Recognition and decision to treat depression

in older adults presenting at GP surgeries.

Alison Campbell

Doctorate in Clinical Psychology
The University of Edinburgh
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Declaration

I, Alison Campbell, declare that this thesis was written by me and that I conducted the work detailed herein. This work has not been submitted for, or accepted in, any previous degree.

Alison Campbell

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ABSTRACT

Objectives: The population, globally and nationally, is ageing and the numbers of those over the age of 65 is increasing. Given this increase in numbers, it is important that the physical and mental health needs of older adults are addressed by service providers. Depression is the most common form of mental ill health in this age group and effective treatments are available. The main aim of the study was to investigate the extent to which general practitioners' (GPs) are able to identify depression and offer appropriate treatment strategies to patients over the age of 65 presenting to non-urgent community GP clinics.

Method: GPs assessed each participant, attending a general clinic appointment, for depression. Participants (n=31, mean age=75.6 years) completed, with the author, the Abbreviated Mental Test Score (AMTS), and two screening tools: the Structured Clinical Interview for DSM-IV (SCID) and the Geriatric Depression Score – short form, 15 item (GDS-15). A structured interview was conducted and patient records examined to gain demographic information for each patient. Cohen's Kappa was used to assess the level of agreement between the GP assessment and the objective measurements for depression.

Results: Depression was identified by both the GP and the SCID in three cases. The inter-rater reliability between the SCID and the GP assessment of depression was good (Kappa = 0.61, $p < 0.001$). The inter-rater reliability between the SCID and the GP assessment of dysthymia was poor (Kappa = -0.08, p =ns). Participant numbers prevented further analysis of how the independent variables recorded affected the diagnosis and treatment of depression by GPs.

Conclusion: The findings suggest that GPs are able to identify depression but not dysthymia in their older adult patients. The difficulties in engaging GPs in research are explored. The strengths and weaknesses of the study are considered. The clinical implications of the study are discussed.

Chapter 1: INTRODUCTION

1.1 Overview

The population, globally and nationally, is ageing and the numbers of the population over the age of 65 is increasing (United Nations, 2009; Scottish Government, 2007). Given this increase in numbers it is important that the physical and mental health needs of older adults are addressed by service providers. In particular, depression is the most common form of mental ill health in this group (Blazer & Hybels, 2005). Once identified, there are effective treatments available for older adults with depression (Cuijpers *et al.,* 2006; Pinquart *et al.*, 2006; Wilson *et al.*, 2008). However, adults who experience depression in later life may not be able to access assessment or treatment as easily as working age adults (Wei *et al.,* 2005). In turn, older people themselves may also assume that no treatment is available or that depression is part of getting older (Unützer *et al.,* 1999). The main aim of this study is to examine the extent to which general practitioners (GPs) are able to identify depression and offer appropriate treatment strategies to patients over the age of 65 presenting to predominately rural, non-urgent community GP clinics. The GP assessment of depression is compared with that of two diagnostic tools, the Structured Clinical Interview for Diagnosis (SCID) (Spitzer *et al.,* 1992) and the Geriatric Depression Scale (GDS) (Yesavage *et al.*, 1983). This study will also explore the factors that may affect a GPs ability to identify depression in their older adult patients and their decision to treat an identified depression.

1.2 The ageing population

1.2.1 The global ageing population

The United Nations (UN) in 2009 reported that

'population ageing is unprecedented, a process without parallel in the history of humanity'

United Nations, 2009, p.viii). The UN defines population ageing as occurring when increases in the proportion of older people (the UN defines this as those over 60) occur with concurrent reductions in the proportions of children (those aged under 15) and followed, therefore, in time, by a reduction in the proportions of working age adults (defined as those aged 15–59). This change is occurring in developed and developing countries across the world. The UN attributes these dramatic changes to reductions in fertility and reductions in the mortality rates of older people. The positive outcome of this is that people are living longer and with better health.

Population ageing has a major impact on society influencing areas such as the composition of families, living arrangements and healthcare services (UN, 2009, p.viii). The United Nations report (UN, 2009) also details the 'potential support ratio': that is the number of persons of working age (15 – 64 years) compared to the number over 65 years of age. Globally between 1950 and 2009 this ratio dropped from 12 to 9. It is projected to drop to four by 2050. This is described as the social burden of ageing. This type of analysis emphasises the negative effects of age, that is older adults are seen as a burden to society; however it is also important to consider the positive aspects to a globally ageing population. In particular older people often contribute constructively to society through voluntary work, unpaid care of grandchildren or providing informal long-term care for others (World Health Organisation, WHO, 2002).

1.2.2 European Union: Ageing population

Population ageing is particularly rapid in Europe. The UN reported that all of the world's 30 oldest countries, using as a measure the percentage of the population over 60 years of age, are European, with the exception of one: Japan. Japan is the first oldest with 27.9 per cent of its

population aged over 60; the United Kingdom is 17th with 21.8 per cent of its population aged over 60 (UN, 2007).

Within the European Union (EU), Lanzieri (2006) reported that the EU population, in the period up to 2050, will decline, but the proportion of this population over 65 will increase considerably. Lanzieri (2006) reported that in 2004 there was one elderly inactive person for every four people of working age. In 2050 that ratio is predicted by Lanzieri (2006) to be one inactive person for every two of working age. Lanzieri (2006) predicts that the population of those over 80 in Europe is expected to rise from 18 million in 2004 to 50 million in 2051 in the EU. This change will become highly visible from 2005 onwards with the progressive ageing of the post-war 'baby boom' generation combined with increased life expectancy of the population. The ageing population is therefore not solely a global phenomenon and affects European countries including the United Kingdom. As the numbers of older people increase it is important for health care providers including those of psychology services in the United Kingdom to consider the way their services are shaped to respond to the health needs of this ageing population.

1.2.3 Scotland: Ageing population

In response to the policy challenges of this ageing population the Scottish Government published a strategy document 'All our futures' (Scottish Government, 2007). The most significant long-term trend noted by the authors is the continued ageing of Scotland's population. More recently the Scottish Government issued forecast figures (Scottish Government, 2009) showing the population of those aged over 65 projected to rise by 21 per cent between 2006 and 2016; and by 2031 the population of this group will have risen by 62

percent. For the oldest old group (those aged over 85 years) the projections show a 38 percent rise from 2006 to 2016 and a rise of 144 per cent by 2031.

The Scottish Government (2007) reported more detailed figures, by local authority area, in particular, Dumfries and Galloway, the area of interest of this study, will have the third highest proportion of their population aged 50 and over (at 54 per cent) by 2024 and also will have the highest proportion of its population aged 75 and over by 2024 (at 16 per cent). Dumfries and Galloway therefore has an ageing population that reflects the national (and global) ageing demographic. The numbers of older adults and their proportion in the population are important in terms of the proportion of health resources used, and unless depression is addressed by service providers this will increase health burden in terms of GP consultations and referrals.

1.2.4 Summary

The global population is ageing; this is defined as the decline in the proportion of children and young people in comparison with the population aged over 60. This effect is also seen in European countries including Scotland. In particular Dumfries and Galloway, the area of interest in this research project, is forecasting population ageing more rapidly than that of the average for Scotland. Older adults make important economic and social contributions to society. This global, national and local forecast for an ageing population raises issues for health policy if society wishes to continue to reap the benefits that older people contribute. WHO (2002, pp.12) states that if ageing is to be a positive experience then longevity must be accompanied by opportunities for ‘health, participation and security’ and it is the first of these, ‘health’, that will be considered further in this study.

1.3 Health consequences of an ageing population

The Scottish Government (2007, pp.61) have set out that as life expectancy increases, they wish to see an increasing proportion of those extra years lived in *'health and independence'*. The Scottish Government therefore recognises that, as the population ages, it is important to maintain physical and mental health of older adults. Depression has a significant impact on the quality of life of older people (Blazer, 2010).

1.3.1 Depression in older adults

There is evidence that depression is the most common mental health problem in later life (Blazer & Hybels, 2005). In a review and commentary of depression in late life, Blazer (2003, p.249) noted that depression is perhaps

'the most frequent cause of emotional suffering in later life'.

There are a number of theories that allow exploration of the psychology of depression in the older adult population and may help to explain the challenges of the identification and treatment of depression in this group by GPs. These theories are introduced here.

1.3.2 Theory of social capital

Social networks are a key resource across the life course. Social relations can improve health and increase survival rates in older adults (Antonucci, 2001; Seeman, 2000). The role of social relations to the health of older adults is important in achieving successful ageing. Antonucci (2001) set out that social relations help people prepare for, cope and recover from the demands of life that are associated with ageing. Antonucci (2001) defines the concept of social relations as including the concepts of social networks, social support, social cognition and a sense of control. The author sets out, in this theory, that just as those who receive positive support from those around them are enabled to meet the multiple and accumulating challenges of ageing,

those who do not receive positive support can result in devastating and negative effects on health including depression (Antonucci, 1994). Those who are lonely or have more hostile interactions with others are more likely to become unwell and take longer to recover (Uchino *et al.,* 1996). Some support networks can also have a negative effect on one's health by encouraging behaviours that are detrimental to health. This theory therefore would lead one to expect that older adults, despite experiencing the challenges of life that may lead to depression can avoid that path by having an ability to interpret and internalise the belief that others have of them as able and competent to control their destiny and solve their problems.

1.3.3 Theories of life-span development

Theories of life-span development aim to explain optimal development by incorporating central tenets such as development as a life-long process of adapting to physical, social and psychological changes together with the active role of the individual. Boerner and Jopp (2007) reviewed the contribution of three major life-span theories (the dual-process model of assimilative and accommodative coping; the model of selection, optimization, and compensation; and the life-span theory of control) in assisting in the process of coping with major life change and loss. Firstly they consider the work of Brandstädter and Rothermund (2002) who proposed the dual-process model of assimilative and accommodative coping. The assimilative mode reflects the effort to modify life circumstances to the individual's preferences and goals; the accommodative mode indicates the way an individual's preferences and goals are adjusted to suit the situational constraints or limitations. Brandstädter and Rothermund (2002) predict a shift with age from the assimilative mode to the accommodative mode. They note, however that accommodative processes may become more prominent at an earlier age if an individual is faced with challenges such as chronic disability that are more

typical of later life. This theory therefore may explain a mechanism that is protective for depression in later life.

The second theory Boerner and Jopp (2007) consider is that of Baltes and Baltes (1990): the model of selection, optimization, and compensation (SOC). In this theory 'selection' refers to the ability to give direction to development, 'optimization' referring to the ability to achieve higher levels of functioning and 'compensation', the ability to focus on the use of alternative means to maintain functioning. Boerner and Jopp (2007) set out that all SOC strategies are expected to become more beneficial with advancing age.

The final theory reviewed by Boerner and Jopp (2007) is the life-span theory of control (Heckhausen & Schulz, 1995). This addresses the way that individual's master developmental challenges related to the continuous change in their potential for control that occurs throughout life. The authors argue that compensatory secondary control strategies increase with age and that these strategies were seen to be more beneficial in old-old than in young-old participants. Each of these three theories attempts to explain the ways in which individuals adapt to major life change and loss and will be informative when considering the prevalence rates of depression in older adults.

1.3.4 Gender and depression in older adults

From adolescence and throughout the entire life-span, women are more likely than men to be diagnosed with depression (Hankin & Abramson, 1999). The prevalence rates for women are between one and a half and three times more than the prevalence among men (Kessler, 2000; Kuehner, 2003). Amongst older adults, Palsson *et al*. (2001) reported that the rates of depression in women over 70 years of age was twice that for men over 70 years of age. There

are many theories to explain the difference in rates of depression between men and women. Specifically that women have a greater sensitivity to stressful life events and traumas (Nolen-Hoeksema, 2001; Hankin & Abramson, 1999). Other researchers forward a biological explanation for these differences between men and women, suggesting that women are particularly prone to depression due to events associated with the reproductive cycle (Parry, 2000). Some researchers contend that the rates between men and women are equal but that women are more likely to express and report symptoms, seek help and are subject to a gender bias in diagnosis (Shaw *et al.*, 1995).

1.3.5 Depression and the young-old and old-old

In order to investigate how rates of depression varied with age in the older adult population Palsson *et al.* (2001) in a longitudinal Swedish study examined the incidence of depression at ages 70, 75, 79, 81, 83 and 85 using a structured interview based on the DSM-III-R criteria. They found that the prevalence of depression increased significantly between the ages of 70 and 85. This study was hampered by small sample sizes and it is unclear if the increasing prevalence with age was due to an increase in chronicity. As depression often takes a remitting rather than a chronic course, it is possible that individuals became and recovered from depression in the time between assessments (periods of up to 5 years).

1.3.6 The ageing paradox

The estimated frequency of depression in older adults is lower than the estimated frequency of depression in young adulthood and middle age (Blazer *et al.*, 1994; Kessler *et al.*, 2003; Hasin *et al.*, 2005). In considering the origins of depression in older adults, a paradox therefore is set up: that older adults appear to have an increased opportunity to be exposed to the risk factors

of depression compared to those in the early adulthood or mid life and yet have lower rates of depression. This is referred to as the ageing paradox.

When factors associated with ageing such as a higher proportion of women, more physical disability, more cognitive impairment and lower socioeconomic status are controlled for there is no relationship between depressive symptoms and age (Blazer *et al.,* 1991). Therefore depression is not an outcome of the ageing experience. Blazer (2010) in a guest editorial considered this ageing paradox and set out three psychological or social factors which may provide protection to older people compared to younger people on developing depression. Firstly, the socio-emotional selectivity theory suggested by Carstensen, *et al.* (2000); secondly the role of the acquisition of wisdom with ageing (Baltes & Staudinger, 2000); and thirdly, that older adults are less likely to experience and can better manage stressful life events (Hughes *et al.,* 1988). Each of these theories is discussed further in sections 1.3.7, 1.3.8, and 1.3.9.

1.3.7 The ageing paradox: Socio-emotional selectivity theory

Socio-emotional selectivity theory (Carstensen, *et al.,* 2000), sets out that goals are often set within a time frame and goal selection depends on a perception of time. Socio-emotional selectivity theory focuses on two classes of psychological goal: expansive goals (such as gaining knowledge or making new social contacts); and feelings related goals (such as sensing that one is needed). Carstensen *et al.* (2003) contends that someone's place on the lifecycle influences the salience of these two types of goals. Therefore, they suggest that older adults see fewer opportunities and less time to obtain and benefit from knowledge-related goals but the salience of emotional needs are strong throughout life. Therefore, older adults invest more in meaningful social ties and less in expanding horizons. It should be mentioned that

Carstensen *et al.* (2000) do, of course, recognise that individual differences still occur. If we accept that investing more in social ties is protective against depression, this is therefore a theoretical view that would explain the ageing paradox of lower rates of depression in older adults than for those in younger or middle years.

1.3.8 The ageing paradox: Acquisition of wisdom

The second theory considered by Blazer (2010) is that of the role of wisdom. Blazer (2010) cited Baltes and Staudinger (2000) who presented a review of wisdom research where wisdom in this context is defined as an expert knowing something concerning the fundamental pragmatics of life. The authors posit a new theoretical perspective that characterises wisdom as a cognitive and motivational metaheuristic organising and orchestrating knowledge towards human excellence. Although the validity of wisdom as a concept is contested it may be considered that adults acquire wisdom with age. However wisdom is an imprecise, unempirical concept. Baltes and Staudinger (2000) suggested five criteria to define wisdom: rich factual knowledge; rich procedural knowledge; lifespan contextualisation; relativism of values and life priorities; and recognition and management of uncertainty.

1.3.9 The ageing paradox: Managing stressful life events

The third theory considered by Blazer (2010) to help to understand the ageing paradox is put forward by Hughes *et al.* (1988); that older adults are less likely to experience and may better manage some of the stressful life events which are associated with risk factors for depression. Hughes *et al*. (1988) found that older adults tended to rehearse certain scenarios, for example imagining how a loss would be managed is not unusual, thereby increasing the ability to cope with that loss. Again the difference in rates of depression throughout the lifecycle could be explained by this theory, that loss is part of the universal experience of ageing (Boerner &

Jopp, 2007) so depression may be challenging to treat in later life as there are often losses such as grief or changes in physical health status for older people to contend with. However older adults may cope more easily with these challenges as they are developmentally 'on time' and therefore they adjust accordingly. This ability of older adults to be resilient and adaptive but also relativistic in their thinking may explain the 'ageing paradox'.

1.3.10 The ageing paradox: what the theories tell us

Older adults have a greater exposure to the risk factors associated with depression and yet prevalence rates show that there is less depression in this age group than in adults in their middle years. The three theories outlined above, therefore, provide an approach to considering the protective factors which may be overlooked when considering the many risk factors for depression in older adults. The theories may go some way to explaining the lower rates of depression in older adults compared to those in early adulthood or mid life.

1.3.11 Prevalence rates of depression in older adults

Prevalence studies report various rates of depressive symptoms amongst older adults living in the community. These are summarised in Table 1.1 below.

Table 1.1 Prevalence rates of depression, dysthymia and minor depression

Study	Details	Results	Conclusion
Murrell *et al.* (1983)	USA community sample Age 55+	Males 13.7% Females 18.2%	Older adults with depression are more likely to seek help from physicians than mental health professionals.
Blazer *et al.* (1987)	North Carolina, USA, community study 60+	Mild dysphoria 19% Symptomatic depression 4% Dysthymia 2% Mixed depressive and anxiety syndrome 1.2% Major depression 0.8%	The major depressive group was more likely to report negative life events and poor social relations
Lindesay, *et al.* (1989)	Community sample, London 65+	Depression 13.5%	Depression is associated with significantly higher levels of dependency
Livingstone, *et al.* (1990).	Inner city London community sample 65+	Depression 15.9%	Prevalence rate of depression is disturbingly high.
Blazer *et al.* (1991)	Epidemiologic exploration	Depressive symptoms 9%	No substantiation that age is a risk factor for depression.
Saunders *et al.* (1993).	Longitudinal community study in Liverpool. Age 65+	Depressive illness 10%	More diagnoses of depression in females than males. The apparent decline in depression with age disappears when organic causes are excluded.
Beekman *et al.* (1995)	Netherlands community-based study 55-85	Major depression 2% Minor depression 13% Clinically relevant symptoms 14.9%	Major depression is an exacerbation of chronic mood disturbance, minor depression is more often a reaction to stressors in later life
Caine *et al.* (1996)	Primary care sample, New York 60+	Major depression 5.4% Minor depression 7.2%	Difficulty within primary care in detecting severe and milder conditions.
Meller *et al.* (1996)	German community based sample Age 85+	Depression 13.3%-14.1%	The younger age cohort, persons with changing life situations and those with dementia had higher risk of depression.
Roberts *et al.* (1997).	USA Community sample at two time points. Aged 50+	Depression 8.7% - 9.0%	Healthy normally functioning older adults are at no greater risk of depression than younger adults.

Study	Details	Results	Conclusion
Schulberg *et al.* (1998)	USA study. Older adults visiting a primary care provider Age 60+	Major depression 9%	Major depression is a prevalent disorder in older adult primary care patients.
Beekman *et al.* (1999)	Systematic review of community prevalence of depression 55+	All depressive syndromes average rate of 13.5% Major depression 1.8% Minor depression 9.8%	Depression is common in later life
Lyness *et al.* (1999)	USA study. Prevalence of subsyndromal depression Age 60+	Subsyndromal depression 9.9% Major depression 6.5% Minor depression 5.2% Dysthymic disorder 0.9%	Criteria-based diagnostic techniques do not capture all patients' clinically significant symptoms
Steffens *et al.* (2000)	Cache County, US 91% Mormon population Age 65-100	Depression Women 4.4% Men 2.7%	Prevalence of sub-syndromal depressive disorders was low, possibly due to unusual characteristics of population.
Palsson *et al.* *(*2001)	A Swedish study. Sample examined at ages 70, 75, 79, 81, 83 & 85	13% (oldest old, at age 85) 5.6% (younger old, at age 70).	Both incidence and prevalence of depression increased with age.
Blazer (2003)	Review and commentary	Clinically significant symptoms (community dwelling) 8%-16%	Mood disorders in old age are a major public health issue.
Hybels & Blazer (2003)	Review of the epidemiology of late-life mental disorders across a variety of community samples.	Depression 1% - 5%	Ageing population will have many implications for healthcare providers.

From the information in Table 1.1, the prevalence rates of depression vary across studies. Nonetheless the range of variance is relatively constrained as they generally fall within the range of between 8 to 18 per cent. The range of variance may be explained in part from the variety in geographical area of the various studies and variety of methodologies of these studies. This is explored below.

The studies described in Table 1.1 take place in a variety of countries from UK based studies (Lindesay *et al.,* 1989; Livingstone *et al.,* 1990; Saunders *et al.,* 1993), European studies (Beekman *et al.,* 1995; Meller *et al.,* 1996; Palsson *et al.,* 2001), and a large number of American studies (Blazer *et al.,* 1987; Caine *et al.,* 1996; Hybels & Blazer, 2003; Lyness *et al.,* 1999; Murrell *et al.,* 1983; Roberts *et al.,* 1997; Schulberg *et al.,* 1998; Steffans *et al.,* 2000). Each of these countries will have their own culture and attitudes towards depression in older adults. One of the studies in particular, Steffens *et al.* (2000), is highly limited in its generalisability to a Scottish population as the participants were 91 per cent Mormon with highly unusual characteristics (such as low prevalence of alcohol use and smoking and low rates of cardiovascular disorders, cancer, and other degenerative disorders) when compared with a Scottish population of similar age.

The studies described in Table 1.1 also considered a wide range of definitions of 'depression'. For example Blazer *et al.* (1987) considered a wide range of possible diagnoses: mild dysphoria, symptomatic depression, dysthymia, mixed depressive and anxiety syndrome and major depression. This contrasts with Lindesay *et al.* (1989) who only considered depression. Other studies aimed to explore subsyndromal symptoms (e.g. Lyness *et al.,* 1999), clinically relevant symptoms (Beekman *et al.,* 1995) and clinically significant symptoms (Blazer, 2003). Clearly this use of a variety of categorisations will result in difficulties in making comparisons between studies and in different prevalence rates emerging.

