/Moderately Severe
GP Assessment of Depression				
	'Agreed non-depressed' n = 83	'Disagreed' n = 32	'Agreed depressed' n = 40	
Changes in medication	22 (26.5%)	12 (37.5%)	13 (32.5%)	
Non-psychiatric referral	3 (3.6%)	0	4 (10.0%)	
Psychiatric referral	0	0	0	
Referral for investigation (eg X-ray)	3 (3.6%)	2 (6.3%)	2 (5.0%)	
Information not recorded	1 (1.2%)	1 (3.1%)	2 (5.0%)	

the health services at the initial consultation. There was no obvious difference between men and women's experience. Table 5.27 shows the same data broken down by depression scale score and general practitioner assessment of depression. There was a tendency for those with a high depression scale score to be referred for non-psychiatric opinion, but otherwise little difference between those identified (by either method) as depressed or not. When referral and treatment changes are examined in the light of agreement or disagreement between general practitioner assessment of depression and depression scale score, excluding those with 'marginal' scores as described above, (Table 5.28), the only tendency obvious was for those about whom there was some disagreement to be referred for non-psychiatric opinion.

#### 9) DERIVATION OF THE FOLLOW-UP GROUP

As described in the section on 'Method', all subjects with a high depression scale score were selected for follow-up, and an approximately equal number with a low score were included to act as controls. During the course of the study it became apparent that the majority of subjects about whom there was disagreement between the depression scale score and general practitioner assessment were

TABLE 5.29 DERIVATION OF FOLLOW-UP SAMPLE

	Initial High Scorers on Depression Scale n = 72	Subjects Assessed by G.P. as Depressed, but with Low Scale Scores n = 51	Other Low Depression Scale Scorers n = 112
Not Sampled	1	17	61
Sampled	71	34	51
Died	2 ( 2.8% of sampled)	3 ( 8.8% of sampled)	0
Refused Follow-Up	10 (14.1% of sampled)	8 (23.5% of sampled)	9 (17.6% of sampled)
Could not be traced	2 ( 2.8% of sampled)	1 ( 2.9% of sampled)	1 ( 2.0% of sampled)
Total Losses	14 (19.7% of sampled)	12 (29.4% of sampled)	10 (19.6% of sampled)
Follow-Up Interview	57 (80.3% of sampled)	22 (70.6% of sampled)	41 (80.4% of sampled)
Total Follow-Up Sample		120 (76.9% of sampled)	

'low-scorers'. These were not necessarily included in the follow-up sample, although they were of some interest from the point of view of outcome. By this time, however, the selection for the first 'batch' of subjects was complete, and follow-up interviews had started: any subjects from this group were included by chance. Subsequently, members of this group were especially included, but, as can be seen from Table 5.29, only 66.6% of them were sought for follow-up, and this group also had a relatively high refusal rate at follow-up. The single patient with a high depression scale who was not sought for follow-up was the result of an administrative error.

The follow-up group was selected, therefore, on one of three grounds: 71 with a high depression scale score, 34 with a low score but assessed as depressed by the general practitioner, and a control group of 51 'agreed non-depressed' subjects. Losses at this stage were comparable for the first and last of these groups, but higher for the middle. The refusal rate was generally higher than expected- all the patients had agreed to follow-up when seen at the surgery- but many had forgotten the interview. The tracing information taken at the initial interview was of use in a small number of cases, but did not prevent the disappearance of a number of subjects from their



TABLE 5.30 Comparison of subjects lost to follow-up with those followed up

	SUBJECTS LOST TO FOLLOW-UP	SUBJECTS FOLLOWED UP
NO.:	36	120
MEAN AGE [S.D.]	73.7 [5.57]	73.6 [5.94]
MALES	15 (41.6%)	35 (29.2%)
WIDOWED	12 (33.3%)	51 (42.5%)
LIVING ALONE	14 (38.8%)	49 (40.8%)

addresses, though not from the lists or records of the general practitioners.

The demographic characteristics of the sample selected are compared with those who were actually interviewed at follow-up in Table 5.30. There was a tendency for females and widow(er)s to be over-represented in those re-interviewed.

The interval between initial interview and follow-up interview ranged between 7 months and 15 months. The mean interval was 9.45 months [S.D. 1.09].

#### 10) OUTCOME

##### a) Mortality

As can be seen from Table 5.29, 5 subjects (3.21% of the 156 sought for follow-up) had died within 9 months of initial interview. Their characteristics are shown in Table 5.31. There was no relationship between mortality and initial depression scale score: those who died represented 3.52% of low-scorers and 2.73% of high-scorers. However, a disproportionate number of the dead were men, all had some sensory

TABLE 5.31 CHARACTERISTICS OF THOSE SOUGHT FOR  
FOLLOW-UP BUT WHO HAD DIED n = 5

	Died n = 5	Sought but Not died n = 151
MEAN AGE	76.2 [5.35]	73.6 [5.86]
Males	3 (60.0%)	47 (31.1%)
Females	2 (40.0%)	104 (68.8%)
Widowed	2 (40.0%)	61 (40.3%)
Living Alone	2 (40.0%)	61 (40.3%)
Low Depression Score	3 (60.0%)	82 (54.3%)
High Depression Score	2 (20.0%)	69 (45.6%)
GP Assessment of Depression:	5 (100%)	85 (56.3%)
(GP Assessment Missing):	0 -	8 (5.3%)
GP Assessed Depression due to pain:	4 (80.0%)	54 (35.8%)
Hearing or Eyesight problems	5 (100%)	83 (54.9%)

TABLE 5.32 Characteristics of follow-up sample (n=120)

DEPRESSION SCALE SCORE:	SAMPLE A		SAMPLE B		SAMPLE C		SAMPLES B+C	
	HIGH	LOW	MILD/MODERATE/SEVERE	LOW	NONE	LOW	LOW	
GP ASSESSMENT OF DEPRESSION:	-		-		-		-	
	"Agreed depressed"		"Disagreed"		"Agreed non-depressed"		All with low depression score	
	n= 57		n=22		n=41		n=63	
MEAN AGE [S.D.]	74.5 [5.89]	73.0 [4.88]	72.9 [6.5]	72.9 [5.94]				
MALES	12 (21.1%)	8 (36.3%)	15 (36.5%)	23 (36.5%)				
FEMALES	45 (78.9%)	14 (63.7%)	26 (63.5%)	40 (63.5%)				
WIDOWED	31 (54.3%)	4 (18.1%)	16 (39.0%)	20 (31.7%)				
LIVING ALONE	27 (47.3%)	5 (22.7%)	17 (41.4%)	22 (34.9%)				
MEAN NO. PHYSICAL SYMPTOMS [S.D.]	2.10 [0.84]	1.72 [0.88]	1.68 [0.99]	1.70 [0.94]				
IMPORTANT LIFE EVENT IN FOLLOW-UP PERIOD	14 (24.5%*)	8 (36.3%)	12 (29.2%*)	20 (32.3%*)				
BOTHERED AND DEPRESSED BY FREQUENT LONLINESS	30 (52.6%)	4 (18.1%)	1 (2.4%)	5 (7.9%)				

\*excludes 1 subject with missing response

deficit, and all were considered by their general practitioner to be depressed at the initial consultation.

b) Admissions to hospital and long-term care

Of the 156 subjects sought for follow-up, 1 was permanently admitted to an old people's home during the follow-up period, two subjects attended psychiatric out-patients, one subject attended a geriatric day hospital, and one patient attended a psychiatric day hospital. Details of these cases are to be found in Appendix VI(b to e).

c) Characteristics of sample who were successfully interviewed at follow-up

These are shown in Table 5.32, arranged by the three groups who were sought for follow-up- those with a high depression scale score (sample 'A'), those with a low depression scale score but assessed as depressed by the general practitioner at the initial consultation (sample 'B') and the remainder of the randomly-selected 'control' group of low-scorers (sample 'C'). It will be seen that, the use of the depression scale score as a means of selection for follow-up resulted in some differences in the

TABLE 5.33 Outcome for follow-up sample (n=120)

DEPRESSION SCALE SCORE:	SAMPLE A		SAMPLE B		SAMPLE C		SAMPLES B+C	
	HIGH	LOW	MILD/MODERATE/SEVERE	NONE	LOW	LOW	LOW	
GP ASSESSMENT OF DEPRESSION:	-	-	-	-	-	-	-	
"Agreed depressed"	n= 57		n=22		n=41		All with low depression score n=63	
"Disagreed"	-		-		-		-	
"Agreed non-depressed"	-		-		-		-	
in Depression Score*	21 (36.8%)	15 (68.1%)	-	35 (85.4%)	-	50 (79.4%)	16 (26.8%)	
Improved:	36 (63.2%)	7 (31.8%)	5 (12.2%)	5 (12.2%)	12 (19.1%)	12 (19.1%)	7 (11.1%)	
Same:	-	-	missing: 1	2 (4.9%)	1 (1.5%)	1 (1.5%)	1 (1.5%)	
Worsened:	-	-	-	-	-	-	-	
ed Non-psychiatric outpatients:	15 (26.3%)	5 (22.7%)	11 (26.8%)	4 (9.8%)	9 (14.3%)	9 (14.3%)	9 (14.3%)	
ed GP more than 9 over follow-up :	15 (26.3%)	5 (22.7%)	2 (4.9%)	7 (11.1%)	7 (11.1%)	7 (11.1%)	7 (11.1%)	
ed to hospital :	11 (19.2%)	5 (22.7%)	4 (9.8%)	9 (14.3%)	9 (14.3%)	9 (14.3%)	9 (14.3%)	

ge means crossing cut-point

demographic characteristics of samples 'A' and 'B and C' taken together. However, their experience of 'life events' appeared similar.

d) Change in depression scale score

Table 5.33 shows the outcome for these samples- A,B and C. Approximately one third of those initially depressed had improved at follow-up, and only one-fifth of initial low-scorers had worsened. (These changes are made on the basis of crossing the cut-point of 9/10 on the depression scale). Excluding those with score changes of two points or less, these proportions become 55.6% and 35.4% respectively.

e) Use of services

The general practice records were examined for frequency of consultation over the follow-up period, during which some personal contact with the general practitioner or practice clinical personnel took place- that is, excluding events like repeat prescriptions. At the same time, it was possible to ascertain the reliability of this information by examining the records for signs of the initial consultation- that is, when the subject was definitely in face-to-face contact with the general practitioner.