Researchers in the studies listed in Table 1.1 have also used a variety of diagnostic tools to establish if depression existed. Caine *et al.* (1996), for example, used an initial screen, the Centre for Epidemiological Studies- Depression (CES-D) followed by a diagnostic tool, the Structured Interview for DSM-III-R (SCID) interview. They also asked the participants to

complete the Hamilton Depression Rating Scale (Ham-D). Crawford *et al*. (1998), however, used the Short Comprehensive Assessment and Referral Evaluation (Short-CARE). The study by Lyness *et al.* (1999) also used the SCID. Palsson *et al.* (2001) used a structured clinical interview by psychiatrists based on the DSM-III criteria. Evidently the variety of methods of assessment may lead to variability in the prevalence rates reported.

Blazer (2003) concluded in their review of depression in late-life, therefore, that reports of community-dwelling older adults with clinically significant depressive symptoms show prevalence rates of between 8 per cent and 16 per cent. Amongst the oldest-old group, depressive symptoms are more frequent, but this is explained by the greater proportion of women, increased rates of physical disability, increased cognitive impairment and lower socioeconomic status (Blazer, 2003). When considering major depression, however within a community dwelling sample rates range from around 1per cent to 4 per cent (Blazer, 2003). Higher rates are recorded by Blazer (2003) for dysthymia and minor depression.

1.3.12 Summary

Overall, despite the methodological differences outlined in the studies described in Table 1.1, depression in the older adult population is at levels that raise serious public health issues. The physical, mental and social wellbeing of an ageing population needs to be considered by health policy makers. Depression is the most common occurring psychological problem experienced by older adults. The identification and treatment of older adults with depression is therefore important to maintaining the health of an ageing population.

1.4 The challenges of depression to society

As set out in section 1.3 above, depression is the most common mental health problem in the older adult population. The public health implications of depression in this population are now examined.

1.4.1 Public Health issues of depression

Beekman, Penninx *et al*. (2002) studied the impact of depression on three public health domains: wellbeing; disability; and use of health services of older adults. They studied a large sample (n=2,200) of those aged 55-85 years of age and found that there was consistent deterioration of all three of these public health domains over the three year period of their study. Depressive symptoms had a considerable impact on the individual's wellbeing, a strong and significantly adverse effect on daily functioning and reduced social participation (such as frequency of visits to museums and other cultural centres; recreational, sport and shopping activities). When they controlled for competing reasons to access services, they found that depression uniquely increased the contact with medical specialists (excluding psychiatrists), admission to hospitals (excluding psychiatric hospital services) and the use of ancillary services (such as home help, home nursing). In the Netherlands, where this study took place, these are services in which no treatment of depression is provided. Older adults with depression may therefore access services (other than those for the treatment of depression) more frequently than older adults without depression, resulting in an increased burden to health services.

This conclusion is also supported by Koenig and Kuchibhatla (1999) who found a link between late-life depression in older adults and an increased level of health care utilisation. They found that appropriate management of common medical conditions increased longevity

and decreased disability measured by self-reported ability to perform the 8 physical and 12 instrumental Activities of Daily Living (ADL) (Katz et al., 1963). This was an American study and therefore is of limited generalisability to a Scottish population. However it does indicate that excess disability due to depression is an important public health issue both in terms of the burden of the disease on individuals and in terms of support and health care costs. Depression in older adults is therefore likely to be referred to inappropriate services, however with appropriate management increased longevity and decreased disability can be achieved.

1.4.2 Chronic nature of Depression in the older adult population

Beekman, Geerlings et al. (2002) studied the natural history of late-life depression of a large sample (n=2,200), considering both depressive disorders that met clinical diagnostic criteria and also sub-threshold disorders. This longitudinal Dutch study considered participants over a three year period and followed the effect of their depressive symptoms on disability, wellbeing and use of services. They considered symptom severity, symptom duration, clinical course type and stability of diagnosis for older adults meeting the diagnostic threshold for depression. Interestingly they used a measure of depressive symptoms (The Centre for Epidemiologic Studies Depression Scale, CES-D), a screening tool for depression rather than a formal psychiatric diagnoses of depression to establish those with depression. They concluded that the prognosis of late-life depression in the community is poor with the average level of symptoms remaining high throughout the study, with half the sample being depressed 60 per cent of the time. They identified that symptoms were short-lived in 14 per cent. There were remissions in 23 per cent, an unfavourable but fluctuating course in 44 per cent and a severe chronic course in 32 per cent. However, it should be noted that this study took place in a community setting where treatment could not be controlled or monitored in any detail. There was also considerable attrition at all stages of the study which will have influenced the

findings. This loss of data may also limit the generalisability of the findings. It is likely therefore that this study, which demonstrates the considerable impact depression has on quality of life, also underestimated the true prognosis of late-life depression.

Blazer (2003) in a review and commentary on late-life depression set out that major depression in older adults exhibits a chronic remitting course when followed up over longer periods. He cites a study by Murphy (1983) which examined older adult patients with depression, many of whom were medically ill and who were followed up for one year: 48 per cent had remittance and recurrence or remained ill; 35 per cent had a good outcome; 14 per cent died; and three per cent developed dementia. Therefore depression in older adults is chronic in nature and can have a significant effect on quality of life.

1.4.3 Depression and mortality

It is a common belief that depression increases the risk of early death. The possible link between depression and mortality has been subject to many possible theories: that depression decreases immune function (Stein *et al.,* 1991); causes functional decline (Bruce *et al.,* 1994); aggravates existing physical illness thereby increasing mortality (Finch *et al.,* 1992). Depression may also lead to irresponsible health behaviours (Lenze *et al.,* 2001) such as smoking, excessive alcohol intake, physical inactivity and poor eating habits.

Geerlings *et al.* (2002) as part of the Longitudinal Aging Study Amsterdam (LASA) compared a group of 35 initially non-depressed patients with a group of 35 depressed patients, measuring their depression at periods throughout three years and then measuring mortality at up to six and a half years later. Although many previous studies have examined the mortality of depression and suggested that it increases the risk of death in older adults (e.g. Schulz *et al.,*

2000; Rozzini et al., 2001), such studies measure depression at one time point and therefore do not consider the consequences of the length of exposure to depressive symptoms. By contrast, Geerlings *et al.* (2002) measured depression at eight time points and therefore were able to distinguish how the course of depression affected mortality. Geerlings *et al.* (2002) found that the mortality effect of depression is a function of both length of exposure to depression and the severity of the symptoms. In particular, that transient depressive episodes do not have a detrimental effect with respect to mortality, but that chronic depression and chronic intermittent depression (indicated by a variability in depression over time) did predict mortality. Geerlings *et al.* (2002) study, however, did not use a diagnostic tool to identify depression, instead using a symptom rating scale. The identification of depression may, therefore, not be in agreement with that of the DSM criteria. Understandably in a longitudinal study of this area, their sample experienced loss to follow-up. Although the main reason for loss to follow-up was death, other non-responders may have affected their results.

Wulsin *et al.* (1999) in a systematic review of the mortality of depression, across a range of adult and older adult population samples, reviewed 57 studies. They reviewed the studies with respect to five issues: strength of evidence for increased mortality; controlling for mediating factors; the contribution of suicide; variation across sample types; and possible mechanisms. They reported that studies linking depression to early death are poorly controlled and that they were unable to answer the question of whether there was strong evidence that depression increases mortality due to insufficient robust evidence. They did conclude that depression substantially increased the risk of death, especially by suicide and cardiovascular disease. This review, however, did not specifically consider the older adult population instead including all adult studies; as such its relevance to the older adult population is limited.

1.4.4 Depression as a consequence of ageing

There is often an assumption that, as one ages and experiences more losses (of relations, physical activity or socioeconomic strength), depression is inevitable. Blanchard (1996) referred to this as the *'understandability phenomenon'*. Unützer *et al.* (1999) called it the *'fallacy of good reasons'*. This is despite the lower rates of prevalence of depression in older adults when compared to adults in their middle years as discussed in section 1.3.6 above.

This assumption of the inevitability of depression in older adults, despite the contrary evidence, can affect a patient, GP or therapist expectation, resulting in feelings of hopelessness with respect to treatment effectiveness for depression (Unützer *et al.*, 1999). Other attitudes which may prevent older adults receiving psychological treatment for depression include therefore pessimism regarding its relevance and effectiveness, a lack of training for professionals and a belief that older adults lack the ability to change in order to benefit from psychotherapy (Lovestone, 1983). Further, Woods (1995) also set out that this is a neglected group for psychological intervention and therefore older adults are unfamiliar with psychological treatments and have expectations of physical treatment (such as pharmacotherapy or ECT).

1.4.5 Summary

There are, therefore, a number of public health implications of depression in older adults. Depression has a considerable impact on an individual's well-being and daily functioning. The chronic nature of depression in older adults greatly affects quality of life. Chronic and chronic intermittent depression also predict mortality.

1.5 The challenges to diagnosis of depression

This section considers the challenges that are faced in identifying and treating depression in an older adult population. Various difficulties will be explored including which professional group the older adult with depression is most likely to present to; how the characteristics of individual GPs and patients can affect diagnosis; and the inherent difficulties due to the nature of depression in establishing diagnosis.

1.5.1 Recognition of depression – who do older adults present to

Few older adults with depression use specialty mental health services, the majority of treatment is within the primary care setting by GPs. Blanchard *et al.* (1994) in a study in inner London found that over a third of patients who screened positively for depression on the Geriatric Mental State (GMS) AGECAT package reported that they had discussed their emotional problems with their GP and half of them were receiving specific therapy. This research raises two issues: that patients, in general, do not feel able to declare depressive symptoms to their GP; and that when they do declare such symptoms, they may not receive treatment.

1.5.2 Recognition of depression by GPs: Defeat Depression Campaign

Almost 20 years ago the Royal College of Psychiatrists (RCP) recognised the importance of the need to improve the detection and management of depression in all age groups and launched the Defeat Depression Campaign in 1992 (Paykel & Priest 1992). This campaign was carried out in association with the Royal College of General Practitioners (RCGP). It was a national campaign, planned to take place over five years with the aims of educating health professionals and the general public about depression, and reducing the stigma associated with depression. The RCP recognised at this time the evidence that was available about the

diagnosis, recognition and the effects of treatment of depression in the general population. The consensus statement produced by the RCP and the RCGP (Paykel & Priest, 1992) set out the difficulties that GPs faced in diagnosing depression: distinguishing depression from other possible diagnoses including life threatening physical disorders, less severe physical disorders, mild or no disorder and psychological disorders. They acknowledged that around half of those presenting at any consultation with depression were not recognised, with this unrecognised proportion reducing over subsequent consultations. They also identified that certain characteristics in presentation make recognition less likely (e.g. depression of less recent origin; less typical symptoms such as less prominent depressed mood or less insight by the patient). Equally, certain GPs are more accurate in recognising depression (e.g. those who make more eye contact with their patients, or who ask direct questions of psychological and social content). The consensus statement also reported on the status of effective treatment for depression through the use of anti-depressant medication, psychosocial management, psychological treatments and onward referral to specialist psychiatric services.

In 1995 the Consensus Group of the Defeat Depression Campaign issued guidance for GPs across the UK on the recognition and management of depression specifically for older adults (Katona *et al.,* 1995). This guidance acknowledged the specific presentation of depression in older adults with greater likelihood of a presentation including altered sleep, appetite, agitation and somatic complaints with fewer complaints of low mood or suicidal intent. The Campaign set out the characteristics of older people more likely to be at risk of depression: including previous episodes of depression, poor physical health, poverty, or experience of loss. They list the methods of brief screening for depression in old age and recommend the use of the GDS-15 to screen for depression in later life. Katona *et al.* (1995) understand the reasons why depression is missed as including a lack of awareness of depression by older adults and their

relatives as a distinct and treatable condition, a reluctance to acknowledge depression due to stigma, and 'ageist' beliefs by the GP that depression is part of ageing. The effective treatments listed in the guidance for depression in older adults include antidepressant medication, lithium, psychosocial management and electroconvulsive therapy.

The Defeat Depression Campaign was essentially an educational campaign for both primary care teams and the general public to improve awareness of and treatment for depression. Rix *et al.* (1999), using a postal survey of 2,046 GPs (representing a systematic sample of 1 in 14 of GPs in England and Wales), evaluated the impact of the 'Defeat Depression' campaign. A good response rate of over 60 per cent was achieved. The authors sought information on GPs' awareness of the campaign and the impact it had made on their clinical practice. Rix and colleagues found that two-thirds of responders were aware of the campaign and that 40 per cent had made clinical changes as a result of the campaign. The authors concluded that the campaign had a useful impact but needed to be supplemented by local and practice-based teaching activities. It is difficult to establish if the differences attributed to the campaign are due to it alone. Clearly there is no control group with which to compare the effects of the Campaign. Indeed the period of the campaign (the early 1990s) coincided with many other changes such as the introduction of GP fundholding and the development of new antidepressant medication which may have affected the GPs' clinical practice.

1.5.3 Studies investigating the recognition of depression by GPs

In a study of the prevalence of depression in older adults (over 65), MacDonald (1986) considered the ability of GPs to identify depression compared with a researcher's assessment (using the depression scale of the Comprehensive Assessment and Referral Evaluation). MacDonald (1986) found that the recognition by GPs of depression in their older adult patients is reported as high; as many as 88 per cent of elderly patients with depression are

correctly identified. The methodology of this study, however, alerted GPs to the future evaluation by the researcher of depression in their patients. This sensitisation may have affected the GPs assessment. The result of the MacDonald (1986) study was similar to that of Turrina *et al.* (1994) in an Italian study (n=255) who found an identification index of 88.4 per cent in GPs ability to identify depression in their older adult patients (over 65) when compared with diagnosis using the Geriatric Mental State Examination (GMS). Crucially, therefore the GPs in both the MacDonald (1986) study and that of Turrina *et al.* (1994) were aware that, following their consultation with selected patients, the research team would subsequently assess patients for depression. This may have heightened the GPs to the possibility of depression in this cohort of patients and increased the likelihood of their detecting depression.

In a similar piece of research, Crawford *et al.* (1998) avoided the difficulty of the GP being sensitised to depression in their patients by advance notice of the researcher's interest; instead they conducted their assessment with patients first, followed by a review of patient GP notes and held interviews with GPs on their assessment of depression: the aim being to avoid sensitisation of the GPs to depression in their patients. Crawford *et al*. (1998) therefore identified, in their sample of elderly patients from north London GP practices, GPs were aware of depression in 51 per cent of depressed patients. They also found that those least likely to have their depression recognised were men, married, those with a high level of physical handicap, those with visual impairment and those least well educated. The Crawford and colleagues study therefore avoided the methodological difficulty of the GP being sensitised to an assessment of depression being made by a researcher as in the MacDonald (1986) and Torrina et al. (1994) studies; however, in the Crawford and colleagues study the assessment of mental state and the GP interview were not simultaneous. There is therefore a possibility that short-term fluctuations in the mental state of patients may have resulted in

patients appearing depressed at the time of interview with the researcher but not when seen by the GP, or vice versa. This study took place in an urban area of north London and as such its generalisability to a rural Scottish population (the area of interest in the current study) is limited.

1.5.4 Presentation of depression in older adults

In 1977 the Epidemiologic Catchment Area (ECA) (Regier *et al.*, 1984) programme of research was instigated in response to the President's Commission on Mental Health in the USA. The aim of the programme was to collect data on the prevalence and incidence of mental disorders and on the use of and need for services by the mentally ill. It involved five research teams across America who conducted studies with a core of common questions and sample characteristics sampling over 3,000 community residents and 500 residents of institutions. This resulted in almost 21,000 participants and included two sets of data collection one year apart with a brief telephone interview part way through the period. Using the NIMH Diagnostic Interview Schedule (DIS), Version II and III diagnoses were categorised according to DSM-III (American Psychiatric Association, 1980), including diagnosis for bipolar disorder, single episode major depression, recurrent major depression and atypical bipolar disorder

As part of a 13 year follow-up to the ECA, Gallo *et al.* (1997) considered the presentation of older adults (aged over 50) with depression. They surveyed community dwelling older adults in Baltimore and sought to explore the core elements that might signal mood disturbance among older adults, even in the absence of dysphoria. They therefore considered hopelessness, worthlessness, thoughts of death, wanting to die and suicidal ideation amongst those who did not meet the criteria for minor depressions (DSM-IV) (American Psychiatric Association,

1994). They found that participants who reported depressive symptoms, but denied dysphoria or sadness, were at increased risk of death, impairment in activities of daily living, impairment in instrumental activities of daily living, psychological distress and cognitive impairment at a 13-year follow up. It therefore appears that depression without sadness in those over 50 may be as important as major depression in relation to the development of functional disability. The results of this study may be particularly relevant to primary care patients, as considered by the present research, that depression without sadness may affect a sub group of older adults and increase the risk of functional impairment. It may therefore be important for general practitioners to consider the somatic expressions of depression.

1.5.5 How GP characteristics affect diagnosis

There are a number of challenges to recognising depression in older adults presenting to a GP. It is often mistakenly assumed that generic losses are common to later life. The normal life stressors such as illness, loss of relationships and family conflict happen at all ages but may occur more frequently in older adults. Unresolved mental health difficulties first arising in younger adulthood may continue on into older adulthood, complicating the picture when a GP is attempting to diagnose depression in a patient (Unützer *et al.,* 2001). GPs may also be concerned about uncovering emotional or psychological stressors that they will be unable to contain within a 10 minute consultation session, which also has a number of competing priorities, one of which is diagnosing depression (Unützer *et al.,* 2001).

1.5.6 The role of stigma

The role of the patients' perception of 'stigma' on treatment discontinuation in young and older adults with major depression was considered by Sirey *et al.* (2001). They examined the extent to which perceived stigma affected treatment discontinuation in young and older adults

with major depression. They identified adults with a diagnosis of depressive disorder using the Structured Clinical Interview for Diagnosis (SCID) (Spitzer *et al.,* 1992) and measured stigma using a version of the Stigma Coping Scale (Link *et al.*, 1989), which uses 12 items to assess beliefs about the devaluation and discrimination directed towards people with a mental illness. They found that stigma predicted treatment discontinuation only among the older age group. Sirey *et al.* (2001), however, only considered a very small number participants (n=92) with only 29 participants being older adults. Despite these limitations it is likely that such perceptions of stigma will also be a barrier to identification of depression in older adults. Older adults may be particularly sensitive to issues of stigma around mental health and, in particular, depression.

This issue of stigma is also reflected in work by Gallo *et al.* (1994) who demonstrated that older adults with depression may be less likely than younger adults to acknowledge symptoms of depression. They considered data from over 6,000 participants on symptoms of depression in the one month prior to interview. After allowing for differences due to overall level of depressive symptoms, gender, minority status, educational attainment, marital status, employment status, and cognitive impairment, they found that low mood was less likely to be endorsed by the older adult group. It therefore appears that older adults are less likely to acknowledge symptoms of depression. This may be understood in terms of the theory proposed by Levy (2003) who set out the process by which aging stereotypes are internalized in younger individuals and then become self-stereotypes when individuals reach old age. The stereotypes, therefore, that younger adults attribute to older people become their self-stereotypes when they themselves are older adults.

1.5.7 Depression as part of ageing

Older adult patients may assume that depression is a natural consequence of ageing and may conclude that treatment will not be effective, thereby not presenting at their GP surgeries. Depression frequently occurs at the same time as a major life event, such as bereavement, loss or illness, which occur more frequently in later life (Knight, 2004). Yet, as discussed in section 1.3.6, the estimated frequency of depression in older adults is lower than the estimated frequency in younger adults and those in middle age (Blazer *et al.,* 1994; Hasin *et al.,* 2005; Kessler *et al.,* 2003). The theory forwarded by Carstensen *et al.* (2000) that older adults place greater salience on feelings related goals may be protective for depression and may explain the relative prevalence rates.

Older adults with a chronic illness or disability receive most of their help from family and friends (Schulz & O'Brien, 1994). The high rate of chronic illness and disability in later life therefore means that many older adults will also be carers. Being a carer is associated with, amongst other difficulties, higher rates of depression (Pinquart & Sorensen, 2003).

One challenge to the diagnosis of older adults with depression is the difference in presentation between older and younger adults. Depressed older adults may be less likely than younger adults to report the symptoms of depression (Unützer, 2002). It is necessary for GPs to be aware that symptoms of anhedonia, complaints of lack of energy, or complaints about somatic problems may be indicators of a possible depression in older adults.

1.5.8 Cognitive impairment and depression: differential diagnosis

The rates of dementia increase with age (Lindesay *et al.,* 1989) and it can be difficult to separate out the overlapping symptoms of cognitive impairment and depression, such as

concentration or memory impairment. This complex differential diagnosis can therefore be a barrier to diagnosing depression. Cognitive impairment and depression often coexist in older adults patients (Butters *et al.,* 2004; Lichtenberg *et al.,* 1995) and in non-demented individuals both depression and cognitive impairment are associated with a successive onset of dementia (Green *et al.,* 2003; Jorm, 2001). It can therefore be problematic to differentiate between individuals with depression and those with dementia as many of the symptoms are common to both such as memory impairment and poor concentration. Those with depression, however, also experience sleep and appetite disturbance, loss of pleasure and loss of energy and, in contrast to those with dementia, they have negative thoughts about themselves, may express guilty feelings, feelings of worthlessness and hopelessness and sometimes suicidal thoughts (Gelder *et al.,* 1996). Difficulties can, therefore, arise in establishing whether an older adult with depression has cognitive impairment due to an underlying dementia or is explained solely by the depression. Depression can therefore be mistaken for the loss of interest in activities, lack of initiative and loss of cognitive ability associated with early dementia. It is sometimes known as 'pseudo-dementia' for this reason (Gelder *et al.,* 1996). However, in depression, over the course of treatment a person's ability to concentrate and to think will improve.