TABLE 5.34 CHARACTERISTICS OF FOLLOW-UP SAMPLE BROKEN DOWN BY FREQUENCY OF CONSULTATION WITH GP REPORTED OVER FOLLOW-UP PERIOD n = 119 (1 subject not reported)

	10 or More Consultations	9 or Less Consultations
	n = 22	n = 97
Mean Age [S.D.]	73.2 [5.13]	73.6 [5.93]
Males	7 (31.8%)	28 (28.8%)
Females	15 (68.1%)	69 (71.2%)
Widowed	6 (27.2%)	44 (45.3%)
Living Alone	5 (22.7%)	43 (44.3%)
High Depression Scale Score	15 (68.1%)	41 (42.2%)
Assessed as Depressed by GP	20 (100%*)	48 (51.7%*)
Mean No. of Physical Symptoms [S.D.]	2.36 [0.66]	1.78 [0.93]

\* excluding cases GP did not assess



A large proportion of the initial consultations were not noted in the general practice records (from 14.6% in one practice to 62.2% in another; overall, 32.2% of these were unaccompanied by any record of a consultation or even prescription). It had been hoped that details of medication changes and diagnosis could also be elicited from these records, but in only one practice did they contain any recoverable information on these topics. The low rates of recording consultations made it very unlikely that any differences between groups could be determined. For these reasons the practice records were abandoned as a source of data for this study, and are not considered further.

There seemed to be no relationship between attendance at out-patients or admission to hospital and an initially high depression scale score, but there was a higher rate of attendance at general practice in this group. Those about whom there was disagreement on the question of depression also had a high rate, but this was balanced by a much lower rate in those who were 'agreed non-depressed'. Further details are shown in Table 5.34- all those with 10 or more consultations had been originally assessed as depressed by their general practitioner.

**TABLE 5.35 CHANGE IN USE OF MEDICATION OVER FOLLOW-UP PERIOD (n=120).**

Most commonly used categories only

	No. taking any drug in category		RANK CHANGE
	INITIAL	FOLLOW- UP	
Non-steroid anti-inflammatory drugs	33 (27.5 %)	11 ( 9.2 %)	-5
Diuretics	28 (23.3 %)	30 (25.0 %)	+1
Analgesics	27 (22.5 %)	25 (20.8 %)	+1
Benzodiazepine hypnotics	21 (17.5 %)	24 (20.0 %)	+1
Benzodiazepines (day)	17 (14.2 %)	14 (11.7 %)	0
Antacids	14 (11.6 %)	15 (12.5 %)	+2
Oral broncho-dilators, expectorants	13 (10.8 %)	11 ( 9.2 %)	+1
Beta-blockers, anti-arrythmics	13 (10.8 %)	10 ( 8.3 %)	-1
Antibiotics	11 ( 9.2 %)	5 ( 4.2 %)	-2
Antidepressants	10 ( 8.3 %)	9 ( 7.5 %)	+1
Anti-hypertensives	6 ( 5.0 %)	5 ( 4.2 %)	0
Digoxin	5 ( 4.2 %)	8 ( 6.7 %)	+2

**TABLE 5.36 NUMBERS TAKING PSYCHOTROPIC MEDICATION  
AT FOLLOW-UP**

	MALES n=35	FEMALES n=85	TOTAL n=120
No psychotropic	28 (80.0%)	52 (61.1%)	80 (66.7%)
Major tranquilliser	0 (- %)	1 (1.2%)	1 (0.8%)
Antidepressant	0 (- %)	10 (11.7%)	10 (8.3%)
Benzodiazepine (day)	3 (8.6 %)	13 (15.2%)	16 (13.3%)
Benzodiazepine hypnotic	6 (17.1%)	19 (22.3%)	25 (20.8%)
Other hypnotic, narcotic, barbiturate	0 (- %)	3 (3.5%)	3 (2.5%)
Any psychotropic medication	7 (20.0%)	33 (38.8%)	40 (33.3%)

Changes in numbers taken:		Low initial Depression Score	High initial Depression Score	TOTAL
		n = 63	n = 57	n = 120
ALL MEDICATION	+5	1 ( 1.6%)	0 -	1 ( 0.8%)
	+4	0 -	1 ( 1.8%)	1 ( 0.8%)
	+3	2 ( 3.2%)	1 ( 1.8%)	3 ( 2.5%)
	+2	2 ( 3.2%)	2 ( 3.5%)	4 ( 3.3%)
	+1	8 (12.6%)	12 (21.0%)	20 (16.6%)
	0	23 (36.5%)	20 (35.0%)	43 (35.8%)
	-1	17 (26.9%)	11 (19.2%)	28 (23.3%)
	-2	7 (11.1%)	9 (15.7%)	16 (13.3%)
PSYCHOTROPIC MEDICATION	-3	3 ( 4.8%)	1 ( 1.2%)	4 ( 3.3%)
	+3	0 -	1 ( 1.7%)	1 ( 0.8%)
	+2	1 ( 1.6%)	0 -	1 ( 0.8%)
	+1	5 ( 7.9%)	4 ( 7.0%)	9 ( 7.5%)
	0	53 (84.1%)	48 (84.2%)	101 (84.1%)
	-1	4 ( 6.3%)	3 ( 5.3%)	7 ( 5.8%)
BENZODIAZEPINES	-2	0 -	1 ( 1.8%)	1 ( 0.8%)
	+2	0 -	2 ( 3.5%)	2 ( 1.7%)
	+1	2 ( 3.2%)	3 ( 5.3%)	5 ( 4.2%)
	0	56 (88.8%)	46 (80.7%)	102 (85.0%)
	-1	5 (7.9%)	5 ( 8.8%)	10 ( 8.3%)
	-2	0 -	1 ( 1.8%)	1 ( 0.8%)

f) Changes in use of medication over follow-up period

These data are based on the account given, at the initial consultation, of medication currently being consumed by each subject, and that given at follow-up interview at the subjects home 9 months later. In the former case information was checked against any prescription or medicine card (one practice used these) held by the patient, in the latter case it was checked against the containers of medication in use.

Table 5.35 shows the principal changes in medication use between the initial and follow-up interviews. Of particular interest is the disproportionate decrease in non-steroid anti-inflammatory drugs. In general, this sample of subjects appeared to be taking fewer drugs of any sort at follow-up than at initial interview. The numbers taking psychotropic drugs at follow-up are shown in Table 5.36. There was, again, a marked difference between men and women. Changes in apparent numbers of medication taken are shown in Table 5.37: there was a marked overall decline in numbers of medication taken by the follow-up sample, but little change in numbers of psychotropic medications. At the follow-up interview, a number of subjects were no longer taking drugs that they were taking at the initial interview,

TABLE 5.38 Changes in medication for follow-up sample (n=120)

DEPRESSION SCALE SCORE:	SAMPLE A		SAMPLE B		SAMPLE C	
	HIGH	LOW	MILD/MODERATE/SEVERE	NONE	LOW	NONE
GP ASSESSMENT OF DEPRESSION:	-					
	"Agreed depressed" n=57		"Disagreed" n=22		"Agreed non-" n=41	
ANY MEDICATION:	-0.16 [1.33]	-0.36 [1.49]	-0.22 [1.41]			
PSYCHOTROPICS:	0.04 [0.59]	0 [0.43]	0.07 [0.47]			
BENZODIAZEPINES:	0 [0.60]	-0.05 [0.37]	0.05 [0.31]			
ANY MEDICATION:	3 (5.3%)	1 (4.5%)	4 (9.8%)			
PSYCHOTROPICS:	4 (7.0%)	2 (9.1%)	4 (9.8%)			
BENZODIAZEPINES:	4 (7.0%)	2 (9.1%)	3 (7.3%)			
ANY MEDICATION:	7 (12.3%)	4 (18.2%)	5 (12.2%)			
PSYCHOTROPICS:	4 (7.0%)	2 (9.1%)	2 (4.9%)			
BENZODIAZEPINES:	5 (8.8%)	1 (4.5%)	1 (2.4%)			

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and a number of subjects were on new medication. This cessation and initiation of medication, together with mean changes in numbers of medications, are shown in Table 5.38, for samples 'A', 'B', and 'C'. There seemed to be no relationship between depression scale score and change, initiation or cessation of treatment.

g) Changes in Depression Scale Score over follow-up period

A plot of depression scale score at follow-up against that at the initial interview, for those that completed both, is shown in Figure 5.9. (1 case had too many missing values at follow-up interview to be included). The dashed lines show the 'cut-points'. If the depression scale score was stable, then one would expect the mean follow-up score to lie on the diagonal of this plot. In fact, a plot of this value for each value of the initial scale score inclines to the horizontal. There was thus a slight tendency for those with low initial scale scores to have higher scores at follow-up, and for those with high initial scale scores to have lower scores at follow-up.