1.5.9 Depression and physical conditions

Reynolds *et al.* (2002) noted that the co-existence with physical health conditions, specifically in older adults, may lead GPs to fail to diagnose depression. They set out that the most important symptoms of depression in older adults are sadness, downcast mood, frequent tearfulness, and recurrent thoughts of death and suicide. This under-diagnosis may be due to older adults' tendency to use somatic complaints to describe a depression (Gallo *et al.,* 1999). The role of medical problems is an important consideration when examining depression in an older adult population. Older adults are more likely to suffer from multiple physical medical

conditions than younger adults. Indeed there is a rapid increase in medical problems with age of patients such as cancer, heart disease, neurological disorders, and stroke (Rang *et al.,* 2002). Depression is also common in a number of chronic physical conditions e.g. diabetes, cardiovascular disease, arthritis and stroke (Drayer *et al.,* 2005), also cancer, arthritis and cardiovascular disease (Bush *et al.,* 2001) which can lead to depression being under diagnosed. Indeed 25 per cent of those who have had a heart attack also have co-morbid major depression significantly increasing the subsequent mortality (Bush *et al.,* 2001). This complicates the ability to diagnose depression as many of the physical conditions which older adults experience have symptoms that are often found in depression. Therefore, diagnosis is often made more difficult than in the adult population due to the overlaying of depression with multiple physical health symptoms (Lebowitz, *et al.,* 1997). However, as mentioned in section 1.3.6, despite greater exposure of older adults to these physical conditions, the rates of depression in older adults are less than for younger and middle-aged adults. The theory put forward by Boernor and Jopp (2007) may explain this anomaly: that older adults are more able to cope with such events as they are developmentally 'on time'.

Nonetheless, excluding somatic complaints, when assessing a patient for depression, may contribute to the risk that patients with depression may not be diagnosed. Norris (2003) suggested that the presentation of conditions such as anhedonia, sleep problems, concentration difficulties, diminished energy and loss of interest may indicate a requirement for further assessment by clinicians. Often the physical medical conditions affecting older adults have symptomatology common to depression. Fatigue, for example, is a common symptom of depression and is common in other disorders.

Depression is clearly associated with functional impairment (Blazer, 2003) and disability is also a risk factor for depression (Roberts *et al.,* 1997). Possible explanations of this relationship between physical disability and depression are suggested by Blazer (2003): that physical disability leads to a higher number of negative life events and may restrict aspects of life such as social support and activities; and that the state of depression itself is disabling with, for example, executive-type cognitive impairments caused by depression resulting in greater disability. The theoretical work of Antonucci (2001) may be relevant in understanding this relationship. Antonucci (2001) set out that the maintenance of social relations is important in achieving successful ageing in relation to health. Disability may therefore cause a rupture in social relations resulting in an increase in the likelihood of depression.

Lenze *et al.* (2001), in a systematic review of this area, considered the association of late-life depression and anxiety with physical disability. Medical co-morbidity, functional impairment and cognitive impairment all have an adverse effect on the outcome of depression and depression, in turn, has an adverse effect on the outcome of the co-morbid problem. Lenze *et al.* (2001) note that studies in their review show both that depression is a risk factor for disability (Tinetti *et al.,* 1995; Penninx *et al.,* 1999; Bruce *et al.,* 1994) and disability is a risk factor for depression (Kennedy *et al.,* 1990; Roberts *et al.,* 1997; Zeiss *et al.,*1996). Lenze *et al.* (2001) also found that depression and disability appear to be synchronised: as one improves so does the other; as one deteriorates so does the other, thus reinforcing the construct of depression as a disabling illness. In investigating the causal route between depression and disability, Lenze *et al.* (2001) propose, for the studies reviewed, two major causal categories. Firstly that the depressed state is inherently disabling and secondly that depression either increases risk for the other medical conditions or impairs health behaviours which would otherwise be protective. Lenze *et al.* (2001) argued that depression being present increases the

risk of some physical illnesses (such as hip fracture and vascular disease); results in health behaviours such as poor medication adherence, smoking and physical inactivity which may in themselves lead to physical disability. Equally some of the features of depression itself may lead to physical disability (such as poor appetite, psychomotor retardation and sleep disturbance). Physical disability may lead to an increase in negative life events; loss of perceived control, low self esteem, social activity restriction and strained interpersonal relationships which may lead to depression. Finally, underlying factors such as preclinical dementia, poverty, low social support and medical illness can lead to either depression or physical disability or both. Lenze *et al.* (2001) concluded that depression increases the long-term risk of disability and that this effect is possibly mediated by a higher incidence of physical illness and poorer health behaviours.

1.6 Challenges in engaging GPs in research

GPs play a key role in the identification and treatment of depression. They can face a complex picture when attempting to identify depression in their older adult patients. It is important, therefore, that researchers are able to engage with GPs to understand the process that they face when establishing a diagnosis. However the level of participation in research by GPs is low internationally (Robinson & Gould, 2000; Askew, *et al.*, 2002).

In order to explore this low participation, Salmon *et al.* (2007) considered a theoretical sample (n=23) of GPs in England who had declined to participate in a research trial involving management of medically unexplained symptoms and examined the barriers that the GPs reported as to why they did not participate. Two factors were considered: that general practice and research were alien to each other, seeing research as incompatible with person-centred care; and that GPs lacked time to take part in the research. In particular this lack of time could

be overcome if payment were made, allowing the GPs to feel able to use their own time in return for payment. However, care should be exercised in considering the generalisability of this study. Salmon *et al.* (2007) used response rates from an earlier study when a total of 1,934 GPs were asked to participate and 67 participated in the original study. The authors then sampled 76 of those who declined to take part, offering £30 for their involvement. Twenty-three agreed to take part in their study.

Salmon *et al.* (2007) noted that GPs presented a strong sense of entitlement not to be involved in research, expressed by reference to their professional values, motivations and tasks. Interestingly they discuss the concept that research is intrinsically valuable. This may be true for certain professions, including clinical psychology and hospital based doctors; however GPs see a lack of value in their involvement in research. Some respondents cited their career in general practice was in order to move away from hospital-based medicine where involvement in research advances careers.

Salmon *et al.* (2007) also described a rejection by GPs of the validity of evidence-based medicine in making clinical decisions. They see their role in terms of the crucial nature of the clinical relationship, emphasising intuitive knowledge built through experience rather than the use of evidence-based medicine in making clinical decisions. Salmon *et al.* (2007) also noted a strand of comment implying that patients needed protection by the GP from researchers, such as a hope that the research would be ethical or referring to threats around confidentiality or coercion by the researcher of the patient. They also noted that no GP recounted a problem arising from previous research.

The second issue raised by Salmon *et al.* (2007) was of a lack of time to participate. Time is widely accepted as a barrier to GPs participation in research but Salmon *et al.* (2007) showed that this was a more complex concept and that GPs viewed time as a finite quantity while also acknowledging that financial payment would release time from the reservoir of their own time. It is therefore challenging to engage GPs in the process of research. They may not be attracted to take part or to initiate research on the assumption that it is intrinsically, clinically or professionally valuable.

1.7 Summary

There are many challenges to the effective diagnosis of depression in an older adult population. Older adult patients are less likely to seek or to accept care from mental health professionals; but do attend their GP. The characteristics of the relationship between GP and patient can affect the likelihood of diagnosis (raising issues such as stigma and co-morbid medical conditions). The complex nature of the presentation of depression and its similarity to other conditions means that differential diagnosis is highly applicable. Finally, the difficulty in engaging GPs in research around the process of diagnosis will be challenging.

1.8 The treatment of depression in an older adult population

It is commonly GPs who manage older adults with depression in primary care settings (Rothera *et al.,* 2002), usually with anti-depressant medication (ADM). The evidence for treatments for this population (both psychotherapy and pharmacotherapy) is considered here.

1.8.1 Psychological-based treatments for older adult depression

The most commonly researched psychotherapy for the treatment of depression is Cognitive Behaviour Therapy (CBT). CBT is an active, directive, time-limited structured psychological-

based treatment. It is based on the approach that how a person thinks affects the way they feel and how they make sense of their experiences. There have been a number of meta-analyses completed of the effectiveness of psychotherapy for older people with depression (Cuijpers *et al.*, 2006; Pinquart *et al.*, 2006; Scogin *et al.*, 2005; Wilson *et al.*, 2008). These are now considered.

Scogin *et al.* (2005) conducted an evidence-based review of psychotherapies for depression in older adults. For a treatment to be considered evidence-based it had to have at least two methodologically sound studies with a minimum of 30 participants across studies shown to be (a) better than control or comparison group or (b) equivalent to an existing evidence-based therapy. They identified six beneficial treatments: behavioural therapy, CBT, cognitive bibliotherapy, problem-solving therapy, brief psychodynamic therapy and reminiscence therapy. However, the inclusion of studies that meet criteria (b) meant that a treatment could be considered evidence-based as a result of its equivalence with an already established evidence-based treatment whether or not its performance compared favourably with a control group. This difficulty was addressed by a meta-analysis by Cuijpers *et al.* (2006), considered next.

Cuijpers *et al.* (2006) conducted a meta-analysis of 25 studies of randomised control trials, 17 of them comparing a psychological intervention to a control condition. They found overall that psychological treatment for older adults with depression had a moderate to large effect size. They considered a variety of formats: individual; group; or bibliotherapy but found no difference in effect. No difference was found between CBT and other forms of psychotherapy. Cuijpers *et al.* (2006), therefore, concluded from their meta-analysis that psychological treatments are effective in the treatment of older adults with depression and the results are

comparable to those of pharmacotherapy. They also concluded that there were no indications that one type of psychological treatment was more effective than another.

More recently a Cochrane review (Wilson *et al.,* 2008) was conducted into the efficacy of psychotherapeutic treatments for depression in older people and considered all randomised controlled trials that included older adults with depression that met the ICD (World Health Organisation, 1992) or DSM-IV (American Psychiatric Association, 1994) criteria. It included all types of psychotherapeutic treatments categorised into CBT, psychodynamic therapy, interpersonal therapy and supportive therapies. Wilson *et al.* (2008) included trials in which the description of patients were of 'older adults' or similar, or in which all patients were aged 55 or over. They found nine trials of CBT and psychodynamic approaches together with a small group of 'active control' interventions, seven of which were suitable for inclusion into the comparison between CBT and controls. No trials were found relating to interpersonal therapy or supportive therapies. Wilson *et al.* (2008) did not find strong support for psychotherapeutic treatments in the management of depression. However, they did conclude that the findings reflected those of a larger meta-analysis (NICE, 2004) that included patients with broader age ranges (18 and over) suggesting CBT may be of potential benefit.

Pinquart *et al.* (2006) completed a meta-analysis looking specifically at the comparison between pharmacotherapy and psychotherapy in the treatment of older adults with depression. They considered 89 controlled studies focussing on treatment of acute depression (37 studies) and other depressive disorders (52 studies). They found that available treatments for older adults with depression are effective but that caution needs to be exercised when comparing pharmacotherapy with psychotherapy due to the placebo effect within the control arm of

medication studies resulting in lower effect size for medication. Overall they found comparable effect size in both psychotherapy and pharmacotherapy.

In the Scottish context a recent randomised control trial was conducted by Laidlaw *et al.* (2008). The authors aimed to provide an empirical evaluation of CBT compared with treatment as usual (generally pharmacotherapy) for older adults with mild to moderate major depression in Fife and Glasgow. They found that participants in both treatment conditions benefited from treatment. However, when considering the participants meeting research diagnostic criteria for depression (four or more symptoms of depression) they found significant differences favouring the CBT condition at the end of treatment and at three-month follow up. However, it should be noted that this was a small study (n=114) and the levels of depression were relatively mild. Despite these criticisms, this an important study as it deals with a Scottish population, in a primary care setting and compares CBT to the treatment as usual for older adults with depression. It demonstrates encouragement towards the use of CBT with this population.

Laidlaw (2001) in a review considered the evidence for the validity and effectiveness of CBT for depression in older adults. This review considered only a small number of studies, reflecting the infancy of the evidence in this area. The author reported that CBT showed minimal difference in outcome when compared with other forms of psychotherapy and beneficial effects in comparison to no treatment or placebo. A larger randomised controlled trial by Serfaty *et al.* (2009) considered the clinical effectiveness of CBT delivered in primary care for people with depression (n=204). Serfaty *et al.* (2009) compared treatment as usual, treatment as usual plus a talking control and treatment as usual plus CBT over a four month period. They found that CBT is an effective treatment for older people with depression.

However this study would have benefitted from longer term follow-up of the results to consider if these improvements were sustained over time.

Despite the attention that CBT has received as an evidence-based treatment for depression in the older adult population, it remains an infrequently referred treatment for older adults with depression (Wei *et al.,* 2005). Within the area of interest for this study, Dumfries and Galloway NHS Board, a very recent audit was reported by Robson and Higgon (2010). The authors found that, although older adults comprise 25.3 per cent of the population covered by Dumfries and Galloway NHS Board, they accounted for only 8.9 per cent of referrals to psychological services and that working age adults were between three to four times more likely to be referred to the service than older adults.

1.8.2 Pharmacotherapy

Anti-depressant medications (ADM) have become the basis for the treatment of moderate to severe depression in older adults. Blazer (2003) in his review and commentary of depression in late life reviewed the evidence for ADM in this area. He concludes that virtually all ADM are equally effective for treating serious major depression across all ages. Comparisons between the two main types of ADM, tricyclic antidepressants (TCAs) and selective serotonin reuptake inhibitors (SSRIs) find broadly equal efficacy but with fewer side effects of SSRIs (Mulsant *et al.,* 2001). However, ADM is found to be less efficacious in treating less severe depression. Williams *et al.,* (2000) carried out a large study with 415 primary care patients with dysthymia and minor depression. They found that paroxetine provided moderate benefits for depressive symptoms and mental health functioning in elderly patients with dysthymia and minor depression. There is also an increasing interest and use of herbal preparations such as St John's wort as an 'over-the-counter' medication for the treatment of depression. The major

active ingredient in St. John's wort is hypericin, which has psychoactive properties. Lantz *et al.* (1999) reported an interesting small scale study of five cases of clinically diagnosed central serotonergic syndrome, a potentially life-threatening drug reaction that causes an excess of serotonin. Each of the five patients had combined prescription ADM with St. John's wort. Older adults may be particularly vulnerable to interactions between prescription and non-prescription medication given their greater likelihood to have medical co-morbid conditions.

Linde *et al.* (2005) conducted a recent systematic review of this area looking at the evidence for the efficacy of St John's wort in the treatment of depression, considering thirty seven double blind, randomised control trials comparing the efficacy of St John's wort with either placebo or ADM in adults (mainly in their forties) with depressive disorders. Linde *et al.* (2005) found that the larger placebo-controlled trials which were restricted to patients with major depression showed only minor effects over placebo. However, older and smaller trials which had not restricted their studies to patients with major depression showed that compared with standard antidepressants, St John's wort had similar effects**.**

Rothera *et al*. (2002) examined the attitudes and practice of GPs in the use of antidepressant medication (ADM) in the treatment of depression in older adults. They surveyed 330 GPs in an English study and considered their responses to a series of attitude statements and clinical vignettes regarding ADM prescribing for depression in their older adult patients. They found that newer ADMs were prescribed more frequently than older antidepressants. Unfortunately the authors did not consider the use of psychological therapies for the treatment of depression, particularly given the evidence base that exists for this treatment with this population (as discussed in section 1.8.1).

1.8.3 Policy recommendations

There is no specific National Institute of Clinical Excellence (NICE) or Scottish Intercollegiate Guidance Network (SIGN) guidance on depression in older adults. NICE has issued guidance for the treatment of depression (NICE, 2004) in adults (those over 18 years of age). NICE do recommend that older adults require an age appropriate dose of antidepressants taking account of their physical health and other medication. NICE also recommend that side effects should be carefully monitored in the older adult population.

1.8.4 American expert consensus

In an American study, Alexopoulos *et al*. (2001) surveyed fifty experts on the use of ADM for depressive disorders in older patients. The experts surveyed recommended including both ADM and psychotherapy in treatment plans for nonpsychotic unipolar major depressive disorder of any severity, as well as for dysthymic disorder or persistent minor depressive disorder with this population. For milder depression they would consider using either ADM or psychotherapy alone. In terms of the type of ADM, SSRIs were recommended for all types of depression,

1.8.5 Summary

There is evidence therefore that both psychotherapy (in particular CBT) and pharmacotherapy are effective in the treatment of older adults with depression. Therefore depression in this population, once identified, has effective treatments available.

1.9 Diagnosis and screening for late-life depression

As discussed earlier in section 1.5.1, GPs are primarily responsible for providing a diagnosis of depression in the older adult population and are also the access point for patients to receive treatments beyond those solely available in primary care. GPs therefore have a crucial role for the wellbeing of older people with depression.

There is no biological marker or test that can determine if a patient has depression and diagnosis is made on the basis of the patient's symptoms, presentation and aetiology. There are various methods of assessing depression: either through the use of clinical judgement and direct observation; a structured clinical interview; or the use of a self-report measure. The former requires training, specialist knowledge and experience in mental health; the latter, self report measures are easy to administer, score and interpret. Best practice would be to use a variety of these methods to assess depression (NICE, 2009, p.90).

1.9.1 Diagnosis

A number of structured clinical interviews such as the Structured Clinical Interview for DSM-IV-R (SCID) (Spitzer, *et al.,* 1992) and the National Institute of Mental Health Diagnostic Interview Schedule (DIS) (Robins *et al.,* 1981) have been developed to provide a reliable method of diagnosis as they allow for systematic exploration of symptoms and behaviours that may otherwise be overlooked.

1.9.2 Screening

Screening is the assessment of large numbers of people in order to identify those with a high probability of having the characteristic of interest. Screening does not confirm a suspected diagnosis. It does however, help to direct attention to where a more definitive clinical

evaluation is needed. In the same way, screening tools for depression are able to identify individuals who report depressive symptoms but a further clinical examination is needed to identify depression.

1.9.3 Summary

The symptoms of depression can therefore appear similar to the symptoms of other conditions and GPs need to be aware of issues of differential diagnosis. It is recognised therefore, that older adults with depression are more likely to seek help from their GP than a specialist mental health professional. The work of the RCP and RCGP with the 'Defeat Depression Campaign' therefore highlighted the importance attached to the GPs' role in recognising and treating depression. In conclusion, UK Government policy states that need, not age should determine access to psychological therapies (Department for Health, 2005).

1.10 Summary of chapter 1

The population, globally and nationally, is ageing and the numbers of the population over the age of 65 is increasing. Given this increase in numbers, it is important that the physical and mental health needs of older adults are addressed by service providers. In particular depression is the most common form of mental ill health in this group. The rates of depression in older adults is, despite this population having greater exposure to the risk factors of depression, less than that of younger and middle-age adults. The theories which have been advanced to understand this difference include socio-emotional selectivity theory, the role of wisdom and the ability to manage stressful life events. Characteristics such as gender and age affect the rates of depression, with more women and more of the old-old being affected by depression. With regard to depression overall prevalence rates of 8 to 18 per cent are noted in the older adult population. Depression has a considerable impact on an individual's well-being and daily functioning. The chronic nature of depression in older adults demonstrates the considerable impact it has on quality of life for older adults. Chronic and chronic intermittent depression also predict mortality.

There are many challenges to the effective diagnosis of depression in an older adult population. The complex nature of the presentation of depression and its similarity to other conditions means that differential diagnosis is highly relevant. Nonetheless, once identified, there are effective treatments available for older adults with depression. Adults who experience depression in later life may not be able to access assessment that is more easily available to the younger patient. In turn, older people themselves may also assume that no treatment is available or that depression is part of getting older.

1.11 General Aim

To examine the extent to which general practitioners' (GP) are able to identify depression in their patients over 65 presenting in a general clinic setting and to offer appropriate treatment strategies.

1.12 Research Hypotheses: Specific

1 That GPs, in a general clinic setting, are able to identify depression among their older adult patients subsequently screened as having depression by a diagnostic tool.

2 That several independent variables such as gender, age, living with others, being a carer, being known to the GP, physical co-morbid conditions and GDS score, will affect the accuracy of GP recognition of depression when compared with the diagnosis using the SCID.

3 That the predictive power of the independent variables such as gender, age, living with others, being a carer, being known to the GP, physical co-morbid conditions and GDS scores will affect the likelihood of the GP treating or not treating a depression.

Chapter 2: METHODOLOGY

2.1 Overview of methodology

The study investigated the extent to which general practitioners' (GPs) are able to identify depression and offer appropriate treatment strategies to their older patients (aged over 65) presenting in a general surgery.

2.2 Design

The study used Cohen's Kappa to assess the level of agreement between the GP and the screening tools for depression. The screening tools used were the Structured Clinical Interview for DSM-IV (SCID) and the Geriatric Depression Score – short form, 15 item (GDS-15).

2.3 Participants

Participants were recruited from attenders identified by GPs from their non-urgent community clinics in Dumfries and Galloway NHS Board area. Participants were required to be at least 65 years of age on the day of the consultation, not to have a current diagnosis of depression and not to be currently undergoing treatment for depression.

2.3.1 Background characteristics of the sample

A total of 40 participants expressed interest in hearing more about the study (by completing and returning the opt-in form, Appendix 1). Four participants decided not to participate when given further information on the study. A further five participants were excluded following assessment with the researcher as they did not meet the criteria for inclusion in the study. There were therefore 31 valid participants for inclusion in the study.

Of the study sample, 19 were women and 12 were men. The mean age was 75.6 (SD=6.5, range 66.4-89.6). Of the sample 45 per cent were in the young-old category (between 65 and 75 years of age) and 55 per cent were in the old-old category (over 75 years of age).

2.4 Inclusion and Exclusion Criteria

2.4.1 Inclusion Criteria

Suitable participants were:

- attending a general practitioner, non-urgent, community service clinic in Dumfries and Galloway NHS Board area
- able to give informed consent
- over 65 on the day of the appointment.

2.4.2 Exclusion criteria

Patients with the following co-morbid conditions were excluded from the study:

- patients with an AMTS (Abbreviated Mental Test Score) of eight or less (indicating significant cognitive impairment)
- patients with a recognised learning disability (recorded in medical records)
- patients whom the GP assessed as unable to give informed consent
- patients with a current diagnosis of depression prior to entering the study
- patients with a diagnosis of dementia
- patients whom the GP assessed as being unable to cope with the requirements of the study.

2.5 Procedure

2.5.1 Recruitment process

At the outset, the study chose to include as broad a range of older adults as possible. This aim was reflected in the inclusion and exclusion criteria for participants. The recruitment process took place from September 2009 to May 2010. The process involved the identification of GP practices that were interested in taking part in the research, the recruitment of individual GPs to the study and the recruitment of participants into the study. A summary of the process of the recruitment of participants is shown in Figure 2.1 below and described further in section 2.5.2 to 2.5.4.

2.5.2 Identification of GP practices

The senior partners in all 25 GP practices, in three of the four Local Health Partnerships (LHPs) of Dumfries and Galloway NHS Board area (Dumfries and Upper Nithsdale; Stewarty; Annandale and Eskdale), representing around 115 GPs, were contacted by letter (Appendix 2) together with a copy of the study protocol (Appendix 3).

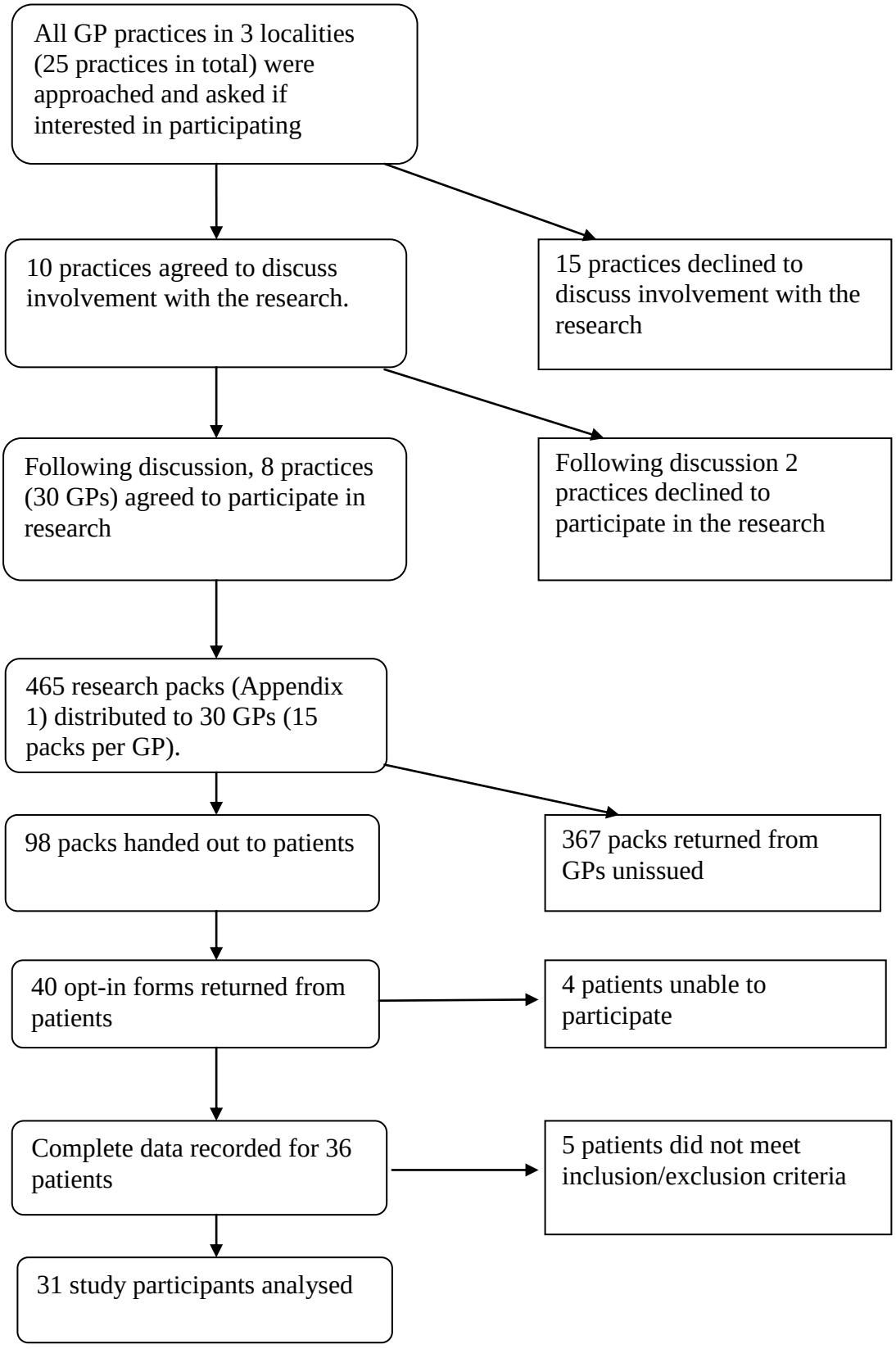

Figure 2.1: Recruitment of study participants

Figure 2.2 shows the geographical area of the practices contacted (marked in green); this area of Dumfries and Galloway is shown in the context of mainland Scotland in Figure 2.3 (marked in dark blue).

Figure 2.2 Map of Dumfries and Galloway NHS Board area

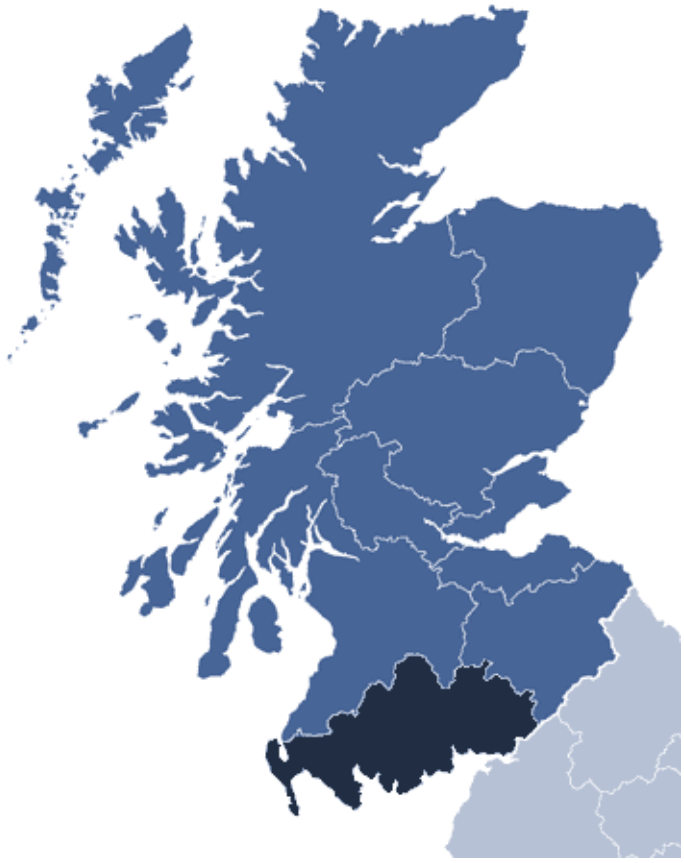

Figure 2.3 Dumfries and Galloway NHS Board area, Scotland

2.5.3 Recruitment of GP participants

The explanatory letter (Appendix 2) and copy of the study protocol (Appendix 3) were followed up by a telephone call to the senior partner from the researcher. It was established at this stage whether there was any interest from the GPs to hear more about the study, the researcher's aim being to gain access to explain the research study to the GPs in person. If consent was given to attend, a copy of the study protocol (Appendix 3) was circulated to all of the GPs in the practice.

Fifteen practices declined to participate at this stage. Ten practices agreed to the researcher giving a presentation to the GPs. At the face-to-face meetings with GPs, the researcher gave further details of the proposed study and questions and issues were discussed. The main issues

raised were around the time involved in GPs issuing the packs; the difficulty in GPs remembering to offer a pack to those who met the criteria for the study; and whether there was any payment for the issuing of packs. Following the presentation, eight practices agreed to take part: two practices declined to participate. In five of the eight practices who agreed to take part all GPs consented to be involved in the study.

The GPs who agreed to take part, were issued with an information sheet (Appendix 4) and, once they had completed a consent form (Appendix 5), they were each issued with a set of 15 packs for distribution, a set of instructions (Appendix 6) and an A6 laminated card to act as aide-memoire (Appendix 7) of the inclusion and exclusion criteria for the study.

2.5.4 Recruitment of participants

GPs identified patients, meeting the inclusion and exclusion criteria, at the end of their consultation, and asked if they were interested in taking part in a research study. If so, they were issued with an information pack. At this stage the GP then completed the post consultation form (Appendix 8) which they held until the researcher had obtained consent from the participant. The GP recorded one of two possible options on the post consultation form (Appendix 8): depressed; not depressed. If the GP recognised the patient as depressed they were also invited to indicate their proposed treatment from one or more of the following options:

- Anti-depressant medication prescribed;
- Referral made to mental health/social work team;
- No active treatment proposed at this time.

The pack issued to patients (Appendix 1) consisted of the opt-in sheet and the participant information sheet. This allowed for time to read the material and to generate questions that could be discussed at the assessment. If patients wished to take part they were invited to contact the researcher via telephone, post or e-mail. A suitable appointment time was then arranged for the researcher to meet the patient within 2 weeks of the patient's GP consultation.

2.5.5 Issuing of packs by GPs

Eight GP practices were recruited into the study, representing 36 GPs, of whom 30 GPs agreed to take part in the study. Each participating GP was issued with 15 packs to distribute with one GP taking 30 packs (Table 2.1). A total of 465 packs were therefore issued to GPs to be handed to patients.

A total of 98 packs were issued to participants (of which 40 took part in the study) (Table 2.1 below), 367 packs therefore remained unissued by GPs.

Table 2.1: Packs issued by participating GPs and numbers of study participants generated

Practice	Number of participating GPs	Number of packs issued to GPs	Number of packs GPs issued to patients	Number of study participants generated
A	4	60	18	5
B	5	75	14	8
C	4	60	5	1
D	3	45	6	0
E	4	60	0	0
F	1	15	5	2
G	2	45	45	14
H	7	105	5	1
TOTAL	**30**	**465**	**98**	**31**

The 30 GPs in the study issued a mean of 3.2 packs (SD=6.07), range (0-30) and generated a mean of 1.07 study participants per participating GP (SD=2.11), range (0-10).

2.5.6 Number of participants generated per GP

Of the 30 GPs in the study, 11 generated all of the study participants; 19 GPs did not generate any study participants. Of the 11 GPs who generated study participants, 10 issued fewer than 15 packs; one GP issued 30 packs to participants.

The 11 GPs who did generate study participants, resulted in a mean of 2.91 participants (SD=2.67), range (1-10).

2.5.7 Returns to opt-in to study

A total of 40 opt-in forms were received from patients wishing to take part in the study. Of these patients Table 2.2 shows the reasons for exclusion from the study following opt-in.

Table 2.2 Participants who opted-in and analysed

Total number of opt-in forms received	40		
Declined to attend when offered appointment		1	
Unable to attend due to ill health		2	
Did not attend appointment		1	
Did not meet inclusion criteria for time limit between GP appointment and attending for study		4	
Did not meet inclusion criteria for cognitive screening		1	
Total number of valid participants (known as the study participants)			31

A total of 115 GPs therefore were approached, 30 individual GPs agreed to take part in the study of which 11 GPs generated 31 participants.

2.5.8 Assessment Procedure

Following receipt of an opt-in form or contact by the participant by phone or e-mail, participants were invited to attend a 30 minute appointment with the researcher at their own GP practice. After discussion of the aims of the study and dealing with any questions from the participants, written consent to the research was obtained (Appendix 9). All participants who attended the assessment appointment consented to take part in the study.

2.6 Measures

Participants were assessed using the following measures, administered in this order for each participant:

- The Abbreviated Mental Test Score (AMTS)
- A structured interview to gain demographic information not available from patient medical records
- Clinical Interview for DSM-IV-R (SCID)
- The Geriatric Depression Scale (short form, 15 items) (GDS-15)

Copies of the measures and their scoring instructions are included in the Appendix section (Appendices 11, 12 & 13). A description of these measures and their psychometric properties are given below.

2.6.1 Cognitive screening tool. Abbreviated Mental Test Score (AMTS)

The AMTS (Hodkinson, 1972) is adapted from the longer Mental Test Score (MTS), with the 10 questions in the test selected due to their greater discriminatory value in assessing cognition. A cut-off point of 8 out of 10 was used to imply significant cognitive impairment that excluded a patient from taking part in this research project.

Psychometric Properties of AMTS

In a systematic review of dementia screening tools for use by general practitioners Brodaty *et al.* (2006) cited the sensitivity of the AMTS as 100 per cent and specificity = 82 per cent.

2.6.2 Demographic information

The following information was collected by structured interview from each participant using the following questions:

1. Currently living with others: "Do you live alone or with others?"
2. Currently caring for a spouse or partner: "Do you consider yourself to be your spouse/partner's carer?"

This information was recorded on patient data form (Appendix 10).

2.6.3 The Structured Clinical Interview for DSM-IV-R (SCID)

The Structured Clinical Interview for DSM-IV-R (SCID, Spitzer *et al.*, 1992) is a semi-structured interview for making the major Axis I DSM-IV-R diagnoses. It is administered by a clinician and includes a number of modules, seven of which represent the major Axis I diagnostic classes. In the current study the SCID was administered by the author, under the training and supervision of an experienced consultant clinical psychologist, and only the depression module was used.

Psychometric Properties of SCID

In measuring the validity of a diagnostic tool, such as the SCID, a comparison would generally be made against a hypothetical 'gold standard'. Difficulties arise in using, for example, unstructured clinical interview as the comparator as the SCID itself is designed to improve on

the limitations of such an assessment tool. Indeed the SCID has been used as a 'gold standard' in establishing the accuracy of clinical diagnoses (Shear *et al.*, 2000; Steiner *et al.*, 1995).

A standard has been proposed by Spitzer (1983) called the LEAD standard. This involves a longitudinal assessment (L) by expert diagnosticians (E) using all available data (AD) about a subject. The limited use of LEAD is accounted for by the difficulty in implementation. A number of studies (Basco *et al*., 2000; Kranzler *et al.*, 1995; Kranzler *et al.*, 1996) reported that the SCID had superior validity over standard clinical interview using an approximation of the LEAD procedure.

2.6.4 The Geriatric Depression Scale (short form, 15 item) (GDS-15)

This is a 15-item self-report set of questions answered yes or no; it is a shorter version of the full 30 item GDS. Sheikh and Yesavage (1986) carried out a validation study comparing this shortened form (GDS-15) with the full 30 item GDS. They found that both measures were successful in distinguishing depressed from non-depressed patients, suggesting that GDS-15 can be successfully used as a self-report screening tool for depression. The cut-offs for the GDS-15 are: a score of less than 4 indicates no depression; a score of 5 to 8 indicates mild depression; a score of 8 to 11 indicates moderate depression; and a score over 11 indicates severe depression.

The GDS-15 can be used with ill or moderately cognitively impaired individuals and is commonly used as a routine part of a comprehensive geriatric assessment. It has been widely used with a variety of groups although its utility with cognitively impaired adults is uncertain (Edelstein *et al.*, 1999). This will not be problematic in this study, as patients with significant cognitive impairment will be excluded from taking part. GDS-15 is helpful with an older

population, as it has no somatic items, which avoids the confusion of medical complaints with depression.

Psychometric Properties of GDS-15

Diagnostic accuracy of the GDS-15 was examined in a meta-analysis by Mitchell *et al.* (2009). They reported sensitivity, that is the proportion of actual positives which are correctly identified, of 81.3 per cent. They reported specificity, that is the proportion of negatives which are correctly identified, of 78.4 per cent. They also found that the diagnostic accuracy of the GDS-15 was significantly higher than that of the full 30 item GDS (77.6 per cent compared with 71.2 per cent, $\chi^2 = 24.8$, $p< 0.0001$).

2.6.5 Medical record information

Once consent has been obtained, and following completion of the assessment by the researcher, the medical records were examined for the participants to establish the following data:

- Age at date of assessment by GP
- Gender
- If known to GP (assessed as one or more contacts with consulting GP in last 6 months)
- Number of physical co-morbidities.

All data were recorded on the patient data form (Appendix 10).

2.7 GP Assessment of participant

Following completion of the assessment interview (including obtaining consent from participants) the post-consultation GP form (Appendix 8) was collected from the relevant GP.

2.8 GP demographic information

The following demographic information was collected about each GP:

1. If they had received additional training in gerontology
2. If they had received additional training in psychiatry
3. Age
4. Gender
5. Years since qualification.

2.9 Ethical Issues

A number of ethical issues were raised in the design of the research. The ways in which these issues could be mitigated were considered.

2.9.1 Potential Distress to Participants

It was appreciated that completion of the assessment measures may trigger distress and therefore the researcher was aware of the well-being of participants as the assessment session progressed, to ensure that support and advice were offered if needed. All assessments took place in the participant's own GP practice and medical staff were also available to deal with any distress that may arise as a result of completing the questionnaires and interview.

2.9.2 Unexpected positive screening

It was considered that some individuals might express interest in the study and then screen positively for cognitive impairment and/or depression which had not already been identified by the GP. It was explained to participants, as part of their consent, that if any matters arose during the study relating to their care and treatment that their GP would be informed

2.9.3 Informed Consent

Informed consent was obtained from all participants at the start of their session with the researcher. Careful consideration was made to give participants full written and verbal details regarding the purpose and content of the study so that potential participants could make fully-informed decisions regarding participation. They were also made aware that they could withdraw from the study at any time and that this would not affect their future routine treatment.

2.9.4 Confidentiality

The confidential nature of all information collected as part of the study was emphasised to participants on the information sheet (Appendix 1) and during the screening appointment. A series of measures was taken to offer the highest standards of confidentiality. Each participant was assigned a number for identification. All questionnaire data were then anonymised, transferred to and stored on a password protected NHS computer. Returned questionnaires were stored safely in an NHS locked filing cabinet. Individual identification numbers assigned to each participant's anonymised data were the only link to their personal information. Personal information was stored in a locked filing cabinet in the researcher's office, on NHS premises. Only the researcher had access to the data. Data from the study will be stored in a locked cabinet on NHS premises for five years, in accordance with research governance guidelines, and subsequently destroyed.

The signed consent form was stored by the researcher in a locked filing cabinet. Participants were also given the opportunity to request a summary of the full research study upon completion.

2.9.5 Ethical Approval

An application was made to West of Scotland Research Ethics Committee 3 on 15th September 2009. The study was reviewed at the ethical review meeting on 1st October 2009, attended by the researcher and a subsequent meeting of a sub-committee of the main research ethics committee on 22nd October. This second meeting was not attended by the researcher.

The ethics committee raised a number of issues at their meeting and within correspondence received. For information regarding the specific issues and replies from the researcher refer to Appendix 14. To summarise briefly, the key ethical issues that where raised by the ethics committee related to GPs taking consent from patients for the researcher to contact them; that the word "treatment" to be omitted from the study title; and that a consent form and information sheet for GPs be developed. All of these issues were accommodated.

Following this correspondence, ethical approval for the study was granted on 22nd October, 2009 by West of Scotland Research Ethics Committee 3 (Appendix 14). Management approval for the study was granted on 26th October, 2009 by Dumfries and Galloway NHS Board (Appendix 15)

2.10 Sample size

To analyse the level of agreement between the GP and the screening tools for depression (SCID and GDS-15) Cohen's Kappa was chosen. Power analyses were calculated prospectively for statistical analysis. According to Clark-Carter (2004, pp.296-298) for a correlation of 0.3, with a power of 0.8 a sample size of 70 participants is required. As power tables for Kappa are not available, tables for Pearson r (1-tailed) were used for this calculation.

The general levels of depression in the older adult population, as discussed in section 1.3.11, are around 8 and to 18 per cent. Given that the population in the current study are GP attenders it would be reasonable to expect the prevalence rates in this group to be towards the upper end of the range, perhaps around 15 per cent. At this prevalence rate it would be expected that a sample size of 70 would result in around 10 – 11 participants identified as depressed.

From discussions with local experts (GPs and researchers), it was expected that five invitations would have to be issued to achieve one patient opting in to the study. It was planned, therefore, to approach 350 patients across a minimum of five GP practices.

2.11 Search strategy

Literature was identified for this thesis from key word searches of the following databases: CINAHL, EMBAS, Medline, Ovid, PsycINFO and PsycLit. The key words and concepts used in the search are given in Table 2.3 below.

Table 2.3: Search terms

	Term 1	**Term 1**	**Term 2**	**Term 3**	**Term 4**	**Term 5**
MAIN TERM	GP	Effectiveness	Recognition	Treatment	Depression	Older adult
Other related terms	General Practitioner	Functional	Detection	Management		Elderly
	Primary care doctor	Ability	Diagnosis		Mood disorders	Old Age
	Primary care	Capacity	Identification		Sub-clinical depression	Older people
	GP surgery	Capability	Classification		Sub-threshold depression	Aged
		Efficiency	Categorisation		Chronic depression	Older
		Efficacy				Late life
		Success				Geriatric
		Effectively				

The reference sections of appropriate studies were used to identify further studies.

2.11.1 Definitions of terms

The following definitions of terms (shown in Table 2.4) were used throughout this thesis.