TABLE 5.39

CHARACTERISTICS OF THOSE WHOSE DEPRESSION SCORE CHANGED  
(crossed cut-point) OVER FOLLOW-UP PERIOD

'SAMPLE A'

INITIAL HIGH SCORERS ON DEPRESSION SCALE n=57

	REMAINED HIGH SCORERS n=36	BECAME LOW SCORERS n=21
MEAN AGE [S.D.]:	75.1 [4.76]	73.5 [5.53]
ASSESSED AS DEPRESSED BY G.P.:	32 (91.4%*)	14 (77.7%*)
LIVING ALONE:	17 (47.2%)	10 (47.6%)
WIDOWED:	22 (61.1%)	9 (42.8%)
EXPERIENCED MAJOR LIFE EVENT:	8 (22.2%)	6 (28.5%)
EXPERIENCED MINOR LIFE EVENT:	9 (25.0%)	8 (38.0%)
BOTHERED BY FREQUENT LONLINESS:	22 (61.1%)	8 (38.0%)
MEAN NO. OF PHYSICAL SYMPTOMS: [S.D.]	2.33 [0.79]	1.71 [0.78]
LENGTH OF DEPRESSION MORE THAN 1 YEAR:	13 (36.1%)	2 (9.5%)

\* excludes cases when GP did not make any assessment



**TABLE 5.40: CHARACTERISTICS OF THOSE WHOSE DEPRESSION SCORE CHANGED (crossed cut-point) OVER FOLLOW-UP PERIOD**

'SAMPLES B & C'

INITIAL LOW SCORERS ON DEPRESSION SCALE n=62

	BECAME HIGH SCORERS n=12	REMAINED LOW SCORERS n=50
MEAN AGE [S.D.]:	73.2 [3.64]	72.6 [6.02]
EXPERIENCED MAJOR LIFE EVENT:	9 (75.0%)	11 (22.4%*)
EXPERIENCED MINOR LIFE EVENT:	5 (75.0%)	9 (18.4%*)
MEAN NO. OF PHYSICAL SYMPTOMS: [S.D.]	2.00 [0.85]	1.62 [0.97]

\* excludes 1 case where data missing

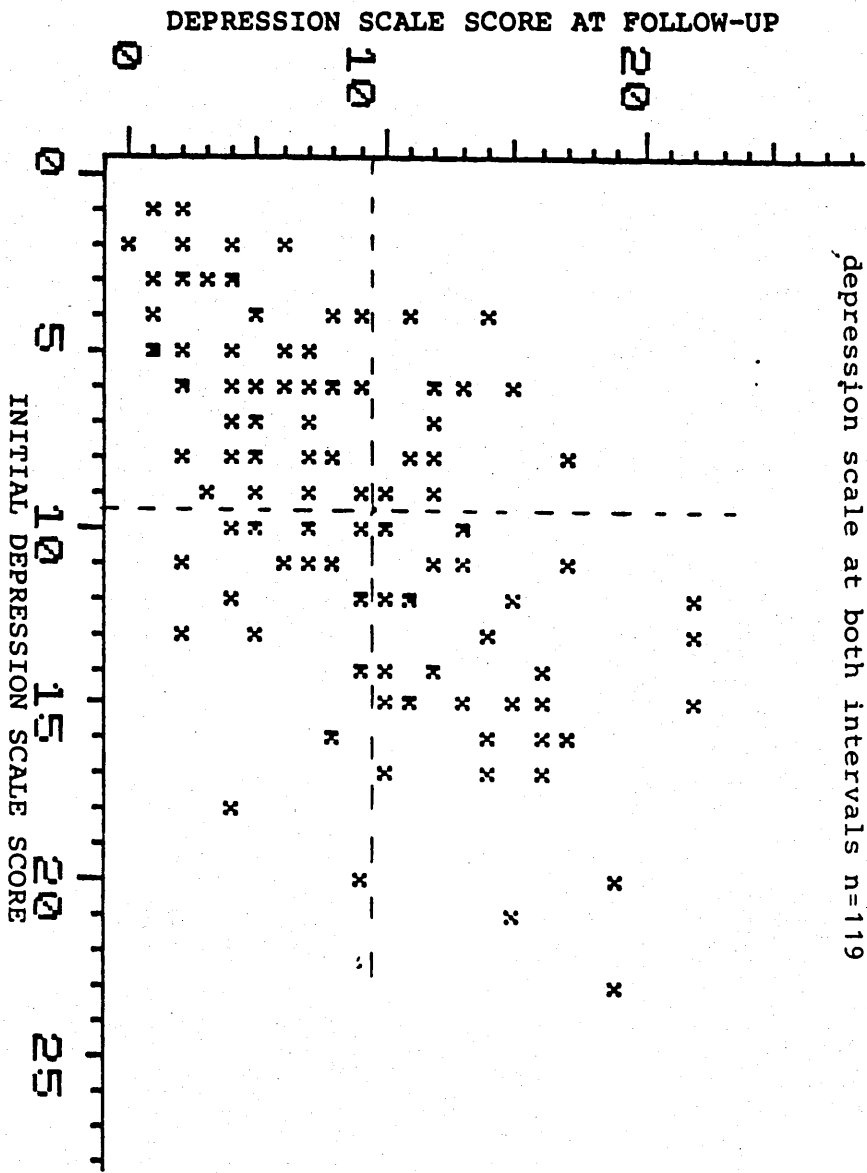


FIGURE 5.9 Plot of Depression Scale score at follow-up by initial depression scale score, for all who completed depression scale at both intervals n=119

Note: x= single case. Progressively blocked in with each case on same point

i) Improvements in those initially depressed

These are shown in Table 5.39. A complaint of being bothered or depressed by frequent loneliness, a higher age, a larger number of physical symptoms were all associated with 'remaining depressed', but the length of depressive symptoms, as given at initial interview, was very strongly associated with the absence of change in this group.

ii) Worsening in those with initial low scores

These are shown in Table 5.40, and it can be seen that the experience of an adverse life event is strongly associated with becoming a high scorer on the depression scale at follow-up.

**SECTION 6**

**DISCUSSION**

## DISCUSSION

### 1) SAMPLING AND REFUSAL RATES

For reasons discussed on page 89, the sampling procedure was not random, being dictated by the presence of an interval between one patient and the next sufficient for an interview to be carried out. Effort was taken to make sure that a patient did not leave a general practitioner expecting an interview and find no-one there, to an extent that favoured the selection of the first elderly patient at a surgery. However, as far as it is possible to determine from age and sex ratios, the interviewed sample were no different from those who refused, or all attenders in the study year.

### 2) CHARACTERISTICS OF THE GENERAL PRACTITIONERS INVOLVED IN THE STUDY

These three practices were chosen on the basis of different catchment areas. They had different styles, and the characteristics of the general practitioners who eventually took part, although in no way representative of practitioners as a whole, reflected the range of age, background and training in psychiatry that might be expected. Surprisingly, it

was the older general practitioners who had had some training in psychiatry- despite the fact that the criterion for "training in psychiatry" was no more than half a day's postgraduate experience or tuition. If this is representative of general practice as a whole, it would suggest either a failure to appreciate the contribution of psychological and psychosocial problems to morbidity in general practice<sup>30</sup>, or a perception of traditional hospital-based training in psychiatry as inadequate for general practitioners.

### 3) INTER-RATER RELIABILITY AND VALIDITY OF THE ASSESSMENT PROCEDURE

The demographic and other characteristics of the special sub-sample selected for these studies were not very different from the study sample as a whole. There was no reason to suspect any bias, except that deliberately introduced by the selection of those with higher depression scale scores for the validation exercise.

The reliability exercises, carried out at intervals throughout the study on a particular day of the week, encountered a low prevalence of high depression scale scorers, presumably by chance. Although the selection of cases for the reliability

exercise was not truly random, the method made it possible to suggest, with reasonable confidence, that the maximum unreliability (plus or minus two points on the depression scale) was representative of the un-reliability in the study as a whole, and could therefore be incorporated into the analysis. However the selection of cases for the validation exercise was perforce subject to the very considerable bias in favour of high-scorers, since it was not feasible to arrange for independent psychiatric assessments on a large number of subjects, and some selection was necessary. The validation of the depression scale by this means is therefore a "strengthening" of its use. There is one method of incorporating the agreement between depression scale and psychiatric assessment in the validation study into the main results by using the concept of "probable prevalence"<sup>71</sup>. This is discussed later (page 152).

4) THE PREVALENCE OF DEPRESSIVE STATES, AS INDICATED BY HIGH DEPRESSION SCALE SCORES, IN THE ELDERLY GENERAL PRACTICE ATTENDERS

The overall prevalence of 30.6% as indicated by the "validated" cut-point of the depression scale is higher than one would expect from population surveys using the same or similar methods. Gurland et al and

Copeland et al, using the CARE depression scale found a prevalence of depressive states of 13% in their study of the community elderly in London<sup>25</sup>. The prevalence rate approaches that found in residents with no signs of dementia in homes for the elderly in Camden (37.4%), using a 23-item depression scale from the C.A.R.E.<sup>72</sup>. Although the whole depression scale was not used in that study, the 23 item version was validated against independant psychiatric assessment using the same method as in the study now reported: indeed, the author of the present study was one of the validating psychiatrists for the Camden Study.

Goldberg has introduced the notion of "probable prevalence" to allow prevalence estimates to be made on the basis of screening instruments with a less-than-perfect agreement with the criterion chosen<sup>71</sup>. For instance, if the "positive predictive value" of a screening test (see page 131) is 85%, 15% of screening test positive subjects are criterion negative, so estimates based solely on the proportion of screening-test positive subjects would represent an inflation of 15%. Obviously, this error would be counterbalanced by the "negative predictive value" of the test procedure, which would lead to an under-estimate. The "probable prevalence" is a figure that takes these factors into account. Assuming that



the validation results from the present study hold for the whole sample, the "probable prevalence" of depression in the elderly surgery attenders was 34.9%—that is, the effect of incorporating disagreement with the criterion is to increase the prevalence estimate rather than reduce it.