Table 2.4: Definition of terms

Term	Definition
Older adult population	Men and women 60 years and over (in conformity with United Nations definition)
Depression	Sub-clinical depression and major depressive disorder (to ensure a wide inclusive definition of depression)
Participants with dementia	Those with an AMTS score of less than 8.

2.11.2 Search period

Papers published from 1990 - 2009 were considered. This allowed for consideration of papers produced as a result of the 'Defeat Depression Campaign' (Orrell *et al.*, 1995), a five-year national campaign launched in January 1992 by the Royal College of Psychiatrists in association with the Royal College of General Practitioners.

Chapter 3: RESULTS

3.1 Overview of analysis of results

The analysis of results is carried out in three sections. Firstly, the characteristics of the participants are described (both patient participants and GP participants). Secondly, the principal data analysis is carried out. This relates to the analysis of the main hypothesis in terms of (1) the ability of the GPs to detect depression in the patients presenting at their general clinic; (2) that certain independent variables affect the accuracy of GP recognition of depression when compared with the diagnosis using a screening tool and (3) that the predictive power of the independent variables will affect the likelihood of the GP treating or not treating a depression. Finally supplementary analyses on the data are presented.

3.2 Characteristics of the sample

3.2.1 Description of the participants (patients)

The recruitment process has been described previously and is shown in Figure 2.1 (section 2.5.2). The characteristics of the participants (n=31) in the study are described in Table 3.1 (below). As can be seen the mean age of participants was 75.6 years and more than half of the participants were women (n=19). When categorised as young-old (65-75 years) and old-old (over 75 years) more than half of the participants were in the old-old category (n=17).

Table 3.2 shows the characteristics of the sample presented in 2 groups: those with a GDS-15 (Geriatric Depression Scale- Short Form) score of 4 or less and those with a GDS score of 5 or more. There was one statistically significant difference when comparing the two groups by the SCID score ($\chi^2_{(1)} = 7.22$, $df=1$, $p = .007$, N=31). Summary statistics for the comparison of these 2 groups are also presented. Unless otherwise stated all assumptions for parametric statistics are met.

Table 3.1 Demographic Table: Participants

	N=31	
Characteristic	**Mean**	**SD**
Age	75.63	6.52
Physical health diagnoses	2.39	1.65
*Time lapsed**	9.81	3.64
	%**	**N**
Age group		
Young old (65-75)	45.16	14
Old old (75 and over)	54.84	17
Gender		
Male	38.71	12
Female	61.29	19
Known to GP†		
Yes (≥ 2 sessions)	70.97	22
No (<2 sessions)	29.03	9
Living with others		
Yes	70.97	22
No	29.03	9
Carer		
Yes	22.58	7
No	77.42	24
SCID†† assessment		
Depressed	12.90	4
Not depressed	87.10	27

* Time lapsed (Time, in days, from GP consultation to screening with researcher)

** Percentage of valid participants recruited.

† Attended two or more consultations with the GP in the last six months

†† SCID (Structured Clinical Interview for DSM-IV)

Table 3.2 Demographic Table: Participants by GDS score

	GDS*** ≤ 4 (n=24)		GDS*** ≥ 5 (n=7)		Summary Statistics	
Characteristic	**Mean**	**SD**	**Mean**	**SD**	**t**	***p***
Age	75.83	6.54	74.97	6.94	0.30	ns
Physical health diagnoses	2.08	1.44	3.43	1.99	2.00	ns
*Time lapsed**	9.83	3.94	9.71	2.56	0.08	ns
	%**	**N**	**%****	**N**	**χ^2**	***p***
Age group						
Young old (65-75)	45.83	11	42.86	3		
Old old (75 and over)	54.17	13	57.14	4	0.02	ns
Gender						
Male	41.67	10	28.57	2		
Female	58.33	14	71.43	5	0.39	ns
Known to GP†						
Yes (≥ 2 sessions)	70.83	17	71.43	5		
No (<2 sessions)	29.17	7	28.57	2	0.00	ns
Living with others						
Yes	62.50	15	100.00	7		
No	37.50	9	0.00	0	3.70	ns
Carer						
Yes	20.83	5	28.57	2		
No	79.17	19	71.43	5	0.19	ns
SCID†† assessment						
Depressed	4.17	1	42.86	3		
Not depressed	95.83	23	57.14	4	7.22	p<0.05

* Time lapsed (Time, in days, from GP consultation to screening with researcher)

** Percentage of valid participants recruited.

*** GDS (Geriatric Depression Scale)

† Attended two or more consultations with the GP in the last six months

†† SCID (Structured Clinical Interview for DSM-IV)

3.2.2 Summary of description of the participants (patients)

In comparing the two groups, those with a GDS (Geriatric Depression Scale) score of 4 or less and those with a GDS score of 5 or more, there is no significant difference between the following characteristics. (age: t(29)= .30, *p*=.76; physical health: t(29)=2.00, *p*=.06; time lasped between GP and screening assessment: t(29)= .08, *p*=.94; between 'young-old' and old-old': $\chi^2_{(1)} = 0.02$, *df*=1, *p* = .89, N=31; gender: $\chi^2_{(1)} = 0.39$, *df*=1, *p* = .53, N=31; being known to the GP: $\chi^2_{(1)} = 0.00$, *df*=1, *p* = 1.0, N=31; living with others: $\chi^2_{(1)} = 3.70$, *df*=1, *p* = .05, N=31; being a carer : $\chi^2_{(1)} = 0.19$, *df*=1, *p* = .66, N=31) (see Table 3.2).

However in comparing the two groups, those with a GDS (Geriatric Depression Scale) score of 4 or less and those with a GDS score of 5 or more, there is a significant difference on one variable: being assessed depressed on the SCID screening tool, $\chi^2_{(1)} = 7.22$, *df*=1, *p* = .007, N=31) (see Table 3.2).

3.2.3 Further analysis of participants (patients) by GDS score

The characteristics of the seven patients with a GDS score of ≥ 5 are detailed in Table 3.3 below.

Table 3.3 patients with a GDS score of ≥ 5

Pt*	GDS score	GP identified depression	Physical health diagnoses	Age group**	Gender	Known to GP†	Living with others	Carer
1	5	Yes	3	Young old	Female	Yes	Yes	Yes
2	5	No	4	Old old	Male	Yes	Yes	Yes
3	5	No	2	Young old	Female	No	Yes	Yes
4	6	No	4	Old old	Female	Yes	Yes	No
5	6	Yes	0	Young old	Female	Yes	Yes	Yes
6	8	Yes	5	Old old	Female	Yes	Yes	Yes
7	11	Yes	6	Old old	Male	No	Yes	No

* Pt - Patient

** Young old (65-75); Old old (over 75)

† Attended two or more consultations with the GP in the last six months

Table 3.4 shows the four categories of agreement between the GP and the GDS score for all 31 participants.

Table 3.4 Agreement between GDS score (≤ 4 and ≥ 5) and GP diagnosis of depression

	GP diagnosis of depression	GP diagnosis of not depressed
GDS score (≤ 4)	1 participants	23 participant
GDS score (≥ 5)	4 participants	3 participants

As shown in Table 3.4 there were four participants where there was no agreement between the GPs assessment and that GDS. For one of these participants the GP assessed the participants as being depressed and the GDS did not screen positively for depression. In three cases the GDS detected depression and the GP's assessment was that the participant was not depressed. For those participants subsequently identified as depressed by the GDS, the GP identified four

out of seven as depressed (57%). The inter-rater reliability was Kappa=-0.270 ($p < .001$), considered to be a poor level of agreement (Robson, 2002).

The treatment proposed by the GPs of the four patients with a GDS score of ≥ 5 and identified by them as depressed are detailed in Table 3.5 below.

Table 3.5 patients with a GDS score of ≥ 5

Patient	GDS score	GP identified depression	Treatment *
1	5	Yes	Ref on
5	6	Yes	ADM + Ref on
6	8	Yes	ADM
7	11	Yes	None

***** Ref on – referral made to mental health/ social work team;

ADM – antidepressant medication prescribed;

None – no active treatment proposed at this time.

3.2.4 Description of the participants (GPs)

The characteristics of the GPs who generated the participants for this study are described in Table 3.6 below.

Table 3.6 Demographic Table: GPs

Characteristic	**Mean**	**SD**	**Range (min-max)**
Age	49.18	8.29	28-59
Years since qualification	23.73	10.65	3-35
Number of valid participants recruited	2.81	2.75	1-10
	%*	**N**	
Gender			
Male	82	9	
Female	18	2	
Training in gerontology			
Yes	36	4	
No	64	7	
Training in psychiatry			
Yes	55	6	
No	45	5	

* Percentage of GPs who recruited valid participants.

3.3 Principal Data Analysis

3.3.1 Primary Hypotheses

Each of the three research hypotheses are considered in turn.

3.3.2 Hypothesis 1

That GPs in a general clinic setting are able to identify depression among their older adult patients subsequently screened as having depression by a diagnostic tool.

This study hypothesised that GPs are able to identify depression in their older adult patients presenting in a general clinic setting consistent with a screening tool designed to identify patients with depression. To assess performance of hypothesis one, firstly the level of agreement between the GP assessment of depression and the screening tool's assessment of depression was analysed. Secondly, the level of agreement between the GP assessment of depression and the screening tool's assessment of dysthymia was analysed. An inter-rater reliability analysis, using the Kappa statistic, was performed to determine the level of agreement between raters. A comparison of the GP assessment with that of the screening tool, the SCID was considered.

Data Screening Prior to Principal Analyses

There are three main assumptions which must be met in order to use Cohen's Kappa. Firstly, the subjects to be rated should be independent of each other, secondly the raters should score the subjects independently, and the rating categories should be mutually exclusive and exhaustive. For the data considered by this study, the raters are independent of each other, the GP completed their assessment first and the researcher was not aware of the GP's assessment until after the screening tool was completed. The raters score each participant independently

of any other participant. Finally the rating categories are dichotomous (depressed or not depressed) and are therefore mutually exclusive and exhaustive.

The categorisation of Kappa by Robson (2002) was used: that kappa in the range 0.4 to 0.6 is considered fair; in the range 0.6 – 0.75 is good; and above 0.75 is excellent.

Level of agreement: SCID assessment of depression and GP assessment of depression

Table 3.7 shows the four categories of agreement between the GP and the screening tool for assessment of depression for all 31 participants.

Table 3.7 Agreement between SCID screening tool and GP diagnosis: depression

	GP diagnosis of depression	**GP diagnosis of not depressed**
Screening diagnosis of depression	3 participants	1 participant
Screening diagnosis of not depressed	2 participants	25 participants

As shown in Table 3.7 there were three participants where there was no agreement between the GPs assessment and that of the SCID. For two of these participants the GP assessed the participants as being depressed and the SCID did not detect depression. In one case the SCID detected depression and the GP's assessment was that the participant was not depressed. For those participants subsequently identified as depressed by the SCID, the GP identified three out of four as depressed (75%). The inter-rater reliability was Kappa = 0.61 ($p < .001$), considered to be a good level of agreement (Robson, 2002).

Level of agreement: SCID assessment of dysthymia and GP assessment of depression

A further analysis was carried out to establish, for those participants where the screening tool detected dysthymia, if the GPs were also able to detect dysthymia and label it as depression. The results of the 3 patients where both the screening tool and the GP identified depression were excluded from this further analysis as a patient cannot have a diagnosis of dysthymic disorder if the mood disturbance is better accounted for by major depressive disorder as characterised by DSM-IV (American Psychiatric Association, 1994). The remaining 28 participants were therefore further analysed to establish the four categories of agreement between the GP for depression and the screening tool for dysthymia (Table 3.8).

Table 3.8 Agreement between screening tool and GP diagnosis: dysthymia

	GP diagnosis of depression	**GP diagnosis of not depressed**
Screening diagnosis of dysthymic	0 participant	2 participants
Screening diagnosis of not dysthymic	2 participants	24 participants

As shown in Table 3.8 there were four participants where there was no agreement between the GPs assessment and that of the SCID. For two of these participants the GP assessed the participants as being depressed and the SCID did not detect dysthymia. In two cases the SCID detected dysthymia and the GP's assessment was that the participant was not depressed. An inter-rater reliability analysis using the Kappa statistic was performed to determine consistency among raters (the GPs and the screening tool). The inter-rater reliability for the

raters was found to be Kappa = -0.08 (p=0.68, ns) considered a poor level of agreement (Robson, 2002).

3.3.3 Summary

The hypothesis was therefore upheld for the GP identification of depression, but not for their identification of dysthymia. The study therefore shows that GPs are able to identify depression in older people presenting at a general primary care clinic setting when compared to assessment of depression using a standardised diagnostic tool, but are less able to identify dysthymia in a general clinic setting of their older adult patients subsequently screened as having depression by a diagnostic tool.

3.3.4 Hypothesis 2

That several independent variables such as gender, age, living with others, being a carer, being known to the GP, physical co-morbid conditions and GDS score, will affect the accuracy of GP recognition of depression when compared with the diagnosis using the SCID.

Given the numbers and balance of participants recruited, it is not possible to analyse the data for this hypothesis.

3.3.5 Hypothesis 3

That the predictive power of the independent variables such as gender, age, living with others, being a carer, being known to the GP, physical co-morbid conditions and GDS scores will affect the likelihood of the GP treating or not treating a depression.

Given the numbers of participants recruited, it is not possible to analyse the data for this hypothesis.

3.3.6 Sample size

Actual power analyses

The correlation coefficient for the study sample is 0.61 with a sample of 31 participants. Using the tables for Pearson r (1-tailed) this is equivalent to a power of 0.99. The power required for hypothesis two and three, however, are dependent on the numbers of depressed patients identified by both the GP and the SCID screening tool. In the study the GPs and the SCID screening tool both identified three participants as having depression.

Chapter 4: DISCUSSION

4.1 Overview of discussion

The main aim of the current study was to investigate the extent to which general practitioners' (GPs) are able to identify depression and offer appropriate treatment strategies to patients over the age of 65 presenting to predominately rural, non-urgent community GP clinics. This study is important given the increased number of older people in the population (United Nations, 2009; Scottish Government, 2007) and the importance of detecting and treating depression in this group (Wei *et al.*, 2005). If treatment is provided for depression, it is most likely to be antidepressant medications and these are often prescribed at low doses (Wilson *et al.*, 2001). Undetected and untreated late-life depression has a poor prognosis (Beekman, Pennix *et al.*, 2002; Geerlings *et al.*, 2002).

Consistent with the main aim of the current study, Cohen's Kappa was used to assess the level of agreement between the GP and the screening tools for depression. The screening tools used were the Structured Clinical Interview for DSM-IV (SCID) and the Geriatric Depression Score – short form, 15 item (GDS-15). The results of 31 participants, with a mean age of 75.6 years, were analysed. Depression was identified by both the GP and the SCID in three cases. The contribution of the current study to this area of research will be considered. The main findings of the study will be highlighted and interpreted in comparison to previous findings and suggestions are made for future research. The strengths and limitations of the study will be examined. Further discussion is given of the clinical implications of the study.

4.2 Contribution of this study

The current study builds on previous UK-based studies in this area (Crawford *et al.,* 1998; MacDonald, 1986). These previous studies have considered urban populations of older adults. Crawford *et al.* (1998) considered a population in north London; and MacDonald (1986) studied populations in south London. Significantly, however the population of patients considered in the current study live in a remote rural community (Dumfries and Galloway) in Scotland. This is a population that is often poorly served by research. It is, however, important to consider the health needs of this population. As discussed in section 1.2.3, Dumfries and Galloway will be the local authority area in Scotland with the third highest proportion of their population aged 50 and over and the highest proportion of its population aged 75 and over by 2024. This study has added to our knowledge of the ability of GPs to detect and treat depression in this previously neglected population.

4.3 Exploration of results

4.3.1 Examining the hypotheses

To test the main study hypothesis GPs were asked to assess their patients (aged over 65) for depression. GP assessment of depression was compared with a subsequent structured diagnostic interview (SCID, Spitzer *et al*., 1992) and a screening tool (GDS-15, Sheikh & Yesavage, 1986). The SCID assessment considered both depression and dysthymia. Cohen's Kappa was used to assess the level of agreement between the GP and both the diagnostic tool and the screening tool for depression.

4.3.2 Comparison with other studies

The results supported hypothesis (1) that GPs are able to identify depression in a general clinic setting of their older adult patients subsequently screened as having depression by a diagnostic tool. The results also endorsed the earlier findings of MacDonald (1986) that the recognition by GPs of depression in their older adult patients is high with 88 per cent of elderly patients with depression being correctly identified in MacDonald's study compared with 75 per cent in the current study.

In the study by MacDonald (1988) GPs knew in advance that there would be an assessment of depression subsequent to their own assessment. This was also part of the methodology of the current study; GPs knew that the SCID and the GDS-15 would be used to assess depression following their assessment. It is unsurprising, therefore, that the results of the current study are in line with those of MacDonald (1986). This methodology has come in for criticism; that the GPs behaviour and practice may be influenced by the knowledge that their ability to detect depression is being assessed. This is problematic and it is entirely possible that using this naturalistic design there may be an over-inflation of recognition rates for depression.

Similarly, a European study, Turrina *et al.* (1994), reported an identification index of 88.4 per cent. This study took place in an industrial city in northern Italy and adopted a similar methodology to MacDonald (1986) insofar as the GPs were aware that an evaluation of depression was being completed prior to or subsequent to their assessment. The results of the current study are also, as expected, in line with that of Turrina *et al.* (1994).

However Crawford *et al.* (1998), aware of the criticisms of the methodology adopted by MacDonald (1986) that GPs may have been sensitised to their assessment of depression, by

the knowledge that it would be compared with a subsequent assessment by the researcher, designed a study that did not alert GPs to the researchers' assessment. The methodology of Crawford *et al.* (1998) instead involved interviewing patients then subsequently examining the patients' GP notes and interviewing the GPs, exploring their assessment of the patient.

Given the awareness of the GPs in the current study of the assessment of depression by the researcher, it is unsurprising that the level of agreement (75 per cent) is higher than that found by Crawford *et al.* (1998), who demonstrated that GPs were aware of depression in a much lower proportion of their depressed patients (51 per cent). Given the context of the current study, attempting to gain information about a population that is often poorly served by researchers and the difficulty in engaging GPs in research (as discussed in section 1.6) the methodology followed a similar approach to that of MacDonald (1986) as it was considered more likely that GPs would participate in a naturalistic design. It is likely therefore that GPs were sensitised to their assessment of depression by the knowledge that it would be compared with a subsequent assessment by the researcher.

The current study compared the GP assessment with that of the SCID and the GDS-15. Previous studies have used a variety of measures. MacDonald (1986) used the depression scale of the Comprehensive Assessment and Referral Evaluation to assess depression. Crawford *et al.* (1998) assessed depression using the Short Comprehensive Assessment and Referral Evaluation (Short-CARE) (Gurland *et al.,* 1984). Clearly the use of different diagnostic assessment tools may also affect the level of agreement achieved. The SCID was chosen for the current study as it is widely used by researchers, therefore making the results of the current study easily open to interpretation.

The results of the current study indicated that GPs were not able to detect dysthymia in this population as well as a diagnostic tool. It may be a weakness of the current study that GPs were not specifically instructed to consider dysthymia as a possible assessment categorisation. Nonetheless the information supplied to GPs allowed clinical autonomy to detect depression in all of its forms *including* dysthymia. The results show, therefore, that GPs are less proficient at detecting dysthymia in their older adult population. It is interesting to hypothesise how this difference arose. It may be that the more subtle long-standing nature of dysthymia makes its detection in a non-urgent GP community clinic appointment more problematic. Dysthymia has fewer or less serious symptoms than major depression but is more enduring. This may make it inherently more difficult for GPs to detect.

The vast majority of participants had a GP assessment and a SCID assessment that agreed no depression was present. Although this study was not designed to measure prevalence, the numbers assessed as depressed by the SCID was broadly in line with the prevalence rates discussed in section 1.3.11.

4.3.3 Summary of main findings

To summarise, analysis of the results found that the level of agreement between the GP assessment of depression and that of the screening tool was good. When the results were stratified by GDS-15 score (into those with a GDS-15 score of four and under compared with those of a GDS-15 score of five and more) no significant differences were found between any of the independent variables (age, gender, physical health, young-old and old-old, being known to the GP, living with others and being a carer). There was a significant difference between the two groups stratified by GDS-15 score and their being assessed depressed on the SCID screening tool.

4.4 Supplementary findings: Demographic characteristics

The results of each of the demographic measures are considered in turn.

4.4.1 Effect of gender

No significant difference was found of the gender of participants between the two groups (those with a GDS-15 score of four or less and those with a GDS-15 score of five or more). Therefore, in this study, there was no significant impact of gender as to whether the GDS-15 screened positively or negatively for depression. This contradicts previous studies concerning relative rates of depression among men and women over 65 (Hankin & Abramson, 2001; Kessler, 2000; Kuehner, 2003) which indicate a greater prevalence of depression among women than men in this population. It is possible that the theory set forward by Antonucci (2001) that social relations can improve health and increase survival rates in older adults may explain this unexpected result. It may be that the social relations of women, but not men, in this remote, rural population help them prepare for, cope and recover from the demands of life that are associated with ageing and are possible risk factors for depression. It will be interesting for researchers to investigate if this is the case for this population in future studies.

4.4.2 Effect of age

No significant difference was found for the age of participants (either by discrete measure or when grouped as young-old and old-old) between the two groups (those with a GDS-15 score of four or less and those with a GDS-15 score of five or more), although more of the old-old group were represented in the higher GDS-15 score group. Therefore, in this study, there was no significant impact of age as to whether the GDS-15 screened positively or negatively for depression. This contradicts previous studies concerning relative rates of depression among

young-old and old-old (Palsson *et al.,* 2001) which indicates that both incidence and prevalence of depression increase with age. Given the small numbers in the sample of the current study it is problematic to generalise from this result. However it may be that the sample of the current study was more physically impaired, they were, of course, healthcare seekers.