However high the prevalence rate estimated by use of the depression scale score, the general practitioner assessment yielded an even higher rate. This was a surprising finding, in view of the reports in the literature of very low rates when the assessments of disorder are made by general practitioners themselves<sup>26,28,32</sup>. Two of the possible explanations are now discussed, with mention of the way in which the general practitioner assessment and the depression scale score disagreed.

The first possibility is that the general practitioners were 'sensitised' to the presence of depression by the research process, in a way that might not have occurred if the general practitioners had carried out the study themselves. As has already been discussed (p 80-81), if this took place, one would expect it to be greatest at the beginning of the study, and 'tail off' over the course of the study year. This would show itself in a difference between

the first and second 6 months of the survey in terms of a fall in the 'sensitivity' (the proportion of those with a high depression scale score with a general practitioner assessment of depression) with a corresponding rise in 'specificity' (the proportion of those with a low depression scale score with a general practitioner assessment of no depression). In fact, the sensitivity rose from 79.4% to 85.2% (120 subjects in the first 6 months and 99 subjects in the second) while the specificity fell from 67.8% to 61.5% between the first and second halves of the study. Thus there was no evidence of any 'sensitisation' that was susceptible to the passage of time.

The second possibility is that in this study the general practitioners simply had a much lower 'threshold' for designating patients as depressed than the general practitioners in the studies cited. Indeed, the comparison between the general practitioner assessments and different cut-points on the depression scale score indicated that the general practitioners agreed best with the depression scale at a lower cut-point than that validated against independent psychiatric assessment. However, even at this lower cut-point (7/8), there was considerable disagreement between the two assessments- a misclassification rate of 27.8% and a kappa value of

0.44 indicated that, quite apart from a difference in 'threshold' between the two assessments as categorisations, they seemed to be different in nature. This is shown in in the differing associations of the two assessments (Tables 5.12 to 5.14). Further evidence of this can be found in the characteristics of subjects about whom the two assessments of depression disagreed (Table 5.18).

In general, it appears that those cases deemed to be 'depressed' by the general practitioner but with a low depression scale are singled out as much by the way in which the general practitioner responded to them, as by patient's characteristics manifested at interview. Thus, although this group admitted less physical symptoms at interview than did the group about whom there was agreement on the presence of depression, they were more likely to be taking non-psychotropic medication, and were more likely to have this 'depression' attributed, by their general practitioner, to pain or physical illness. It appears, then, that the discrepancy between the general practitioner assessment of depression and the scale score may be in part explicable by the tendency of general practitioners to call patients 'depressed' whom they expect, on account of physical illness, to be depressed, taking little account of the actual

level of depressive symptomatology present.

Fortunately, perhaps, there was no evidence of any additional psychotropic medication in this group.

#### 5) PERSONALITY ASSESSMENTS

Further evidence that the two assessments (General practitioner assessment of depression and high depression scale score) are different in nature as well as threshold can be found in the relationship of each to the subjects retrospective self-assessments of personality. It is generally accepted that self-assessments of personality, in those with psychological problems or distress, are very likely to be contaminated by the current mental state<sup>66</sup>. There are no reasons for supposing that a retrospective self-assessment would be exempt from this, although one might expect some different effects. The study reported here also suggested some association, in the expected direction, of all the personality assessments that were made with any reasonable inter-rater reliability with the score on the depression scale. However, the general practitioner assessment of depression showed much weaker associations with these self-assessments, and some were in the direction opposite to that expected. Interestingly, the category 'tough, uncomplaining, resilient' was almost

twice as common in the group about whom there was disagreement between the general practitioner assessment and the depression scale score as it was in the group who were 'agreed depressed'. This might suggest that general practitioners were making an intuitive judgement, based perhaps on their knowledge of the combination of the patient's personality and physical illness, rather than on the actual presence of depressive symptoms.

#### 6) USE OF MEDICATION

In 1971 Parish published a study of psychotropic use in general practice, which included a retrospective survey of all prescriptions by 48 general practitioners in one year<sup>73</sup>. The year-prevalence of taking any psychotropic was 15.7% for those aged 65 or over (this figure is derived from Table 9 of his report). Murray et al found higher rates than Parish in their study of 2563 subjects in the community in West London<sup>74</sup>. There were 456 men and 681 women over 65 years old in their survey. The 2-week prevalence of taking any psychotropic medication was 13.6% for men and 21.9% for women, -overall 18.6% for this age group. The finding, in the present study, of a higher point-prevalence of drug use is probably due to the fact that attenders at

general practice surgeries, compared with community subjects, are a 'high-risk group' in terms of medication consumption. However, the differential rates for men and women were of much the same order. The prevalence of taking all individual categories of psychotropic medication was higher in the group of attenders than for that reported in Murray et al's study, but the sex-ratio was similar.

#### 7) CHANGES IN MEDICATION BETWEEN INITIAL INTERVIEW AND FOLLOW-UP INTERVIEW

The striking reduction in the numbers of medications being taken by the follow-up group contrasts markedly with the pattern of changes in medication initiated by the general practitioner at the surgery consultation- there was a definite tendency for general practitioners to add to the patient's medication rather than reduce it. This may be explained in several ways: for example, the changes made by the general practitioner at the initial consultation may have been unduly influenced by the fact that these patients were going to participate in a 'psycho-social' interview. However, these changes were mostly of non-psychotropic drugs, and, as has been discussed, this effect, if present, does not seem to have been part of any general 'sensitisation' by

the project.

Another possibility was that this decline was the result of a difference in the nature of the assessments of drug consumption at the two interviews. Although the question asked at each interview was the same, there may have been a tendency for subjects interviewed in the surgery, often with a new prescription, to be less willing to admit that they were not taking all their medications than they were at home, when no such reminder of their duty was present. Indeed, during the follow-up interviews, some subjects distinguished between 'being on' medications and actually consuming them. Another plausible explanation is that the elderly subjects simply gave up a large number of medications on their own initiative, allowing a balance to be struck with the therapeutic enthusiasm of their doctor. The 'problem' of non-compliance has been related, amongst other factors, to advancing age<sup>75</sup>.

The greatest changes were in non-psychotropic medication, and in particular in the use of non-steroid anti-inflammatory drugs. This may well have been due to the occurrence, during the study period, of a well-publicised 'scare' involving a particular non-steroid anti-inflammatory drug

reputedly responsible for the deaths of several elderly people. However, there was also a general reduction in the numbers of other categories taken, excluding psychotropics, whose consumption was fairly 'stable' over the follow-up period.

8) THE OUTCOME FOR DEPRESSED AND NON-DEPRESSED  
ELDERLY IN GENERAL PRACTICE

As has been stressed, the selection of patients for follow-up was based on their initial depression scale scores as well as their general practitioner assessments of depression, and therefore the whole group cannot be regarded as a representative sample of attenders.

Because of the disappointing data available from the records of the general practitioners, the 156 subjects sought for follow-up, divided into groups by depression scale score, were the denominator for estimates of mortality and admission to long-term care. The 120 re-interviewed subjects, again divided into groups, were the denominator for estimation of rates of short-term admission, out-patient or casualty attendance, consultation with general practitioners, and other factors about which data were gathered at interview.



The failure of both the depression scale scores and the general practitioner assessments of depression to predict attendance rates at out-patients and casualty is at variance with the findings of other work attempting to relate psychological health to service use in the elderly<sup>76,77</sup>. It may be that this facet of service use was relatively independent of "present state". Although no distinction was made in the data gathered from the patient on this topic (it was hoped that the 'hard data' would come from the G.P. records), the author's impression was that many of these attendances were of a 'routine', long-term surveillance type.

On the other hand, general practice attendances over the follow-up period, as estimated by the subjects, were markedly increased in those with depression as assessed by both methods. From Table 5.34 it will be seen that a general practitioner assessment of depression is equally strongly correlated with a high consultation rate as a high depression scale score, indicating that the depression scale score is only part of the explanation for this - the equivalent rates for the 'disagreed' group might well be explained by physical illness.

Reference has been made to the disappointing

quantity of useful data that could be gathered from the general practice records. In only one practice was there a reliable system for recording the medication that the patients were supposed to be taking. Whereas the failure to record information such as referral, admission and consultations may not be necessarily directly harmful to the patient, it has been known for some time that the elderly are at risk of iatrogenic disorder to an considerable degree, and there can be little doubt that a serious attempt to keep track of what an elderly patient is taking is a prerequisite to reducing such unnecessary morbidity.

The finding that, of those with initial low depression scale score, a greater proportion of the subjects who had significantly worse scores at follow-up had experienced life-events than had those who were not worse, is in keeping with that of Murphy, in her study of the relationship between life events and outcome in depressed out- and in-patients<sup>78</sup>. Unlike her findings, however, these results suggest that life events appeared to play no part in determining outcome for those already depressed at the initial interview- this might be explained by the longer outcome period in Murphy's study, as well the possibility that depression in a general practice

population is likely to run a different course from that of the condition in a sample referred to a specialist. Again, in this study, no attempt was made to corroborate the subjects' accounts, to assess physical health objectively, or to subject the history of 'life events' to exhaustive epistemological analysis.

9) RELATIONSHIP OF THE FINDINGS OF THIS STUDY TO  
OTHER RELEVANT WORK

In this study the general practitioners appeared, on the whole, to successfully identify the great majority of elderly patients with high depression scale scores as 'depressed'. This suggests that the reasons for the discrepancy between high 'community' rates of non-psychotic psychiatric disorder and low admission rates are not related to inability of general practitioners to recognise these disorders in their elderly patients. Before examining the implications of this finding, it is related to those of three other groups who have addressed this issue directly. Goldberg and his colleagues, in a number of related studies of the recognition of psychiatric morbidity by general practitioners, have established that much is 'missed'<sup>5</sup>. Recently Paykel and his group have published reports of apparently 'missed' major depressive disorder in attenders at general practice surgeries<sup>80</sup>, and finally Williamson et al, in 1964, published direct evidence that general practitioners were not aware of the high prevalence of psychiatric morbidity in their elderly patients<sup>22</sup>.

a) Goldberg and colleagues' work

Goldberg used a 2-stage screening method based on the concept of psychiatric 'caseness'. The general practitioners were asked to measure 'caseness' on a scale from 0 to 5. In the present study they were asked to assess the presence of depression. It may be that the idea of psychiatric 'caseness' is, to a general practitioner, synonymous with a need to refer, whereas the idea of 'depression' is accepted as less deterministic of action. Indeed, there may be inherent difficulties in demanding a general practitioner to determine 'caseness' when even very determined psychiatrists, of undisputed calibre, in the congenial setting of a major conference on this topic can find little to agree about<sup>79</sup>.

The subjects in the present study were elderly, with more physical illness than in younger attenders, and therefore, perhaps, regarded by the general practitioner as more 'legitimately' assigned to a pathological category.

There is no reason to suppose that the general practitioners were more 'sensitised' by the research method in the present study than they would have been by the use of a 'caseness'-orientated approach.

b) Paykel and colleague's work

During a study of the nature of major depressive disorder in general practice, Sireling et al reported recently an attempt to show that a high proportion of this was missed<sup>80</sup>. Random visits were made to the surgeries of 62 general practitioners who had been asked to notify the research team, over a 14 month period, of all patients aged between 18 to 64 whom the G.P. felt were 'sufficiently depressed to need treatment'. They were issued with a reminder card, and each G.P. was telephoned twice a week. At these visits a 'two-stage' screening procedure was to identify those with major depressive disorder (a DSM III category). They intimated that 24 cases of 'missed major depressive disorder' (i.e. cases satisfying their criteria who had not been notified previously to the team) were found in 1099 patients screened (2.1%).

Apart from the younger age-range, the major difference between the present study and that carried out by Paykel and his colleagues is that they did not actually ask the general practitioner whether each patient was depressed or not. If the criterion of 'recognition' of depression in the study reported in this thesis had been the same- i.e. a referral by the

G.P. to the research workers as needing treatment- a very similar picture would have emerged. What seems clear from the present study, at least for elderly patients, is that it is likely that G.P.'s have little trouble identifying depression, but do not appear to embark on specific treatment very often at all. Such a conclusion is quite compatible with Paykel's findings.

c) Williamson and colleagues' work

In his major study, Williamson showed that 76.2% of the cases of 'depression' in elderly patients on practice lists were unrecognised by their general practitioner<sup>22</sup>. They assessed recognition primarily by examining the general practice records in advance of the survey, and noting when a particular diagnosis was recorded. Although mention is made of occasions when general practitioner's records were inadequate for this purpose, and an interview had to be arranged with the doctor, it is unfortunately unclear how often this was necessary. The finding, in the present study, that in one practice 62.2% of attendances went entirely unrecorded, let alone anything approaching a diagnosis, suggests that perusal of records is not now an acceptable method of assessing recognition. It is uncertain whether general practice records in 1964

were any better kept.

A further, major difference between Williamson's study and the present one is that the former was of 'list' elderly patients, whereas this investigation was of elderly attenders, so that better recognition of psychiatric morbidity was to be expected, however this was assessed.



**SECTION 8**

**IMPLICATIONS**

## IMPLICATIONS

- a) The high rate of depressive states in elderly attenders at the surgeries

There is little doubt that, of the 30.6% of patients with a high depression scale score, a proportion were suffering from short-term dysthymic states which required little in the way of intervention. However, 63.2% of initial high scorers remained high scorers over the 9 month follow-up period, and represented a 'pool' of long-term morbidity that would appear to deserve attention, both by virtue of the suffering involved and by the consumption of general practitioner time in repeated consultation, and the consumption of psychotropic medication.

- b) The ability of general practitioners to recognise depression in elderly attenders

The readiness on the part of the general practitioners in this enquiry to recognise depression in this age-group seems to suggest that general practitioners need no instruction in 'detecting' depression- they may already be regarded as

'sensitive' screening instruments, if lacking in 'specificity'. This may, in fact, be a result of work like that of Goldberg and Williamson. Whatever the reason, they would appear to be in the best position to tackle the problems posed by this morbidity- there is a high prevalence, and they can readily detect the disordered state.

c) Low rates of referral and antidepressant treatment

Less than 10% of those with high depression scale scores were receiving any antidepressant therapy. The only referral, at initial consultation, for psychiatric opinion was a subject with a low depression scale score, and only two subjects attended psychiatric outpatients over the 9 month follow-up period. This suggests that these depressed states are perceived by the general practitioners as unlikely to respond to such approaches. Further phenomenological and therapeutic investigations into the degree with which such pessimism is justified seem necessary. As the prevalence in attenders is high, and general practitioners appear to have no difficulty in recognising these states, these investigations might well be carried out jointly by general practitioners and psychiatrists interested in the elderly.

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**APPENDICES**

**APPENDIX I FORM USED BY GENERAL PRACTITIONERS TO RECORD THEIR ASSESSMENT OF DEPRESSION: PILOT STUDY**

Coding Purposes Only

**GENERAL PRACTITIONER QUESTIONNAIRE**

**Instructions :** please tick the relevant box. The information requested concerns the past month

1. To what extent do you think this patient has been troubled by emotional problems in the past month? (Please tick one box)	Not at all	Slightly	Significantly	Very
2. To what extent do you think this patient has been depressed over the past month? (Please tick one box)	Not at all	Slightly	Significantly	Very
3. To what extent do you think any possible psychiatric illness or depression, present in the last month, could be improved by any current or new professional action? (Please tick one box)	Not at all or not applicable	Slightly	Significantly	A lot
4. Has the patient been receiving, during the month before today's consultation:				
a) Regular consultation with a psychiatrist or social worker	YES	or	NO	
PATIENT SEES PSYCHIATRIST OR SOCIAL WORKER				
b) Regular consultation with you or another general practitioner for help with psychiatric problems or depression? (Please tick)	YES	or	NO	DON'T KNOW
PATIENT SEES G.P. REGULARLY FOR EMOTIONAL PROBLEMS				
c) Regular prescription of hypnotic, sedative, tranquilliser or antidepressant medication? (Please tick)	YES	or	NO	
PATIENT ON HYPNOTIC, SEDATIVE, TRANQUILLISER OR ANTIDEPRESSIVE				
5. Is any relative of the patient regularly seeing any General Practitioner or mental health care specialist for help with emotional problems (Please tick)	YES	or	NO	DON'T KNOW
RELATIVE SEEN G.P. REGULARLY FOR EMOTIONAL PROBLEMS				
6. Which, if any, of the following do you intend to initiate or change as a result of today's consultation?				
a) Referral to a psychiatrist or social worker? (Please tick)	YES	or	NO	
PLAN: REFERRAL				
b) Prescription of hypnotic, sedative, tranquilliser or antidepressant medication? (Please tick)	YES	or	NO	
PLAN: PRESCRIPTION				
c) Recall for further consultation concerning emotional aspects of the patient's condition? (Please tick)	YES	or	NO	
PLAN: RECALL				
d) Arrangements for the interview of a relative of the patient, or other important third party, in connection with emotional problems	YES	or	NO	

For Coding Purposes Only

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

3. GENERAL PRACTITIONER QUESTIONNAIRE NAME ..... No. ....

To what extent do you think this patient has been depressed over the past month?  
(Please tick one box)

<input type="checkbox"/>	NOT AT ALL	<input type="checkbox"/>	MILDLY	<input type="checkbox"/>	MODERATELY	<input type="checkbox"/>	SEVERELY	<input type="checkbox"/>
--------------------------	------------	--------------------------	--------	--------------------------	------------	--------------------------	----------	--------------------------

IF ANY OF THESE, PLEASE ANSWER THE FOLLOWING

IN YOUR OPINION (NOT PATIENTS)

Do you think it is due to:

Physical Illness or Pain

Grief

Unhappy Relationships

Poor Housing

Financial Problems

Other (please indicate)

<input type="checkbox"/>	Yes	<input type="checkbox"/>	or	<input type="checkbox"/>	No	<input type="checkbox"/>	(please tick)
<input type="checkbox"/>	Yes	<input type="checkbox"/>	or	<input type="checkbox"/>	No	<input type="checkbox"/>	
<input type="checkbox"/>	Yes	<input type="checkbox"/>	or	<input type="checkbox"/>	No	<input type="checkbox"/>	
<input type="checkbox"/>	Yes	<input type="checkbox"/>	or	<input type="checkbox"/>	No	<input type="checkbox"/>	
<input type="checkbox"/>	Yes	<input type="checkbox"/>	or	<input type="checkbox"/>	No	<input type="checkbox"/>	

APPENDIX III

INITIAL C.A.R.E  
INTERVIEW



SHORT-CARE (U.K.)  
 (COMPREHENSIVE ASSESSMENT AND REFERRAL EVALUATION)

GPC / 16S

CARD 1

STUDY NUMBER

2				
---	--	--	--	--

1-4

INSTRUMENT STAGE

0	2
---	---

5-6

DATE OF INTERVIEW

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

7-12

INTERVIEWED BY:

--	--

13-14

NAME (Mr. Mrs. Miss)

\_\_\_\_\_  
 \_\_\_\_\_

1. Could I have your name please?

0 a) male = 1  
 female = 2

--

15

2. You have been seen by  
 Dr. \_\_\_\_\_  
 Is he your usual doctor?

0 b) Seen by own doctor

t f  
 1 0

n 9

16

0 c) Name of Dr. seen : \_\_\_\_\_

--	--

17-18

What did you see/are you going to see/your GP/physician for?  
 How have you been feeling lately?  
 This past month? Has anything important or out of the ordinary happened recently? Were you on any treatment before seeing your GP? What?