4.4.3 Physical health diagnoses

No significant difference was found for the number of physical health diagnoses between the two groups (those with a GDS-15 score of four or less and those with a GDS-15 score of five or more). Therefore, in this study, there was no significant impact of the number of physical health diagnoses as to whether the GDS-15 screened positively or negatively for depression. This was an unexpected result as the literature shows that many common chronic physical conditions can lead to depression being under diagnosed (Bush *et al.,* 2001; Drayer *et al.,* 2005). However the measure used in the current study of number of physical health diagnoses makes no inference of the relative severity or of the longstanding nature of chronic illnesses that may have resulted in accommodation of the physical condition. Equally no assessment was made in the current study of the perceived impact of illnesses in terms of their diagnostic determination. The use of this measure is discussed further in section 4.5.6.

4.4.4 Time lapsed

As expected, no significant difference was found for the measure of the time elapsed between GP assessment and the screening tools being completed between the two groups (those with a GDS-15 score of four or less and those with a GDS-15 score of five or more). Therefore, in this study, there was no significant impact of the time between the GP and researcher

assessment of depression as to whether the GDS-15 screened positively or negatively for depression.

4.4.5 Being known to GP

No significant difference was found with regard to whether the patient was known or not to the GP (participants categorised as ‘well known’ or ‘not well known’ on the basis of the number of attendances with that GP in the previous six months) between the two groups (those with a GDS-15 score of four or less and those with a GDS-15 score of 5 or more). During the course of the study it became clear that GP turnover in the practices taking part was very low. Equally, in these rural practices GPs very often take an active part in their local community, resulting in their interacting with their patients outside of their role as a GP. The measure used to evaluate how well known a patient was to the GP may not accurately reflect the knowledge a GP has of the patient. GPs may, therefore, not have seen a particular patient in a consultation in the six months prior to the current consultation but may have had contact with that patient, their family and have wider knowledge of the patient’s circumstances for 25 years or more. It is clear that, in these cases, a simple measure of number of consultations in the previous six months does not provide an accurate assessment of how well the patient is known to the GP. It may be hypothesised that the population considered in this study is very well known to their GPs and it may be reasonable for this to positively affect the ability of the GP to detect depression. It will be interesting for future researchers to consider whether a GP being closely involved with their practice community enhances their ability to detect and treat depression.

4.4.6 Living with others and being a carer

No significant difference was found between whether participants were living with others or not and their membership of the two groups (those with a GDS-15 score of four or less and

those with a GDS-15 score of five or more). In addition no significant difference was found between whether participants described themselves as a carer and their membership of the two groups (those with a GDS-15 score of four or less and those with a GDS-15 score of five or more). This is inconsistent with evidence by Pinquart & Sorensen (2003) that being a carer is associated with, amongst other difficulties, higher rates of depression. It is possible that this inconsistency is due to the small sample size in the current study (n=31), with only seven participants identifying themselves as carers.

4.4.7 GP characteristics

The present study considered the following characteristics of the GPs taking part; age, gender, years since qualification and if they had received training in gerontology and psychiatry. The average age was broadly in line with that of the previous study by MacDonald (1986). However no comparison could be made with Crawford *et al.* (1998), as no contextual information was provided by these researchers. In the current study, around a third of the participating GPs had received gerontology training and more than half had received psychiatry training. Again comparisons with previous studies are hampered by the lack of this contextual information about the assessing GPs. MacDonald (1986) reported that around half the GPs in their study had received less than half a days' postgraduate training in psychiatry but no further information was given. It is important for researchers in future studies to give contextual information about the assessing GP in order to investigate further the GP characteristics that affect their ability to detect and treat depression in this population.

In the current study, from the indication of the levels of psychiatry and gerontology training undertaken, the GPs who volunteered to take part in the current study may be particularly interested in their older adult patients and also have a particular interest in mental health

issues. As such, they may be more aware of depression in older people and better able to assess for it as is consistent with the data reported in Table 3.6. It may be reasonable to assume that the current study did not attract those GPs without a keen interest either in this population or in the mental health of this population, as characterised by those who have not taken part in gerontology or psychiatry training. The GP sample was predominately male. This is broadly representative of the GP in the Dumfries and Galloway region. In order to evaluate the effect of the characteristics of the GP on the ability to detect and treat depression in this population, it is important that future studies report this contextual information about GPs.

In reviewing the study, it was clear that a further measure of GP attitude to ageing would be useful. A measure such as the Reactions to Ageing Questionnaire (Gething, 1994) would allow assessment of the attitudes and reactions of GPs to ageing and would assist exploration of the ways in which these attitudes may affect the likelihood of a GP to correctly assess and treat depression. Such a measure was not used in the current study due to the time implication for GPs and the likely impact on recruitment. Nonetheless, future researchers may wish to consider the use of this measure in a study in this area.

4.5 Strengths and Limitations of the Study

4.5.1 Sample size

The major limitation of this study is the relatively small sample size, and an unfortunate consequence of this is that it was not possible to properly analyse data for hypotheses 2 and 3. However, repeated attempts were made to recruit sufficient numbers to afford analysis to be completed and every effort was made to increase recruitment to the study. This included contacting all GPs within three of the four localities for Dumfries and Galloway NHS Board

by letter followed up by telephone contact to recruit practices into the study. In addition weekly reminder calls were made to GPs during the time they were in the study to find out if they were experiencing any difficulties in recruiting. This raises interesting issues about how psychologists may engage GPs in research, in particular in this remote rural community. It may be that the GPs who did not take part in the study are less interested in research, less interested in their older adult patients or less interested in mental health issues.

The present study involved engaging GPs to carry out the recruitment of participants. As discussed in the introduction (section 1.6), GPs are very difficult to engage in research for two main reasons; lack of time and lack of interest in research (Salmon *et al.*, 2007). Anecdotally a number of GPs did ask if there was any payment attached to their recruitment of participants and there appeared to be an expectation amongst a significant minority of GPs that payment would be made. Two practices specifically mentioned that, if they were being asked to recruit participants for a drug trial, they would receive payment for each participant recruited. For one practice lack of payment was a large enough issue to result in their not taking part in the study.

Lack of time was often cited by GPs who had already agreed to take part in the study but were not recruiting participants. The author made weekly reminder calls to GPs during the time they were in the study to find out if they were experiencing any difficulties in recruiting. GPs would often cite a lack of time available to recruit participants. Part way through the study (from October 2009), GPs and their staff had the additional strain of dealing with the swine flu pandemic and the resulting vaccination programme. This further reduced the ability of a number of practices to take part in the study as their time was committed to the vaccination programme. In addition, the swine flu pandemic caused particular difficulty in allocating

clinic space for the author to interview research participants within the practices at a time when additional clinic space was needed for the vaccination programme.

GPs remarked that they would forget that the study was taking place and subsequently not offer a pack to a suitable participant. Some GPs mentioned that it would have been easier for them to issue packs if they had been prompted to hand out packs. This was apparent when the unused packs were collected from practices at the end of the recruitment period. Many piles of packs were obscured under paperwork or placed in a drawer. The difficulty of engaging GPs was recognised by the author and extensive efforts were put into approaching all 25 GP practices, in three of the four Local Health Partnerships (LHPs) of Dumfries and Galloway NHS Board area (Dumfries and Upper Nithsdale; Stewarty; Annandale and Eskdale), representing around 115 GPs.

One GP, however, had no difficulty in issuing packs and issued 30 packs, all of the remaining 10 GPs issued fewer than 15 packs. It would be interesting to investigate further the reasons why this one GP was able to easily issue packs. It may be that this GP had a particularly positive view of research, or is particularly interested in the mental health of older adult patients. Once GPs had committed to taking part in the study and were issuing packs, the rate of return of packs was better than expected. The rate of issuing packs was better than the planned return rate as set out in the study protocol (Appendix 3). The author was aware of limitations during the recruitment phase and made extensive efforts to identify potential GP practices and to encourage GPs already recruited into the study to issue packs.

A supplementary result of this work, therefore, has been the difficulty that was found in engaging GPs in research. This is very important as GPs hold a gatekeeping function in

healthcare and few older adults with depression use specialty mental health services, the majority of diagnosis and treatment is within the primary care setting by GPs (Blanchard *et al.*, 1994). It is therefore important that greater understanding is achieved of the factors that affect a GP's ability to detect and treat depression in older adults. In order to do this, it will be important to engage GPs in research in this area.

Salmon *et al.* (2007), in their survey of the barriers presented in GPs' explanations for declining to participate in research, noted a strand of comment implying that patients needed protection by the GP from researchers. The GPs surveyed by Salmon *et al.* (2007) expressed a hope that the research would be ethical or referred to threats around confidentiality or coercion by the researcher of the patient. Salmon *et al.* (2007) also noted that no GP recounted a problem arising from previous research. This concern of GPs to protect or shield patients from the researcher may be relevant to the present study and may explain why so many GPs consented to take part in the study and yet issued few or no packs to patients.

Recruitment difficulties may also have arisen as a result of stigma. As discussed in section 1.5.5, Sirey *et al.* (2001) considered the extent to which perceived stigma affected treatment discontinuation in young and older adults with major depression. However, it is also possible that stigma played a role in patients not opting-in to the study. It will be interesting for future research to consider the role of perceived stigma in patients opting to take part in a study about depression compared with, for example, a study that is not associated with the stigma of mental ill health.

4.5.2 GP assessment of mood

The second limitation of this study is that the assessment of mood by the GP and by the researcher using the screening tools was not simultaneous. It is possible that short-term fluctuations in the mood of patients may have resulted in some patients appearing depressed at the time of the GP assessment and not at the time of interview by the researcher and vice-versa. In order to reduce the likelihood of this occurring, the two assessments occurred no more than 14 days apart. However it is possible that had the assessments happened simultaneously the level of agreement would have been higher.

4.5.3 GP control of recruitment

GPs were given exclusive control over which of their older adult patients they recruited into the study, provided they met the inclusion criteria. This may have resulted in GPs recruiting patients for whom they were confident in their assessment of depression. If the GPs had no control over the recruitment of participants into the study, the level of agreement between the SCID and the GP may have been reduced.

4.5.4 Measure: assessment of depression

In the current study both a screening measure and a diagnostic tool for depression were used. Screening tools do not diagnose depression but provide an objective measure of the severity of symptoms usually within a specified period (usually 7 to 10 days). All screening tools have a statistically predetermined cut-off score at which depression symptoms are considered significant. A diagnostic tool is a method, usually a structured clinical interview to assess diagnosis of depression against the DSM-IV (American Psychiatric Association, 1994) criteria. It is a strength, therefore, of the current study that it uses both a validated screening measure of depression and a rigorous diagnostic tool to establish a diagnosis of depression.

4.5.5 Measure: Selection of the cognitive screen

In selecting the cognitive screen to be used in the present study, a recent review by Brodaty *et al.* (2006) was considered. Brodaty *et al.* (2006) reviewed dementia screening tools for their suitability in general practice, considering each test sensitivity and selectivity, positive and negative predicative value as well as the time taken to complete the test. A number of screens were discounted for use in the current study because of the length of time taken to complete them. The Abbreviated Mental Test Score (AMTS) was selected from those reviewed as Brodaty *et al.* (2006) reported a sensitivity of 100 per cent and a specificity of 82 per cent and the time taken to complete of three minutes. The AMTS is therefore a rigorous cognitive screen requiring limited time to complete for use in the current study.

The Abbreviated Mental Test Score was introduced into the screening procedure to control for the potential effects of cognitive impairment on the screening tests for depression. It has been shown that rates of dementia increase with age (Lindesay *et al.*, 1989) and it can be difficult to separate the overlapping symptoms of cognitive impairment and depression: such as concentration or memory impairment. This complex differential diagnosis can therefore be a barrier to diagnosing depression. The benefit of excluding those with a possible cognitive impairment therefore should be to simplify the diagnosis. Consequently, some people with depression may have been excluded from participating and thus the current results may have underestimated GPs' ability to detect depression in a population that includes those with cognitive impairment.

4.5.6 Measure: Physical health assessment

The present study did not use a standardised measure of physical impairment, instead using the number of physical diagnoses present on participants' medical records. This, clearly, did not allow for the relative severity of physical diagnoses. A more accurate assessment could have been made by using a formal assessment measure of physical disability, such as the Health Assessment Questionnaire (Fries, *et al.,* 1980), the Index of Independence in Activities of Daily Living (Katz, *et al.*, 1979), or the Lambeth Disability Screening Health Assessment (Patrick *et al.,* 1981). The current study did not include a standardised measure due to the increase in time commitment by participants to complete such an assessment. Use of a screening measure would allow more rigorous investigation of the role that physical health has on the likelihood of a GP detecting and treating depression. However it would increase significantly the time commitment of participants in the study and may adversely affect recruitment.

4.5.7 Measure: impact of being a carer

The present study did not take a standardised measure of caring responsibilities, instead using an open question in the structured interview ("Do you consider yourself to be your spouse/partner's carer?") due to the increase in time commitment by participants to complete such an assessment. In future studies it would be useful to assess caring responsibilities using a standardised measure, for example, the Caregiver Burden Inventory (Novak & Guest, 1989). It would be interesting to investigate further the role that being a carer has on the likelihood of a GP detecting and treating depression. Use of an assessment of carer burden would allow more rigorous investigation of the carer role on the likelihood of a GP detecting depression,. However, this would increase significantly the time commitment of participants in the study and may adversely affect recruitment. Changes would also have to be made to the

recruitment strategy to oversample carers in order to provide sufficient number of participants for analysis.

4.5.8 Sample Size and power

The author acknowledges that given the low numbers recruited and the large difference in cell frequencies of participants recruited, it was not possible to analyse the data for hypothesis two and hypothesis three. However, the findings for the main hypothesis one were sufficiently powered.

4.6 Clinical Implications

The GP is fundamental to the co-ordination and integration of patient care. The diagnosis at primary care is often the key determinant of clinical outcome (Academy of Medical Sciences, 2009). There is therefore a need for further research to strengthen the evidence base for decision making in diagnosis, treatment and patient care pathways. This study has shown that the GDS-15 is an effective measure in detecting depression in patients aged over 65 presenting at GP surgery, given the level of agreement between the SCID assessment and that of the GDS-15. It may be helpful to consider if this screening tool should be used more frequently in clinical practice to augment a GPs clinical judgement.

4.7 Conclusion

To conclude, this study aimed to investigate the extent to which general practitioners (GPs) are able to identify depression and offer appropriate treatment strategies to patients over the age of 65 presenting to predominately rural, non-urgent community GP clinics. The current study has demonstrated that GPs are able to identify depression in their older adult patients as effectively as a diagnostic tool and these results are broadly in line with previous studies using similar methodology. The strengths of the current study include its simultaneous use of a validated screening measure of depression with a rigorous diagnostic tool; the use of a rigorous cognitive screen to exclude those with a cognitive impairment; and the limiting of the time between GP assessment and researcher assessment to less than two weeks.

The major limitation of the current study is the relatively small sample size and an unfortunate consequence of this was that it was not possible to properly analyse data for hypotheses two and three. In order to be able to evidence the characteristics of both patients and GPs that make diagnosis and subsequent treatment more or less likely, researchers need to be able to engage with GPs. In accepting that evidence-based practice is a prerequisite to ensuring the best possible levels of care are provided to older adult patients, then it is vital that researchers are able to engage in research with both GPs and their patients.

Possible improvements which are suggested to the current study include the use of more rigorous measures for assessing physical health, carer status, how well known the patient is to the GP and GPs' attitudes to ageing. However, all of these suggested measures would increase the time involvement of patient and GP participants. Given the recruitment difficulties of the current study, it is vital that the impact of this increased time commitment on recruitment should be carefully considered in any future research.

This study makes an important contribution to the body of research on the ability of GPs to detect and treat depression in their older adult patients. Significantly, the population of patients considered is in a predominately remote rural community (Dumfries and Galloway) in Scotland. This is a population that has been previously neglected by researchers and despite the difficulties in recruitment, this study has added to our knowledge in this area.

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APPENDICES

APPENDIX 1

RESEARCH PACK ISSUED TO PATIENTS:

PART 1: PARTICIPANT INFORMATION SHEET

Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA
Tel 01387 244495

Information Sheet for Participants

Study title: "Recognition and decision to treat depression in older adults presenting at GP surgeries."

You are being invited to take part in a research study. Before you decide whether or not to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
This study investigates general practitioners' (GP) awareness of depression in their older patients (aged over 65) and aims to identify the characteristics of those patients least likely to be recognised and treated.

Why have I been chosen?
You have been chosen to take part in this study as you are over 65 and have attended your GP for a general clinic appointment.

Do I have to take part?
No, it is up to you to decide whether or not to take part.

What are the possible disadvantages and risks of taking part?

We do not anticipate any risks from taking part in this study.

What are the possible benefits of taking part?

There will be no direct benefit to you by taking part, and individual results will not be revealed. However, it is hoped that this research will improve the ability of GPs and other health professionals to identify and treat depression in the older adult population.

Will my taking part in this study be kept confidential?

All information that is collected about you during the course of the research will be kept confidential. However, some of the tests that are part of the research project may indicate matters relating to your care and treatment. If this is the case the researcher will inform your GP.

What will happen to me if I take part?

If you decide to take part you will be asked to take part in a short assessment with a researcher. This should take around 30 minutes to complete. It involves answering some questions and doing some paper and pencil tasks.

(on headed paper)
Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA
Tel 01387 244495

What will happen to the results of the research study?

The results of the research will be published as a doctorate thesis and forms part of a trainee research programme for qualification as a clinical psychologist. The project may be published in appropriate peer-reviewed scientific journals for distribution to other professionals. In all cases, your name and personal details will not be identified.

Who is organising the research?

Alison Campbell, a trainee clinical psychologist at Dumfries and Galloway NHS Health Board, Dumfries is organising the study under the supervision of Dr Ross Warwick, a consultant clinical psychologist within the department of psychological services and research at Dumfries and Galloway NHS Health Board, Dumfries.

Who has reviewed the study?

The proposal was reviewed by the Doctorate in Clinical Psychology Ethics Tutor and Dumfries and Galloway NHS Board Research Ethics Committee.

Contact for Further Information

If you wish to ask anything further then please contact Alison Campbell via the address below or on 01387 244495 (alison.campbell5@nhs.net). Alternatively contact Dr Ross Warwick via the address below or on 01387 244495

Department of Psychological Services and Research,

Nithbank,

Dumfries and Galloway NHS Health Board,

Dumfries,

DG1 2SA

Would you like to know the results of the study?

If you would like to be sent a summary of the results of this study, then complete the slip below and return it to the researcher when attending for testing or by post to Alison Campbell, Dept of Psychological Services and Research, Nithbank, Dumfries DG1 2SA :

Name _____

Address _____

_____

_____

Thank you for reading this information sheet.

APPENDIX 1

RESEARCH PACK ISSUED TO PATIENTS:

PART 2: PARTICIPANT OPT-IN FORM

(PRINTED ON GREEN PAPER)

(on headed paper)

Department of Psychological Services and Research

Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA
Tel 01387 244495

Please return this form if you are interested in hearing more about taking part in this research project.

Study title: "Recognition and decision to treat depression

in older adults presenting at GP surgeries."

Patient Name	
Date of Birth	
Contact phone number	
Pack No. Issued	

Please return this form

EITHER

To the receptionist at your GP surgery in the envelope provided.

OR

By post, SAE enclosed to Alison Campbell, Dept of Psychological Services and Research, Nithbank, Dumfries , DG1 2SA

OR

contact the project by e mail to alison.campbell5@nhs.net

OR

contact the project by calling Alison Campbell on XXXX or XXXX

WE WILL THEN ARRANGE A SUITABLE TIME TO MEET YOU AT YOUR LOCAL SURGERY AND TO EXPLAIN MORE ABOUT THE RESEARCH PROJECT.

Thank you for your time.

APPENDIX 2

LETTER INVITING PRACTICES TO TAKE PART IN STUDY

(on headed paper)

Date

PRACTICE ADDRESS

Dear XXXXXXX

Research project with older adults

I am in the final year of a doctorate in clinical psychology and as part of my studies I am undertaking a piece of research looking at general practitioners' awareness of depression in their elderly patients (aged over 65) and to identify the characteristics of those patients least likely to be recognised and treated. Full ethical approval has been received for this project from the West of Scotland REC, ref number 09/S0701/96.

I am looking for GP practices who are interested in hearing more about the research and who may be interested in taking part, your practice was suggested by Dr Gwen Baxter at the R and D department in DGRI. I am already involved with the XXXX practices in XXXX, XXXX, XXXX and XXXX practices.

Broadly the GP involvement in this project would be as follows:

- **To identify patients who are attending the GP clinic who are over 65, have no cognitive impairment and are not currently being treated for depression.**
- **to invite those patients interested in taking part in the study to take a pack**
- **Then for the GP to complete a tick sheet (requiring one or two responses ticked)**

I have asked other practices to issue 15 packs per GP and this appears to be a reasonable number that can be issued over a relatively short period (say two to three weeks).

I have attached a copy of my protocol and I will call you in the next week or two to find out if your practice would like to hear more about my research.

Thank you for your time.

Yours sincerely,

Alison Campbell
Trainee Clinical Psychologist

APPENDIX 3

RESEARCH PROTOCOL

RESEARCH PROTOCOL

Project Title:
Recognition and decision to treat depression in older adults presenting at GP surgeries.

Project Summary

Older adults who experience depression in later life may not be able to access assessment or treatment that is more easily available to the younger patient. In turn older people themselves may also assume that no treatment is available or that depression is part of getting older. The proposed project aims to examine the extent to which general practitioners' (GP) are able to identify depression in their elderly patients (aged over 65) presenting in a general surgery.

Scientific Justification for Research

In a review and commentary of depression in late life, Blazer (2003) noted that depression is perhaps 'the most frequent cause of emotional suffering in later life'. Depressive symptoms in later life are a major public health problem. Prevalence studies report rates of depressive symptoms amongst older adults living in the community of between 8% and 16% (Blazer, Burchett, Seervice, George, 1991; Beekman, 1999).