What did your GP say was the matter? Were you given any/new treatment?

Od) LIST DRUGS TAKING AS OF TODAY:  
 (both prescribed and not)

---



---



---



---



---

Presenting Complaint  
 Current Treatment  
 Change in Treatment


19-22  
 23-26  
 27-30

4. How old are you? e) RECORD AGE (Years) [ ] [ ] Card 1  
31-32

5. Could I have your date of birth? Q. F) RECORD DATE OF BIRTH [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 33-38  
(999999 if unknown)

1a - 4c not applicable  
5a - 8b not applicable

6. What kind of things do you worry about? t f n  
11a Admits to worrying without further probing 1 0 9 39-

Do you worry about: 1 0 9 40  
Your health: 1 0 9 41

Money? 1 0 9 42

Housing problems? 1 0 9 43

Anything else? 1 0 9

11f

IF MENTIONS WORRIES:

Do you worry about almost everything? 1 0 9 44  
11g Worries about almost everything

11h 1 0 9 45  
11j Always worries/been worrier

How long, roughly, have you had worries/been worrying? 1 0 9 46  
11k Onset in last 1 year

11l Onset in last 5 years 1 0 9 47

11m Onset in last 10 years 1 0 9 48

11n Onset before 10 years ago 1 0 9 49

7. Have you been sad or depressed during the past month?

12a Sad or depressed mood during past month

t f n  
1 0 9

(Card 1  
50

IF YES:  
Has anything particular happened to cause this?

12b Record answer:

--	--	--	--

51-54

How long does the depression last? Just a few hours at a time or longer than that?

13a Depression lasts longer than just the occasional few hours

1 0 9

55

What time of the day does your depression feel worst?

13b Depression worst at beginning of day

1 0 9

56

Have you felt that life wasn't worth living?

13c Has felt life wasn't worth living

1 0 9

57

How long have you been sad or depressed? (this episode/spell)

13d Always sad or depressed

1 0 9

58

13e Onset in last 1 year

1 0 9

59

13f Onset in last 5 years

1 0 9

60

13g Onset in last 10 years

1 0 9

61

13h Onset before 10 years ago

1 0 9

62

8. Have you had spells of feeling sad or depressed, for longer than a week, in the past?

13j Previous episodes of sadness or depression

1 0 9

63

IF YES:  
How often? When?  
Why was that?  
How long did they last?

RECORD OVERLEAF

EVENT	EPISODE	NOTES	YEARS AGO	DATE
-----	-----	-----	100	1882
-----	-----	-----	90	1892
-----	-----	-----	80	1902
-----	-----	-----	70	1912
-----	-----	-----	60	1922
-----	-----	-----	50	1932
-----	-----	-----	40	1942
-----	-----	-----	30	1952
-----	-----	-----	20	1962
-----	-----	-----	10	1972
-----	-----	-----	TODAY	1982

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

Card 1

14a Has cried t f n



74

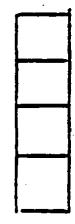
14b Has felt like crying but did not



75

9. Have you cried at all?  
IF NO CRYING:  
 Have you felt like crying even though you did not?  
IF YES:  
 What made you cry (or feel like crying)?

14c Record answer:



76-79



80

SUBJECT I.D.



CARD 2  
COL 1-4

10. How do you feel about your future? What are your hopes for the future?

15a Is not pessimistic about the future...0

15b Is pessimistic about the future or has empty expectations .....1

15c Mentions that the future looks bleak or unbearable .....2

Not applicable/refused/? 9



5

11. In the past month have you at any time felt that you'd rather be dead or felt that you wanted to end it all?

16a Has not wished to be dead ..... 0  
16b Has wished to be dead but rejects suicide ..... 1

IF YES:

Did you think of doing anything about it yourself? How often do you think about it?

16c Has considered suicide, but suicidal thoughts are fleeting..... 2

What did you plan to do? Did you actually try anything? What did you do?

16d Has seriously considered a method of suicide but has not attempted it ..... 3  
16e Has attempted suicide ..... 4  
Not applicable/refused ..... 9

SPECIFY:

12. What about before the last month?

16f Not wished to be dead (ever) ..... 0

16g Wished to be dead but rejects suicide (ever) ..... 1

16h Considered, fleetingly, suicide (ever) ..... 2

16j Seriously considered suicide (ever) ..... 3

16k Attempted suicide (ever) ..... 4

Not applicable/refused ..... 9

IF WISHED TO BE DEAD OR WORSE EVER:

When was that? Why? What happened?

MARK ON CHART (Q 13)

8

7

6

13. When did you last feel really happy? t f n  
1 0 9 9

17a Does not mention feeling happy in the last month

14. Do you feel happy about yourself as a person?  10  
IF NO:

18a Does not mention regrets or self blame .....0

Do you have regrets about your life? 1

18b Mentions regrets about past which may or may not be justifiable.....1

Do you blame yourself for anything? 2

18c Obvious and unjustifiable self blame over past or present misdeeds .....2

Not applicable/refused.....9

IF YES: RECORD ANSWER:

What?

--	--	--	--	--



15. Have you had trouble sleeping over the past month?

Have you been taking anything to help you sleep? (What?)

IF ON NIGHT SEDATIVES, ASK: If you weren't taking \_\_\_\_\_ would you have trouble sleeping?

IF ADMITS TO SLEEP DIFFICULTY OR TO TAKING NIGHT SEDATIVES Do you have difficulty in falling asleep?

Do you wake up during the night?

What is it that prevents you from sleeping (or wakes you up?)

Is it because you feel tense or depressed?

What goes through your mind while you are lying awake?

Is it because of pain or discomfort?

Is it because you have to go to the bathroom?

Can you get back to sleep?

19a Trouble falling or staying asleep

19b Taking medication for sleep

IF ON SEDATIVES RATE DIFFICULTY AS WHEN NOT TAKING MEDICATION

19c - e

19f Difficulty is due to altered moods or thoughts, or tension

19g Lies awake with depressed or anxious feelings or thoughts

19h - j

t f n

1	0	9
1	0	9

1	0	9
1	0	9

15

16

17

18

16. Do you wake very early in the morning? (Is that normal for you?)  
 Can you get back to sleep? 20a Awakes about 2 hours or more before normal time of awakening and cannot go back to sleep

When you get up in the morning do you feel you have had enough sleep? 20b Wakes up feeling tired

How much do you sleep during the day? For more than 2 hours? 20c Sleeps for more than 2 hours during the day

21a-h, 22a, 23a, 24a-b, 25a-b, 26a-h not applicable

17. Recently, have you felt as if you do not have enough energy? 27a Listlessness, subjective restriction of energy

18. Do you feel that you have become slowed down in your physical movements? 28a Has become subjectively slowed down in movements

IF YES:  
 Has this happened gradually? 28b Gradual decline

28c Marked decline

When did this become most obvious? 28d Over past 1 year

28e Over past 2-5 years

28f Over past 6-10 years

28g Over more than 10 years

	t	f	n
20a	1	0	9
20b	1	0	9
20c	1	0	9
27a	1	0	9
28a	1	0	9
28b	1	0	9
28c	1	0	9
28d	1	0	9
28e	1	0	9
28f	1	0	9
28g	1	0	9

19. Have you been doing more, less, or about the same as usual? t f n  
1 0 9 30

Is there any time of the day when you feel slower and less energetic? t f n  
1 0 9 31

Have you actually been sitting around a lot because of lack of energy? t f n  
1 0 9 32

20. Do you have difficulty in relaxing? t f n  
1 0 9 33

Do you get restless? t f n  
1 0 9 34

31a not applicable

21. Do you have headaches? t f n  
1 0 9 35

IF YES:  
Where do you get them? (What are they like)? t f n  
32a Describes any headache 1 0 9  
32b Describes tension headache (e.g. "bands around head", "pressure", or "tightness in back of neck") 1 0 9

22. What have you enjoyed doing in the past month? t f n  
 37a Almost nothing enjoyed 1 0 9 Card 2

23. Are you a religious person? Do you go to church/synagogue/chapel/etc. regularly? t f n  
 37b Attends religious centre at least once a month regularly 1 0 9 38

24. Do you spend as much time doing things you enjoy as you used to (say a few years ago?) t f n  
 34a Less time spent in usual interests or activities 1 0 9 39

25. When you do things for enjoyment, do you have the same interest in them as you used to have? t f n  
 IF NO: Why is that?  
 35a Less interest or enjoyment in activities 1 0 9 40  
 35b Too depressed or nervous 1 0 9 41

26. In general, how happy are you? t f n  
 - very happy, fairly happy, not very happy, or not happy at all?  
 36a Very happy.....1   
 36b Fairly happy.....2  
 36c Not very happy.....3  
 36d Not happy at all.....4  
 Not applicable/refused.9

27. Do you get out as often as you need to get out?  
(e.g. to cash cheques, (get pension), shop, go to doctor)

IF DOES NOT GET OUT AS OFTEN AS NEEDS:

How do you feel about that?

40a Does not get out as often as needs

40b Distressing, loneliness, boredom, frustrated

t	f	n
1	0	9

43

t	f	n
1	0	9

44

28. Have you felt lonely in the past month?

IF FEELS LONELY:

How often have you felt this way?

Does it bother you very much?  
Does it make you feel depressed?

43a Feels lonely

43b Often feels lonely

43c Bothered and depressed by current loneliness

t	f	n
1	0	9

45

t	f	n
1	0	9

47

29. Have you been more irritable (angry) lately? (Is this usual for you?)

44a Admits to having been more irritable (angry) than usual lately

t	f	n
1	0	9

48

30. Have you been eating well?

IF NOT EATING WELL:

Why is that?

46a Not eating well

46b Obviously due to a psychiatric condition (e.g. overt depression, or belief that food is poisoned, etc.)

46c Poor appetite, in the absence of obvious medical cause and without nausea

t	f	n
1	0	9

49

t	f	n
1	0	9

50

t	f	n
1	0	9

51

RATE ANSWERS FOR PAST MONTH

Card 2

I would like to ask some questions about your physical health.

Any significant joint, bone or limb problems

t	f	n
1	0	9

52

Do you have trouble with :

91 a) - Limit manual dexterity

1	0	9
---	---	---

53

91 b) - Limit mobility

1	0	9
---	---	---

54

Stiffness, or pain in joints or limbs?

91 c) - Cause chronic pain

1	0	9
---	---	---

55

91 d) - Worrying

1	0	9
---	---	---

56

Breathlessness or chest pain?

Any significant breathlessness or chest pain

1	0	9
---	---	---

57

92 a) - Limit mobility

1	0	9
---	---	---

58

92 b) - Worrying or frightening

1	0	9
---	---	---

59

Water (Urine) problems?

Any significant urinary problem

1	0	9
---	---	---

60

93 a) - Disturbs sleep

1	0	9
---	---	---

61

93 b) - Affects social life

1	0	9
---	---	---

62

Eyesight, hearing or sense of touch?

Any significant sensory deficit

1	0	9
---	---	---

63

94 a) SPECIFY: \_\_\_\_\_

9	99	
---	----	--

64-65

94 b) - Limits social life

1	0	9
---	---	---

66

- Any (other) pain from anything?

Any chronic or recurrent pain

1	0	9
---	---	---

67

95 a) SPECIFY: \_\_\_\_\_

9	9	
---	---	--

68-69

95 b) Nature \_\_\_\_\_

9	9	
---	---	--

70-72

95 c) Cause \_\_\_\_\_

9	9	
---	---	--

73-75

95 d) Frequency \_\_\_\_\_

9	9	
---	---	--

76-77

95 e) Severity \_\_\_\_\_

9	9	
---	---	--

78-80

**IF YES TO ANY OF ABOVE:**  
How does it affect you? Does it stop you from doing things (sleeping)? Does it worry or frighten you?

4	6	2
---	---	---

78-80

32. Finally, I would like to ask a few questions about the sort of person you were, say aged 30-40?

How would you describe yourself then?

PROBES:

- If things weren't right, would you object or complain?
- Did you like things to be tidy and neat?
- Were you a shy person?
- How did you get on with other people?
- How many friends did you have?
- What was your mood like, on average?
- Were you a calm sort of person, taking life as it came?
- How did you cope with the normal problems of life?
- What was your temper like?

NO REVERSE ANSWERS

REVERSE END

Card 3  
Col 1-4

0 = Nil  
1 = Trait  
2 = Interference

A									
B									
C									
D									
E									
F									
G									
H									
I									
J									
K									
L									

17-18

KEY WORDS:

- A. 1 Outgoing
- 2 Lively
- 3 liked company
- 4 Plenty of activities
- B. 5 Quiet
- 6 Solitary
- 7 Kept own company
- 8 Reserved
- 9 Serious
- C. 10 Shy
- 11 Easily upset by others
- 12 Avoided going out
- 13 Anxious about meeting people
- D. 14 Eccentric
- 15 Odd ideas
- 16 Aloof
- 17 Suspicious
- 18 Blamed others
- 19 Defended rights
- E. 20 Moody
- 21 Up and down
- 22 Always gloomy
- 23 Always optimistic
- 24 Always energetic
- F. 25 Houseproud
- 26 Extremely conscientious
- 27 High standards
- 28 Stubborn
- 29 Perfectionist
- G. 30 A born worrier
- 31 Worried easily
- 32 Never relaxed
- H. 33 Inadequate
- 34 Couldn't cope with normal demands of life
- 35 Always ill
- 36 No Energy
- I. 37 Irresponsible
- 38 Aggressive
- 39 Cold and callous
- 40 Always in trouble
- 41 Inpatient
- J. 42 Dramatised
- 43 Unreliable
- 44 Craved attention
- 45 Over-dependent
- 46 Shallow
- K. 47 Resilient
- 48 Tough
- 49 Strong
- 50 Uncomplaining
- 51 Stoic (al) Confidence
- L. 52 Kind
- 53 Generous
- 54 Forgiveing
- 55 Loving
- 56 Warm

33. Does anyone live in the same household as you, or do you live alone?

97 a) Lives alone

t	f	n
1	0	9

21

97 b) Does not know or does not complete reply

1	0	9
---	---	---

22

34. (Are you married/widowed/single etc?)

97 c) Marital Status:

- married 1
- single 2
- widowed 3
- divorced/separated 4

--	--	--

23

35. Do you have any children? Where do they live? (Do they live close by?)

97 d) Number of children still living

97 e) LIST:

_____
_____
_____
_____

--	--

24-25

36. Have you been in any particular occupation throughout your life? What was that? Any other prolonged occupation (more than 2 years?) (your husband?)

97 f) Record occupations for periods longer than 2 years: (husbands if married/widowed)

--	--	--	--

26-29



37. (Apart from those living with you) do you have any relatives whom you see regularly/once a month or more on average?

98 a) Relatives seen regularly

98 b) Friends seen regularly

IF NO FRIENDS/RELATIVES SEEN REGULARLY

Any social workers or anyone like that seen regularly?

Probe \_\_\_\_\_

- Home help?
- Nurse?
- Social worker?
- Other?

98 c) Professional seen regularly

SPECIFY \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

t f n

1	0	9
1	0	9

1 0 9

30  
31

32

33-35

38. We would like to call on some of the people in this survey again, to find out how they are getting on. Would you be prepared to see us - either myself or a colleague?

99 a) Permission for re-interview

t f n  
1 0 9

36

IF NO THEN END INTERVIEW  
AND COMPLETE PAGE 20

IF PERMITS RE-INTERVIEW

39. What is your address? 99 b) 6d RECORD ADDRESS \_\_\_\_\_

40. How long have you lived at that address? 99 c) 7a RECORD LENGTH OF TIME AT ADDRESS (years)   37-38

41. Do you have a telephone? 99 d) 10a Does have a telephone t. f n  
 IF YES: 1 0 9  
 Could I have the number? NUMBER   
 10b, 10c

42. Do you have any plans to move away/go away in the next 9 months? 99 e) Specify any plans to move/go away:

It would be very useful to have a rough idea of when, during the week, we could call on you: are there any times when you are usually in? (IF HAS PHONE: Should we ring first?) 99 f) Ring first t f n  
 1 0 9 40

43. Just in case we can't get in touch with you easily, it would be very helpful to have the phone number/address of someone who would know where you were - would that be possible? 99 g) Permits contact below 1 0 9 41  
 99 h) Name, address, relationship and phone number of contact: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Thank you very much,  
we will be in touch  
with you.

END INTERVIEW

NOTES ON SUBJECT:

	t	f	n	
Subject looks unhappy or depressed	1	0	9	42
Capable of completing self-rating questionnaire	1	0	9	43
Serious doubt validity of interview	1	0	9	44

3

45-79  
BLANK  
80

APPENDIX IV

INTERVIEW OF GENERAL  
PRACTITIONERS

General Practitioner Interview

GPI/1

1. NAME OF G.P. \_\_\_\_\_

2. DATE ENTERED STUDY

3. DATE LEFT STUDY

4. POSITION IN PRACTICE

Principal = 1  
Assistant = 2  
Trainee = 3  
Locum = 4

5. Full time or part time

Full time = 1  
Part time = 2

6. How long had you been in general practice at start of survey?

- 6/12 = 1
- 6/12 - 1 year = 2
- 1 - 5 years = 3
- 6 - 10 Years = 4
- 10 years = 5

7. Where did you qualify in medicine?

- U.K. University = 1
- Commonwealth University = 2
- Other = 3

8. What do you think are the main problems of elderly patients in general practice?

8. What would you say are the 3 most common psychiatric problems in elderly patients in general practice, in order:

1.	_____	<input type="checkbox"/>	<input type="checkbox"/>
	_____		
2.	_____	<input type="checkbox"/>	<input type="checkbox"/>
	_____		
3.	_____	<input type="checkbox"/>	<input type="checkbox"/>
	_____		

10. Roughly how many surgeries have you done per week (over study period)?

11. Roughly how many home visits have you done per week (over study period)?

12. Would you say there is a difference between elderly surgery attenders and elderly patients seen at home?

Yes = 1  
No = 0

If so, what?

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

13. What do you think are the factors that cause the elderly to become depressed?

14. Roughly, what proportion of depressed elderly do you treat with:

- a) antidepressants
- b) night sedation
- c) benzodiazepines
- d) other psychotropic
- e) no medication

15. How satisfied are you with the local psychiatric services, as far as care of the elderly go?

- Very = 1
- Fairly = 2
- Not very = 3



16. Apart from a basic medical qualification, do you have any postgraduate degrees or diplomas?

MRCP = 1      DOG = 4      MRCPsych = 7  
MRCGP = 2      DPH = 5      DCH = 8  
FRCS = 3      DPM = 6

Other (specify)

\_\_\_\_\_ =9

17. Have you attended any postgraduate training of at least a 1/2 day in psychiatry? (include psychiatric SHO posts)

Yes = 1  
No = 0

18. What is your practice list?

Individual?

As a share of group?