There is a rapid increase in medical problems with age of patients such as cancer, heart disease, neurological disorders, and stroke (Rang, Krishnan, Delong, Kraemer, Carney, Spiegel, Gordon, McDonald, Dew, Alexopoulos, Buckwalter, Cohen, Evans, Kaufmann, Olin, Otey, & Wainscott 2002). Diagnosis of depression in the older adult population is therefore often made more difficult than in the adult population due to the overlaying of the depression with multiple physical health symptoms (Lebowitz, Pearson, Schneider, Reynolds, Alexopoulos, Bruce, Conwell, Katz, Meyers, Morrison, Mossey, Niederehe, and Parmelee, 1997). Older adult patients are also less likely to seek or to accept care from mental health professionals (Coyne & Katz, 2001); but do attend their primary care doctor (Katon & Schulberg, 1992) who provide the majority of care for the older adult patient with depression. Depression causes suffering to those that are undiagnosed and untreated and thereby disables those who might otherwise be able-bodied.

It is over 25 years since the launch, by the Royal College of Psychiatrists (RCP) in association with the Royal College of General Practitioners (RCGP), of the Defeat Depression Campaign. This was a five-year national campaign launched in 1992 to educate health professionals and the general public about depression, and to reduce the stigma associated with depression. One result of the campaign, specifically in relation to the older adult population, was the production of guidance for GPs in the recognition and management of depression specifically in late life, issued by the RCP (Katona, Freeling, Hinchcliffe et al, 1995). Rix, Paykel, Lelliott, Tylee, Freeling, Gask & Hart (1999) using a postal survey of GPs in England and Wales evaluated the impact of the 'Defeat Depression' campaign. They concluded that the campaign had a useful impact but needed to be supplemented by local and practice-based teaching activities. The recognition by GPs of depression in their elderly patients is reported as high; as many as 88% of elderly patients with depression are correctly identified (Turrina Caruso, Este, Lucchi, Fazzari, Dewey & Ermentini, 1994). However, Crawford, Prince, Menezes & Mann, 1998) stressed that this result may have been mitigated by the GPs being aware that following their consultation with selected patients the research team would subsequently interview them.

Crawford et al (1998) identified that in their sample of elderly patients of north London GP practices GPs were aware of depression in 51% of depressed patients. They also found that those least likely to have their depression recognised were men, the married, those with a high level of physical handicap, those with visual impairment and those least well educated.

There is no biological marker or test that can determine if a patient has depression and diagnosis is basically made on the basis of the patient's symptoms, presentation and aetiology. Screening for depression is therefore critical in primary care. Watson and Pigone (2003) in a systematic review considered the accuracy of instruments for detecting unrecognised late-life depression in a primary care setting. They concluded that of the 9 screening instruments reviewed, 3 were most commonly used: the Geriatric Depression Scale (30 and 15 item versions), (GDS) and the Centre for Epidemiologic Studies Depression Scale (CESDS) and the selfCARE (D). They also stated that differences in performance between these three were minimal. The GDS in particular minimises the questions about somatic and vegetative symptoms, which can overlap with symptoms of concurrent medical illness. Research has showed that screening was beneficial when standardised screening scales such as the GDS) or the CES-D are used (Yesavage, Brink, Rose, 1983; Koenig, Meador, Cohen, Blazer (1992).

In conclusion, depression is common in the older adult population and is mainly treated in primary care. There are known to be barriers to an elderly population being treated. In this study general practitioners' (GP) awareness of depression in their elderly patients (aged over 65) will be investigated and the characteristics of those patients least likely to be recognised and treated will also be investigated.

In particular it is perceived that in the target health board, Dumfries and Galloway NHS Board, there is a high number of people who move into the area following retirement. It is speculated that, as these people are less well known to their GP, this will affect the likelihood of any depression being detected.

Research Hypothesis: General

To examine the extent to which general practitioners' (GP) are able to identify depression in their elderly patients (aged over 65) presenting in a general surgery.

Research Hypotheses: Specific

1) That GPs are as effective in identifying depression in a general clinic setting of their older adult patients subsequently screened as having depression by a diagnostic tool.

2) Using the SCID screening tool as the 'gold standard' for diagnosing depression the accuracy of GP recognition of depression will be examined in relation to several independent variables such as gender.

3) Further exploratory questions relating to the predictive power of the independent variables in terms of the SCID scores and GDS scores and relating to the likelihood of the GP treating or not treating a depression will also be considered.

The independent variables recorded for each participant will be:

- Age
- Gender

- Currently living with a partner
- Currently caring for a spouse or partner.
- Known to GP (1 or more contacts with consulting GP in last 6 months)
- Number of physical co-morbidities (number of medical diagnoses on medical file)

The independent variables recorded for each GP will be:
- Received additional training in gerontology (Y/N)
- Received additional training in psychiatry(Y/N)
- Age
- Gender
- Years since qualification

Methodology

Following ethical approval, GPs will be issued with an information sheet (version 1 07/10/09) and invited to complete a consent form (version 01 07/10 /09) for their own participation. They will then ask those patients meeting the inclusion and exclusion criteria, if they are interested in taking part in a research study. If so they will be issued with an information pack. This pack will consist of the participant information sheet (Version 05, dated 09/10/09) and the opt-in sheet (Version 4, dated 09/10/09). If they would like to take part they will be invited to contact the PI via telephone, post or e mail. A suitable appointment time will then be arranged. They will meet with the PI within 2 weeks of their GP consultation.

Assessment measures

Participants interested in taking part in the study will be asked to provide written consent to the research. They will be assessed using the following measures:

The Structured Clinical Interview for DSM-III-R (SCID) (Spitzer, Williams, Gibbon & First, 1992)

The Structured Clinical Interview for DSM-III-R (SCID) is a semi-structured interview for making the major Axis I DSM-III-R diagnoses. It is administered by a clinician and includes a number of modules, seven of which represent the major axis I diagnostic classes. In this study only the depression module will be used.

The Geriatric Depression Scale (short form) (GDS-S) (Sheikh & Yesavage , 1986).

This is a 15-item self-report set of questions answered yes or no; a shorter version of the full 30 item GDS. Sheikh and Yesavage, 1986 carried out a validation study comparing this shortened form (GDS-S) with the full 30 item GDS. They found that both measures were successful in distinguishing depressed from non-depressed patients, suggesting that GDS-S can be successfully sued as a self-report screening tool for depression.

The GDS-S can be used with ill or moderately cognitively impaired individuals and is commonly used as a routine part of a comprehensive geriatric assessment. It has been widely used with a wide variety of groups although it utility with cognitively impaired adults is mixed in nature (Edelstein, Kalish, Drozdick & McKee 1999). This will not be problematic in this study, as patients with significant cognitive impairment will be excluded from taking part.

GDS-S is helpful with an older population, as it has no somatic items, to avoid the confusion of medical complaints with depression.

Cognitive screen. Abbreviated Mental Test Score (AMTS) (Hodkinson, 1972)

The AMTS is adapted from the longer Mental Test Score (MTS), with the 10 questions in the test selected due to their greater discriminatory value in assessing cognition. A cut of 8 out of 10 is used to imply significant cognitive impairment that would exclude a patient from taking part in this research project.

Demographic information about each participant will also be collected:

1. Age. From patient medical record.
2. Gender. From patient medical record.
3. Currently living with a partner. Information requested from patient.
4. Currently caring for a spouse or partner. Information requested from patient.
5. Known to GP (1 or more contacts with consulting GP in last 6 months) from patient medical record.
6. Number of physical co-morbidities (from patient medical record)

All recorded on patient information form (Version 01, dated 25/07/09)

Information from GP
On the post-consultation GP form (Version 3 dated 25/07/09). The GPs will record one of two possible options following the consultation: depressed; not depressed. If the GP has recognised the patient as depressed they will also be invited to indicate their proposed treatment from one or more of the following options:

- Anti-depressant medication prescribed;
- referral made to mental health/social work team;
- No active treatment proposed at this time

The independent variables recorded for each GP will be:

- Received additional training in gerontology
- Received additional training in psychiatry
- Age
- Gender
- Years since qualification

Inclusion and exclusion criteria

Suitable patients will

- be attending a general GP clinic at a Dumfries and Galloway NHS Heath Board Health Centre;
- able to give informed consent; and
- be over 65 years of age on the day of the appointment

Patients with the following co-morbid conditions will be excluded from the study:

- patients with an ATMS score of 8 or less (indicating significant cognitive impairment)
- patients with a recognised learning disability (recorded in medical records)

- patients who, as assessed by the GP are considered not able to give consent
- patients with a current diagnosis of depression
- patients with a diagnosis of dementia
- patients who the GP assess as not able to cope with the requirements of the study.

Analysis of Results

To analyse the level of agreement between the GP and the screening tools for depression (SCID and GDS-S) Cohen's Kappa will be used. Power analyses were used prospectively for statistical analysis using Kappa. According to Clark-Carter (2004) for a correlation of 0.3, with a power of 0.8 a sample size of 70 participants is required. As power tables for Kappa are not available tables for Pearson r (1-tailed) were used for this calculation.

From discussions with local experts (GPs and researchers) it is expected that 5 invitations will have to be issued to achieve one patient opting in to the study. It is planned, therefore, to approach 350 patients across a minimum of 5 GP practices.

The chief investigator will be responsible for data input and analysis. Data will be managed via SPSS, which is a Statistical Package for Social Sciences.

Timetable

April – September 2009: Ethics application
November 2009– April 2010: Selection and participant recruitment
May 2010: Collation of results
June 2010 - July 2010: Write up
August 2010: Submission of Doctoral thesis
September 2010: Dissemination of results

Budget

- Assessment measures
    - GDS available in the public domain at no cost
    - SCID, £35
    - ATMS available in the public domain at no cost

- Patient travel costs to be reimbursed at standard NHS rate for those entitled to travel benefits.
- Principal investigator travel costs to be reimbursed at standard NHS employee rate for travel from Dumfries to surgery
- Postage costs for reply paid envelopes. 350 packs at 50p each, £175
- Stationery costs for patient packs. 350 packs at 30p each, £95

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APPENDIX 4

GP PARTICIPANT INFORMATION SHEET

(on headed paper)

Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA
Tel 01387 244495

Information Sheet for GP Participants

Study title: "Recognition and decision to treat depression in older adults presenting at GP surgeries."

You are being invited to take part in a research study. Before you decide whether or not to take part it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?
This study investigates general practitioners' (GP) awareness of depression in their older patients (aged over 65) and aims to identify the characteristics of those patients least likely to be recognised and treated.

Why have I been chosen?
You have been chosen to take part in this study as you are a GP in the Dumfries and Galloway NHS Board area.

Do I have to take part?
No, it is up to you to decide whether or not to take part.

What are the possible disadvantages and risks of taking part?
We do not anticipate any risks from taking part in this study.

What are the possible benefits of taking part?
There will be no direct benefit to you by taking part, and individual results will not be revealed. However, it is hoped that this research will improve the ability of GPs and other health professionals to identify and treat depression in the older adult population.

Will my taking part in this study be kept confidential?
All information that is collected about you during the course of the research will be kept confidential.

What will happen to me if I take part?
If you decide to take part you will be asked to identify patients suitable for inclusion in the study, following your consultation with them to ask if they are interested in hearing about the research study and if so to issue them with an information pack about the study which contains details of how they can take part.

(on headed paper)
Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA
Tel 01387 244495

What will happen to the results of the research study?
The results of the research will be published as a doctorate thesis and forms part of a trainee research programme for qualification as a clinical psychologist. The project may be published in appropriate peer-reviewed scientific journals for distribution to other professionals. In all cases, your name and personal details will not be identified.

Who is organising the research?
Alison Campbell, a trainee clinical psychologist at Dumfries and Galloway NHS Health Board, Dumfries is organising the study under the supervision of Dr Ross Warwick, a consultant clinical psychologist within the department of psychological services and research at Dumfries and Galloway NHS Health Board, Dumfries.

Who has reviewed the study?
The proposal was reviewed by the Doctorate in Clinical Psychology Ethics Tutor and the West of Scotland NHS Research Ethics Committee.

Contact for Further Information

If you wish to ask anything further then please contact Alison Campbell via the address below or on 01387 244495 (alison.campbell5@nhs.net). Alternatively contact Dr Ross Warwick via the address below or on 01387 244495

Department of Psychological Services and Research,
Nithbank,
Dumfries and Galloway NHS Health Board,
Dumfries,
DG1 2SA

Would you like to know the results of the study?

If you would like to be sent a summary of the results of this study, then complete the slip below and return it to the researcher when attending for testing or by post to Alison Campbell, Dept of Psychological Services and Research, Nithbank, Dumfries DG1 2SA :
Name _____
Address _____
_____
_____

Thank you for reading this information sheet.

APPENDIX 5

GP CONSENT FORM

(on headed paper)
Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA
Tel 01387 244495

Consent Form (GPs)

Study title: "Recognition and decision to treat depression in older adults presenting at GP surgeries."

Name of Researcher: Alison Campbell

Please initial boxes

❑ I confirm that I have read and understand the information sheet dated 07/10/09 (Version 1) for the above study and have had the opportunity to ask questions.

❑ I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

❑ I agree to take part in the above study.

_____	_____	
Name of GP	Signature	Date
_____	_____	
Researcher	Signature	Date

Return to:
Alison Campbell, Trainee Clinical Psychologist, Department of Psychological Services and Research, Dumfries and Galloway NHS Board, Nithbank, Dumfries, DG1 2SA

APPENDIX 6

FULL SIZE VERSION OF GP INSTRUCTIONS

(ISSUED ON LAMINATED CARD)

Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA
Tel 01387 244495

Recognition and decision to treat depression in older adults presenting at GP surgeries.

INSTRUCTIONS TO GPs

1. DOES PATIENT MEET INCLUSION AND EXCLUSION CRITERIA?

Suitable patients will

- be attending a general clinic with you;
- able to give informed consent; and
- be over 65 years of age on the day of the appointment

Patients with the following co-morbid conditions will be **excluded** from the study:

- patients with recognised significant cognitive impairment
- patients with a recognised learning disability (recorded in medical records)
- patients who, you consider not able to give informed consent
- patients with a diagnosis of depression
- patients with a diagnosis of dementia
- patients who you assess as not able to cope with the requirements of the study.

2. IS THE PATIENT INTERESTED IN HEARING MORE ABOUT THE STUDY?

Issue an information pack. Explain to patient that if they are interested they should complete the green sheet and return to receptionist or researcher.

3. GP COMPLETES PINK POST-CONSULTATION FORM

This will be held with patient records until consent to participate in the project is obtained.

THANK YOU FOR YOUR TIME.

APPENDIX 7

AIDE-MEMOIR VERSION OF GP INSTRUCTIONS

(ISSUED ON LAMINATED CARD)

OLDER ADULTS RESEARCH PROJECT

Suitable patients will

- be attending a general clinic with you;
- able to give informed consent; and
- be over 65 years of age on the day of the appointment

Patients with the following co-morbid conditions will be **excluded** from the study:

- patients with recognised significant cognitive impairment
- patients with a recognised learning disability (recorded in medical records)
- patients who, you consider not able to give informed consent
- patients with a current existing diagnosis of depression
- patients with a diagnosis of dementia
- patients who you assess as not able to cope with the requirements of the study.

OFFER A PACK if taken FILL IN PINK TICK SHEET

Thank you

APPENDIX 8

POST-CONSULTATION FORM

(PRINTED ON PINK PAPER)

Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA

Pack No. Issued_____

Post-consultation (GP form)

Patient Chi Number	_ _ _ _ _ _ / _ _ _ _
Date of consultation	_ _ / _ _ / _ _

TICK ONE BOX ONLY

Depressed	☐
Not depressed	☐

IF DEPRESSED - TREATMENT DELIVERED

TICK APPLICABLE BOXES

☐ **Anti-depressant medication prescribed**

☐ **Referral made to mental health/social work team**

☐ **No active treatment proposed at this time**

APPENDIX 9

PARTICIPANT CONSENT FORM (PATIENT)

(on headed paper)
Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA
Tel 01387 244495

Consent Form

Study title: "Recognition and decision to treat depression in older adults presenting at GP surgeries."

Patient Chi Number _ _ _ _ _ _ / _ _ _ _

Name of Researcher: Alison Campbell

Please initial boxes

❑ I confirm that I have read and understand the information sheet dated 07/10/09 (Version 5) for the above study and have had the opportunity to ask questions.

❑ I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

❑ I agree to take part in the above study.

_____	_____	
Name of Participant	Signature	Date
_____	_____	
Researcher	Signature	Date

Return to:
Alison Campbell, Trainee Clinical Psychologist, Department of Psychological Services and Research, Dumfries and Galloway NHS Board, Nithbank, Dumfries, DG1 2SA

APPENDIX 10

PATIENT DATA FORM

(on headed paper)
Department of Psychological Services and Research
Dumfries and Galloway NHS Board
Nithbank
Dumfries
DG1 2SA

Patient data form

Patient Chi Number _ _ _ _ _ _ / _ _ _ _

1. Age **____ yrs _____ mths**

2. Gender **MALE or FEMALE**

3. Currently living with a partner
YES or NO

4. Currently caring for a spouse or partner.
YES or NO

5. Known to GP (1 or more contacts with consulting GP in last 6 months)
YES or NO

6. Number of physical co-morbidities (medical diagnoses on medical file)

_____

APPENDIX 11

ABBREVIATED MENTAL TEST

Abbreviated mental test, with suggested scoring instructions

I am going to ask you some questions and at the end I'm going to ask you to recall an address:
42 West Street

	ANSWER	SCORE	
What Age are you?			Score for exact age only
What is your date of birth			Score for correct date and month (year not required)
What year is it?			Score for current year only
Do you know without looking at your watch the time of day			Score if correct to the nearest hour
Can you tell me what this place is called?			Score if exact address or name of hospital given ("in hospital" is insufficient)
Who is the present Monarch			Score for current monarch only
When was the first world war ?			Score for year of start or finish (both not necessary)
Could you count backwards from 20 to 1			Score if no mistakes or subject corrects spontaneously
Recognition of two people			Score if roles of two people correctly recognised--for example, doctor and nurse
Recall of three point address such as 42 West Street			Score if registered correctly near beginning of test and on recall at end of test

*Each correct response scores 1 mark; no half marks given.
Score of less than 7 suggests subject may be confused..

APPENDIX 12

GERIATRIC DEPRESSION SCALE

Geriatric depression scale

CHOOSE THE BEST ANSWER FOR HOW YOU FELT THIS PAST WEEK:

Are you basically satisfied with your life?	yes	no
Have you dropped many of your activities and interests?	yes	no
Do you feel that your life is empty?	yes	no
Do you often get bored?	yes	no
Are you in good spirits most of the time?	yes	no
Are you afraid that something bad is going to happen to you?	yes	no
Do you feel happy most of the time?	yes	no
Do you often feel helpless?	yes	no
Do you prefer to stay at home, rather than going out and doing new things?	yes	no
Do you feel you have more problems with memory than most?	yes	no
Do you think it is wonderful to be alive now?	yes	no
Do you feel pretty worthless the way you are now?	yes	no
Do you feel full of energy?	yes	no
Do you feel that your situation is hopeless?	yes	no
Do you think that most people are better off than you are?	yes	no

APPENDIX 13

EXTRACTS FROM STRUCTURED CLINICAL INTERVIEW FOR DSM -IV (SCID)

OVERVIEW

I'm going to be asking you about problems or difficulties you may have had, and I'll be making some notes as we go along. Do you have any questions before we begin?

DEMOGRAPHIC DATA

SEX: 1 male 2 female NP106

What's your date of birth?

DOB: AGE mon day year NP107 NP108

Are you married?

IF NO: Were you ever? Any children? (What are their ages?)

MARITAL STATUS (most recent): 1 married or living with someone as if married 2 widowed 3 divorced or annulled 4 separated 5 never married NP109

IF YES: How many? Where do you live Who do you live with? **EDUCATION AND WORK HISTORY** How far did you get in school?

EDUCATION: 1 grade 6 or less 2 grade 7 to 12 (without graduating high school) 3 graduated high school or high school equivalent 4 part college 5 graduated 2 year college 6 graduated 4 year college 7 part graduate/professional school 8 completed graduate/ professional school NP110

IF FAILED TO COMPLETE A PROGRAM IN WHICH THEY WERE ENROLLED: Why didn't you finish?

What kind of work do you do?
(Do you work outside of your home?)

Are you working now? _____

"" IF YES: How long have you worked there? _____

IF LESS THAN SIX MONTHS: Why did you leave your last job? _____

Have you always done that kind of work?

* IF NO: Why is that? What kind of work have you done? ----------

How are you supporting yourself now?

IF UNKNOWN: Has there ever been a period of time when you were unable to work or go to school? ----------

IF YES: Why was that? ----------

PAST PERIODS OF PSYCHOPATHOLOGY

(THE LIFE CHART ON PAGE V OF OVERVIEW MAY BE USED TO SUMMARIZE A COMPLICATED HISTORY OF PSYCHOPATHOLOGY AND TREATMENT.)

Have you ever seen anybody for emotional or psychiatric problems?

Treatment for emotional problems with a physician or mental health professional 1 NO 2 YES NP111

> IF YES: What was that for? (What treatment(s) did you get? Any medications?)

*• IF NO: Was there ever a time when you, or someone else, thought you should see someone because of the way you were feeling or acting?

What about treatment for drugs or alcohol?

Have you ever been a patient in a psychiatric hospital?

Number of previous hospitalizations (Do not include transfers) 1 2 3 4 5 (or more) NP112

IF YES: What was that for? (How many times?)

IF AN INADEQUATE ANSWER IS GIVEN, CHALLENGE GENTLY: e.g., Wasn't there something else? People don't usually go to psychiatric hospitals just because they are tired or nervous.