19. How many GP's in your practice?

Full time only

Include part time

20. How many practices in your centre?

21. Does your practice have an age/sex register?

Yes = 1  
No = 0

22. When did you qualify?

--	--	--	--

23. How old are you?

--	--

24. Do you have any comments about the survey?

--	--	--

END OF INTERVIEW

APPENDIX V

INTERVIEW CARRIED OUT BY  
VALIDATING PSYCHIATRIST

VALIDATION OF SHORT-CARE (GPC) D. ITEMS

CAR  
1-  
BLA

SUBJECT'S I.D. NUMBER

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(10)

SUBJECT'S NAME

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NAME OF  
GENERAL PRACTITIONER  
SEEN.

---

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--	--	--

(14)

ADDRESS

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---

DATE OF INTERVIEW

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

(17)

Please conduct a brief (approximately 20 minutes) open ended psychiatric interview with the subject sufficient to respond to the following items:

(NB: "CURRENT" MEANS IN THE LAST MONTH)

- 1. Is there any evidence (at all) of a current depressive state at interview?

YES = 1
NO = 0

(23)

IF NO, GO TO  
ITEM 6 : page 9

2. SEVERITY

- A) Please indicate whether the depressive state is

MILD : 1

MODERATE : 2

OR SEVERE : 3

(24)

- B) Please rate 0-9 severity

(25)

3. Please suggest how it might best be managed, in your opinion: (any logical combination)

YES = 1
NO = 0

A) INTERVENTION AND CONSULTATION

- No intervention  (26)
- Consultation for investigation (psychiatric or medical)  (27)
- Occasional consultation: (less than 1 per 8 weeks)  (28)
- Regular consultation: (More than 1 per 8 weeks)  (29)

B) DRUGS AND ECT

- Use of minor tranquillisers  (30)
- Use of major tranquillisers  (31)
- Use of non-tricyclic, non-maoi antidepressants  (32)
- Use of tricyclics  (33)
- Use of maoi's  (34)
- Use of ECT  (35)

**C) REFERRAL AND ADMISSION**

**REFERRAL FOR:**

Immediate admission  
(psychiatric or medical)  (36)

Possible admission soon  
(LT 6 months)  (37)

Referral to psychiatric O.P.D.  (38)

Referral to S.W.  (39)

Referral to psychologist  (40)

Referral to physician O.P.D.  (41)

Other referral /  
Please specify

\_\_\_\_\_   (42-)

**D) OTHER MANAGEMENT  
(Please specify)**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_   (44)

4. Please check the presence or absence of the following symptoms, in the past month. (out of the ordinary for the subject, or, in your opinion, indicative of a problem)

YES = 1
NO = 0

	Out of ordinary for subject	Indicative of problem	
Low spirits	<input type="checkbox"/>	<input type="checkbox"/>	(46-
Sleep disturbance	<input type="checkbox"/>	<input type="checkbox"/>	(48-
Poor appetite	<input type="checkbox"/>	<input type="checkbox"/>	(50-
Weight loss	<input type="checkbox"/>	<input type="checkbox"/>	(52-
Diurnal variation in mood (either polarity)	<input type="checkbox"/>	<input type="checkbox"/>	(54-
Suicidal thoughts	<input type="checkbox"/>	<input type="checkbox"/>	(56-
Non suicidal wish to die	<input type="checkbox"/>	<input type="checkbox"/>	(58-
Hypochondriacal symptoms	<input type="checkbox"/>	<input type="checkbox"/>	(60-
Memory problems	<input type="checkbox"/>	<input type="checkbox"/>	(62-



5. COURSE AND HISTORY

A) How long (years, months) would you estimate the current depressed state to have lasted? (exclude minor, transient "windows")

Years

(64-

Months

(66-

B) To what extent would you consider the current picture to be a reflection of an adult personality pattern?

YES = 1

NO = 0

Not at all

(68

Slightly

(69

Considerably

(70

Entirely

(71

72-8  
BLAN

C) To what extent do you think the current state is directly related to:

YES = 1  
NO = 0

	Not at all	Slightly	Considerably	Entirely	
Physical Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(10-1
Impoverishment (Social)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(14-1
Physical illness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(18-2
Physical disability (including sensory deficits)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(22-2
Bereavement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(26-2
Other traumatic event (past or recent)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(30-3
Other (Please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(34-3
_____				<input type="checkbox"/>	
_____				<input type="checkbox"/>	
_____				<input type="checkbox"/>	(38-3

D) What do you think the outcome will be for the current state:  
(include effect of any planned management)

YES = 1
NO = 0

In the next 12 months?

Great improvement

(40)

Some improvement

(41)

Remain same

(42)

Some worsening

(43)

Considerable worsening

(44)

Death

(45)

In the foreseeable future?

Great improvement

(46)

Some improvement

(47)

Remain same

(48)

Some worsening

(49)

Considerable worsening

(50)

6. Please indicate the presence of any of the following factors

YES = 1
NO = 0

Evidence of previous history of significant depressive states (any time)

(5)

Evidence of memory problems (current)

(5)

Evidence of significant recent life events (in last 6 months)

(5)

Evidence of burdensome physical disabilities or illnesses (6 months)

(5)

Evidence of hearing difficulty (current)

(5)

Evidence of eyesight difficulty (current)

(5)

Please write brief resume of your findings, including important data which is not covered in the questionnaire

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APPENDIX VI      BRIEF VIGNETTES

a) Three subjects in the initial survey whose interviews were abandoned.

The first was a very frail 75 year woman who was extremely agitated during interview, and who would only tolerate the first few questions. The general practitioner assessment was that she was suffering from a dementing illness.

The second was an 80 year old woman with obvious dyspnoea at rest, and found the effort of answering questions excessive - the interview was abandoned, at her request, two thirds of the way through.

The third was a seventy year old former nurse who was very unwilling to discuss any personal problems whatsoever, and refused to continue with the interview as soon as she was asked any questions about how she was feeling.

b) Subject admitted to a local authority home during follow-up period

This was a 75-year-old woman with mild memory problems, and quite severe impairment of vision. She was widowed, living alone, and had her two sons lived somewhere outside London. At the initial consultation she had a home help, but had refused any other assistance. When seen at follow-up, in the old people's home, she could not give a clear account of how she had got there, but described what sounded like an acute confusional state shortly before admission. Her depressive symptoms prior to admission were concerned with loneliness: those after admission concerned with the way she was treated in the home.

c) Two subjects who attended psychiatric out-patients during follow-up period

One was a man aged 70 with chronic bronchitis who was abandoned by his wife two years previously, and living in a decaying first floor council flat with no lift. He was disabled by his chest condition, was lonely, with financial problems, and had a high score on the depression scale, both initially and at follow-up.

The other was a 72 year old widower, living alone

with a history of depressive episodes for over 30 years. He had a history of admissions to psychiatric hospitals and suicidal attempts. He was currently seeing a psychiatrist but was on no antidepressant treatment.

d) Patient who attended a psychiatric day hospital during the follow-up period

This was a 73 year old pharmacist who, when seen at the initial consultation had a high depression scale score, but was on no treatment. The patient was well aware of his depressive state, but his general practitioner thought that his memory impairment was due to incipient dementia. Over the following 9 months he developed a disturbed state, in which he was admitted to a psychiatric day hospital and treated briefly with mianserin. He had messages from God, and at follow-up interview was clearly hypomanic.

e) Patient who attended a geriatric day hospital during the follow-up period

This was a 89-year-old woman disabled by osteoarthritis and chronic pain, confined to her house and with a high score on the depression scale at both interviews.

APPENDIX VII MIMS CATEGORIES OF MEDICATION  
USED IN THIS STUDY

CVS	VASOCONSTRICTRS	17
CVS	PERIPH. VASODLTRS	16
CVS	HAEMOSTATIC	18
CVS	ANTI-HYP+DIURETIC	19
CVS	ANTICOAG, FLTLT SEP	10
CVS	BETA BLOCKERS	11
CVS	DIURETICS	12
CVS	ANTI-ANGINALS	13
CVS	ANTI-HYPERTENSIVES	14
CVS	DIGOXIN	15
GEN	ANTI-TB	20
GEN	ANTI-INFLAMMATORY	21
GEN	VITAMINS	22
GEN	TONICS, PLACEBO	23
GEN	HAEMOTINICS, eg Fe	24
GEN	ANTI-GOUT	25
GEN	ANTI-ALLERGICS	26
GEN	ANTIBIOTICS	27
GEN	ORAL STEROIDS	28
GEN	ANALGESICS	29
GIS	ANTI-APPETITE	35
GIS	ANTI-DIARRHOEAL	33
GIS	ANTI-EMETIC	34
GIS	LAXATIVES	31
GIS	ANTACIDS, ANTI-ULCER	32
GUS	URINARY ANTISEPTIC	81
HORMONES	ORAL HYPOGLYCAEMIC	41
HORMONES	INSULIN	42
HORMONES	THYROXINE	43
HORMONES	ANTI-OESTROGENS	44
NEUR	ANTIEMETIC, QUININE	53
NEUR	ANTICONVULSANTS	51
NEUR	ANTI-PARKINSONIAN	52
PSYCH	NARCOTIC	67
PSYCH	BARBITURATE (non ep)	66
PSYCH	MAJOR TRANQUILLISER	61
PSYCH	HYPNOTIC-OTHER	62
PSYCH	HYPNOTIC-BNZDPN	63
PSYCH	BENZDPINE (DAY)	64
PSYCH	ANTI-DEPRESSANTS	65
RESP	ANTIHISTAMINE	74
RESP	BRONCHODILATORS	72
RESP	ORAL BRONCHDLTRS	71
RESP	INHALED STEROIDS	73
UNKNOWN	UNKNOWN ORAL/PARENT	99