Have you ever been in a hospital for treatment of a medical problem?

IF YES: What was that for?

Thinking back over your whole life, when were you the most upset?

(Why? What was that like? How were you feeling?)

When were you feeling the best you have ever felt?

PSYCHOPATHOLOGY DURING PAST MONTH

Now I would like to ask you about the past month. How have things been going for you?

Has anything happened that has been especially hard for you?

What about difficulties at work or with your family?

How has your mood been?

How has your physical health been? (Have you had any medical problems?) (USE THIS INFORMATION TO CODE AXIS III)

Do you take any medications or vitamins?

IF YES: How much and how often do you take (MEDICATION)? (Has there been any change in the amount you have been taking?)

How much have you been drinking (alcohol) (in the past month)?

Have you been taking any drugs (in the past month)? (What about marijuana, cocaine, other street drugs?)

CURRENT SOCIAL FUNCTIONING

How have you been spending your free time?

Who do you spend time with?

A. MOOD EPISODES

IN THIS SECTION, MAJOR DEPRESSIVE, MANIC, HYPOMANIC EPISODES, DYSTHYMIC DISORDER, MOOD DISORDER DUE TO A GENERAL MEDICAL CONDITION, SUBSTANCE-INDUCED MOOD DISORDER, AND EPISODE SPECIFIERS ARE EVALUATED. MAJOR DEPRESSIVE DISORDER AND BIPOLAR DISORDERS ARE DIAGNOSED IN MODULE D.

CURRENT MAJOR DEPRESSIVE EPISODE

Now I am going to ask you some more questions about your mood.

In the last month...

...has there been a period of time when you were feeling depressed or down most of the day nearly every day? (What was that like?)

IF YES: How long did it last? (As long as 2 weeks?)

...what about losing interest or pleasure in things you usually enjoyed?

IF YES: Was it nearly every day? How long did it last? (As long as 2 weeks?)

MDE CRITERIA

A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood, or (2) loss of interest or pleasure.

(1) depressed mood most of the day, nearly every day, as indicated either by subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). Note: in children or adolescents, can be irritable mood. A1

(2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated either by subjective account or observation made by others) ? A2

1 2

IF NEITHER ITEM (1) NOR ITEM (2) IS CODED "3," GO TO **"PAST MAJOR DEPRESSIVE EPISODE,"** A. 12

NOTE: WHEN RATING THE FOLLOWING ITEMS, CODE "1" IF CLEARLY DUE TO A GENERAL MEDICAL CONDITION, OR TO MOOD-INCONGRUENT DELUSIONS OR HALLUCINATIONS.

FOR THE FOLLOWING QUESTIONS, FOCUS ON THE WORST 2 WEEKS IN THE PAST MONTH (OR ELSE THE PAST 2 WEEKS IF EQUALLY DEPRESSED FOR ENTIRE MONTH).

During this (2-WEEK PERIOD). . .

...how was your appetite? (What about compared to your usual appetite?) (Did you have to force yourself to eat?) (Eat [less/more] than usual?) (Was that nearly every day?) (Did you lose or gain any weight) (How much?) (Were you trying to [lose/gain] weight?)

(3) significant weight loss when not dieting, or weight gain (e.g., a change of more than 5% of body weight in a month) or decrease or increase in appetite nearly every day. Note: in children, consider failure to make expected weight gains. ? A3

Check if: A4
___ weight loss or decreased appetite
___ weight gain or increased appetite A5

... how were you sleeping? (Trouble falling asleep, waking frequently, trouble staying asleep, waking too early, OR sleeping too much? How many hours a night compared to usual? Was that nearly every night?)

(4) insomnia or hypersomnia nearly every day ? 1 2 3 A6

Check if:
___ insomnia A7
___ hypersomnia A8

...were you so fidgety or restless that you were unable to sit still? (Was it so bad that other people noticed it? What did they notice? Was that nearly every day?)

IF NO: What about the opposite - talking or moving more slowly than is normal for you? (Was it so bad that other people noticed it? What did they notice? Was that nearly every day?)

(5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down) ? A9

NOTE: CONSIDER BEHAVIOR DURING THE INTERVIEW

Check if: A10
___ psychomotor agitation A11
___ psychomotor retardation

. . what was your energy like? (Tired all the time? Nearly every day?)

(6) fatigue or loss of energy nearly every day ? A12

?=inadequate information 1=absent or false 2=subthreshold 3=threshold or true

During this time . ..

...how did you feel about yourself? (Worthless?) (Nearly every day?)

IF NO: What about feeling guilty about things you had done or not done? (Nearly every day?)

(7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)

NOTE: CODE "1" OR "2" IF ONLY LOW SELF-ESTEEM.

Check if:
___ worthlessness
___ inappropriate guilt

1 2 3 A13
A14
A15

...did you have trouble thinking or concentrating? (What kinds of things did it interfere with?) (Nearly every day?)

IF NO: Was it hard to make decisions about everyday things? (Nearly every day?)

(8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)

Check if:
___ diminished ability to think
___ indecisiveness

A16
A17
A18

...were things so bad that you were thinking a lot about death or that you would be better off dead? What about thinking of hurting yourself?

IF YES: Did you do anything to hurt yourself?

(9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

NOTE: CODE "1" FOR SELF-MUTILATION W/O SUICIDAL INTENT.

Check if:
__ thoughts of own death
__ suicidal ideation
__ specific plan
___ suicide attempt

A19
A20
A21
A22
A23

AT LEAST FIVE OF THE ABOVE SXS [A (1-9)] ARE CODED "3" AND AT LEAST ONE OF THESE IS ITEM (1) OR (2).

NOTE: DSM-IV criterion B (i.e., does not meet criteria for a Mixed Episode) has been omitted from the SCID.

A24

1

GO TO *PAST MAJOR DEPRES-SIVE EPISODE* A. 12

?=inadequate information 1 =absent or false 2=subthreshold 3=threshold or true

IF UNCLEAR: Has (DEPRESSIVE EPISODE/OWN WORDS) made it hard for you to do your work, take care of things at home, or get along with other people?

C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

1 A25

GO TO ***PAST MAJOR DEPRES-SIVE EPISODE*** A. 12

Just before this began, were you physically ill?

IF YES: What did the doctor say?

Just before this began, were you using any medications?

IF YES: Any change in the amount you were using?

Just before this began, were you drinking or using any street drugs?

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, medication) or to a general medical condition.

? 1 A26

DUE TO SUB-STANCE USE OR GMC GO TO ***PAST MAJOR DEPRESSIVE EPISODE*** A. 12

IF THERE IS ANY INDICATION THAT THE DEPRESSION MAY BE SECONDARY (I.E., A DIRECT PHYSIOLOGICAL CONSEQUENCE OF A CMC OR SUBSTANCE, GO TO ***GMC/SUBSTANCE,*** A. 43, AND RETURN HERE TO MAKE A RATING OF "1" OR "3."

Etiological general medical conditions include: degenerative neurological illnesses (e.g., Parkinson's disease), cerebrovascular disease (e.g., stroke), metabolic conditions (e.g., Vitamin B-12 deficiency), endocrine conditions (e.g., hyper- and hypothyroidism, hyper- and hypoadrenocorticism); viral or other infections (e.g., hepatitis, mononucleosis, HIV), and certain cancers (e.g., carcinoma of the pancreas).

Etiological substances include: alcohol, amphetamines, cocaine, hallucinogens, inhalants, opioids, phencyclidine, sedatives, hypnotics, anxiolytics. Medications include antihypertensives, oral contraceptives, corticosteroids, anabolic steroids, anticancer agents, analgesics, anticholinergics, cardiac medications.

PRIMARY MOOD EPISODE

CONTINUE ON NEXT PAGE

Did this begin soon after someone close to you died?

E. Not better accounted for by bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

A27

1 → SIMPLE BEREAVE-MENT GOTO *PAST MAJOR DEPRES-SIVE EPISODE* A. 12

3 I → NOT SIMPLE BEREAVE-MENT CONTINUE WITH NEXT ITEM

MAJOR DEPRESSIVE EPISODE CRITERIA A, C, D AND E ARE CODED "3."

A28

GOTO *PAST MAJOR DEPRES-SIVE EPISODE* A. 12

CURRENT MAJOR DEPRES-SIVE EPISODE

How many separate times in your life have you been (depressed/ OWN WORDS) nearly every day for at least 2 weeks and had several of the symptoms that you described, like (SXS OF WORST EPISODE)?

Total number of Major Depressive Episodes, including current (CODE 99 IF TOO NUMEROUS OR INDISTINCT TO COUNT.)

NOTE: TO RECORD DETAILS OF PAST EPISODES, GO TO J. 9 (OPTIONAL).

A29

IF ASSESSING CURRENT MDE SPECIFIERS, CONTINUE ON NEXT PAGE; IF NOT, GO TO **'CURRENT MANIC EPISODE,*** PAGE A. 18

?=inadequate information 1=absent or false 2=subthreshold 3=threshold or true

DYSTHYMIC DISORDER CRITERIA

IF THERE HAS EVER BEEN A MANIC OR HYPOMANIC EPISODE, CHECK HERE AND GO TO NEXT MODULE

IF NO MAJOR DEPRESSIVE EPISODE IN PAST 2 YEARS: For the past couple of years, have you been bothered by depressed mood most of the day, more days than not? (More than half of the time?)

IF YES: What was that like?

A. Depressed mood for most of the day, for more days than not, as indicated either by subjective account or observation made by others, for at least 2 years. Note: in children and adolescents, mood can be irritable and duration must be at least 1 year.

GO TO NEXT MODULE

A163

IF CURRENT MAJOR DEPRESSIVE EPISODE: Let's review when you first had most of the symptoms of (CURRENT MAJOR DEPRESSIVE EPISODE). For the 2 years prior to (BEGINNING DATE), were you bothered by depressed mood most of the day, more days than not? (More than half the time?)

FIRST MET CRITERIA FOR CURRENT MAJOR DEPRESSIVE EPISODE:

Month/Yr: / Age:.

A163a
A163b

FOR A PAST MAJOR DEPRESSIVE EPISODE DURING THE PAST 2 YEARS: Let's review when you first had most of the symptoms of (PAST MAJOR DEPRESSIVE EPISODE) and the point at which you no longer had most of the symptoms. Since the (DATE OF NO LONGER MEETING CRITERIA), have you still been bothered by depressed mood, so that you have been depressed for most of the day, more days than not?

IF YES: For the 2 years prior to (DATE OF BEGINNING OF PAST MAJOR DEPRESSIVE EPISODE), were you bothered by depressed mood, most of the day, more days than not? (More than half the time?)

FIRST MET CRITERIA FOR PAST MAJOR DEPRESSIVE EPISODE IN PAST 2 YEARS:

Month/Yr: Age:.

A163c
A163d

NO LONGER MET CRITERIA FOR PAST MAJOR DEPRESSIVE EPISODE IN PAST 2 YEARS:

Month/Yr: / Age:.

A163e
A163f

During these periods of (OWN WORDS FOR CHRONIC DEPRESSION) do you often . ..

B. Presence, while depressed, of two (or more) of the following:

. . . lose your appetite? (What about overeating?)	(1) poor appetite or overeating					A164
.. . have trouble sleeping or sleep too much?	(2) insomnia or hypersomnia					A165
. .. have little energy to do things or feel tired a lot?	(3) low energy or fatigue					A166
... feel down on yourself? (Feel worthless, or a failure?)	(4) low self-esteem					A167
. .. have trouble concentrating or making decisions?	(5) poor concentration or difficulty making decisions					A168
. .. feel hopeless?	(6) feelings of hopelessness	?	1	2	3	A169
	AT LEAST TWO "B" SYMPTOMS CODED "3."	?	1	2	3	A170

GO TO NEXT MODULE

What is the longest period of time, during this period of long-lasting depression, that you felt OK? (NO DYSTHYMIC SYMPTOMS.)

C. During the 2-year period (1 year for children or adolescents) of the disturbance, the person has never been without the symptoms in criteria A and B for more than 2 months at a time.

? 1 A171

GO TO NEXT MODULE

NOTE: CODE "1" IF NORMAL MOOD FOR AT LEAST 2 MONTHS AT A TIME.

?=inadequate information 1 =absent or false 2=subthreshold 3=threshold or true

How long have you been feeling this way? (When did this begin?)

COMPARE ONSET OF DYSTHYMIC SXS WITH DATES OF PAST MAJOR DEPRESSIVE EPISODES TO DETERMINE IF THERE WERE ANY MAJOR DEPRESSIVE EPISODES IN FIRST 2 YEARS OF DYSTHYMIC DISORDER.

IF A MAJOR DEPRESSIVE EPISODE PRECEDED DYSTHYMIC SXS: Now I want to know whether you got completely back to your usual self after that (MAJOR DEPRESSIVE EPISODE) you had (DATE), before this long period of being mildly depressed? (Were you back to your usual self for at least 2 months?)

IF NOT ALREADY CLEAR: RETURN TO THIS ITEM AFTER COMPLETING THE PSYCHOTIC DISORDERS SECTION.

D. No Major Depressive Episode has been present during the first 2 years of the disturbance (1 year for children and adolescents): i.e., not better accounted for by chronic Major Depressive Disorder or Major Depression in partial remission.

? 1 A172

1 → GO TO NEXT MODULE

Age at onset of current Dysthymic Disorder (CODE 99 IF UNKNOWN). A173

Note: There may have been a previous Major Depressive Episode provided there was a full remission (no significant signs or symptoms for 2 months) before development of the Dysthymic Disorder. In addition, after the initial two years (1 year for children or adolescents) of Dysthymic Disorder, there may be superimposed episodes of Major Depressive Disorder, in which case both diagnoses may be given when criteria are met for a Major Depressive Episode.

NOTE: CODE "3" IF NO PAST MAJOR DEPRESSIVE EPISODES OR IF MAJOR DEPRESSIVE EPISODES WERE NOT PRESENT DURING THE FIRST 2 YEARS OR IF THERE WAS AT LEAST A 2-MONTH PERIOD WITHOUT SYMPTOMS PRECEDING THE ONSET.

E. There has never been a Manic Episode, a Mixed Episode, a Hypomanic
Episode, and the criteria have never been met for Cyclothymic Disorder.

1 A174

1 → GO TO NEXT MODULE

F. The disturbance does not occur exclusively during the course of a chronic psychotic disorder, such as Schizophrenia or Delusional Disorder. A175

NOTE: CODE "3" IF NO CHRONIC PSYCHOTIC DISORDER OR IF NOT SUPERIMPOSED ON A CHRONIC PSYCHOTIC DISORDER.

GOTO NEXT MODULE | NOT SUPER-IMPOSED CONTINUE

?=inadequate information 1 =absent or false 2=subthreshold 3=threshold or true

APPENDIX 14

ETHICAL CORRESPONDENCE AND APPROVAL

West of Scotland Research Ethics Service
West of Scotland REC 3
Ground Floor, The Tennent Institute
Western Infirmary 38 Church Street
Glasgow G11 6NT

Telephone: 0141 211 2123
Facsimile: 0141 211 1847 08
October 2009

NHS

Greater Glasgow and Clyde

Mrs Alison Campbell Trainee clinical psychologist Dept of Psychological Services Dumfries and Galloway NHS Board Nithbank Dumfries DG1 2SA

Dear Mrs Campbell

Study Title: **Recognition and treatment of depression in older adults presenting at GP surgeries. 09/S0701/96 Version 4**

REC reference number:
Protocol number:

The Research Ethics Committee reviewed the above application at the meeting held on 01 October 2009. Thank you for attending to discuss the study.

Documents reviewed

The documents reviewed at the meeting were:

Document	*Version*	*Date*
Covering Letter		10 September 2009
REC application		10 September 2009
Protocol	Version 4	10 August 2009
Investigator CV		1 1 September 2009
Participant Information Sheet	Version 4	27 August 2009
Participant Consent Form	Version 3	25 July 2009
Evidence of insurance or indemnity		27 July 2009
Letter from Sponsor		31 August 2009
Interview Schedules/Topic Guides	Version 1	11 September 2009
Questionnaire: Validated		
CV - Student		1 1 September 2009
Interested in Taking Part Form	Version 3	25 July 2009
Post GP Consultation Form	Version 3	25 July 2009
Authority to Approach Form	Version 3	25 September 2009

Provisional opinion

The Committee would be content to give a favourable ethical opinion of the research, subject to receiving a complete response to the request for further information set out below. ***Delivering better health***

The Committee delegated authority to confirm its final opinion on the application to a meeting of the sub-committee of the REC.

Further information or clarification required

1) The Committee had concerns around the recruitment process which was discussed with you at the meeting. The Committee then had further discussion and it was their opinion that they could not agree to the GP taking consent for you to make contact. The Committee would prefer the GP to speak to potentially suitable participants and if they are interested give them a research pack which should include an 'opt-in' form and stamped addressed envelope. The patient could then decide in their own time whether they wished to participate and if so could either post the opt-in form back to you or take back in a sealed envelope to an agreed drop off point in the surgery. A telephone number should also be included in the information pack so that the patient could contact you if they had any questions before deciding whether they wished to opt in.

2) It was the Committee's view that the title of the project did not reflect the content. A suggested title is 'Recognition and Decision to treat depression in older adults presenting at GP Surgeries'. The relevant documentation should be altered to reflect this more appropriate title.

3) It was agreed on discussion with you at the meeting that there should also be a Consent Form for the GPs.

When submitting your response to the Committee, please send revised documentation where appropriate underlining or otherwise highlighting the changes you have made and giving revised version numbers and dates.

If the committee has asked for clarification or changes to any answers given in the application form, please do not submit a revised copy of the application form; these can be addressed in a covering letter to the REC.

The Committee will confirm the final ethical opinion within a maximum of 60 days from the date of initial receipt of the application, excluding the time taken by you to respond fully to the above points. A response should be submitted by no later than 05 February 2010.

Membership of the Committee

The members of the Committee who were present at the meeting are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

09/S0701/96 Please quote this number on all correspondence

Yours sincerely

Liz Jamieson
Committee Co-ordinator on behalf of Dr Robert McNeill - Acting Chair

West of Scotland REC 3 Attendance at

Committee meeting on 01 October 2009

Committee Members:

Name	Profess/on	*Present*	*Notes*
Dr Jacqui Anderson	Consultant Psychiatrist	Yes	
Dr Jim Brooks	Lay Member	No	
Dr Adam Burnel	Consultant Psychiatrist	Yes	
Ms Lorna Cuthbertson	Senior Clinical Pharmacist	Yes	
Mr Paul Davies	Principal Pharmacist	No	
Mr Philip Dolan	Lay Member	Yes	
Dr Paul Fleming	Consultant Clinical Psychologist	No	
Dr Judith Godden	Scientific Officer/Manager	No	
Mrs Liz Jamieson	Committee Co-ordinator	Yes	
Mr Eoin MacGillivray	Lay Member	No	
Miss Winifred McCartney	Administrative Assistant	No	
Dr Pauline McGough	Consultant in sexual & reproductive health	Yes	
Dr Robert McNeill	General Practitioner	Yes	
Mrs Gillian Notman	Joint Occupational Therapy Lead Advisor	No	
Mrs Helen Ross	Lay Member	Yes	
Mrs Rosie Rutherford		Yes	

Written comments received from:

Name	*Position*
Mrs Gillian Notman	Joint Occupational Therapy Lead Advisor

(on headed paper)

For the attention of Liz Jamieson
West of Scotland Research Ethics Service
West of Scotland REC 3
Ground Floor, The Tennent Institute
Western Infirmary
38 Church Street
Glasgow G11 6NT

9th October 2009

Dear Ms Jamieson

Study Title: **'Recognition and decision to treat depression in older adults presenting at GP Surgeries'. (Formerly 'Recognition and treatment of depression in older adults presenting at GP surgeries.')**

REC reference number: **09/S0701/96**

Thank you for your letter detailing the comments of the committee.

Please find enclosed the following revised documents (all changes are highlighted in blue) and a table detailing my response to each of the points raised by the committee:

Document	Version	Date
Protocol	Version 5	07 October 2009
Participant Information Sheet	Version 5	07 October 2009
Participant Consent Form	Version 4	07 October 2009
Opt in form	Version 4	09 October 2009
GP Information Sheet	Version 1	07 October 2009
GP Consent Form	Version 1	07 October 2009

I would like to thank the committee for their time in considering my application and I hope to hear from you in due course.

Yours sincerely

Alison Campbell
Trainee clinical psychologist

Response to comments from the Ethics committee on application 09/S0701/96

1) The Committee had concerns around the recruitment process which was discussed with you at the meeting. The Committee then had further discussion and it was their opinion that they could not agree to the GP taking consent for you to make contact. The Committee would prefer the GP to speak to potentially suitable participants and if they are interested give them a research pack which should include an 'opt-in' form and stamped addressed envelope. The patient could then decide in their own time whether they wished to participate and if so could either post the opt-in form back to you or take back in a sealed envelope to an agreed drop off point in the surgery. A telephone number should also be included in the information pack so that the patient could contact you if they had any questions before deciding whether they wished to opt in.	AGREED The recruitment arrangements have been amended in line with the committee's recommendations. An opt in form (version 04 dated 09/10/09) is attached. A revised protocol (version 5 dated 071009) is attached.
2) It was the Committee's view that the title of the project did not reflect the content. A suggested title is 'Recognition and Decision to treat depression in older adults presenting at GP Surgeries'. The relevant documentation should be altered to reflect this more appropriate title.	AGREED The title has been amended to 'Recognition and decision to treat depression in older adults presenting at GP Surgeries'. All documentation is amended to reflect the new title and revised copies are attached.
3) It was agreed on discussion with you at the meeting that there should also be a Consent Form for the GPs.	AGREED These are attached.

West of Scotland Research Ethics Service
West of Scotland REC 3
Ground Floor, The Tennent Institute
Western Infirmary
38 Church Street
Glasgow G11 6NT

Telephone: 0141 211 2123
Facsimile: 0141 211 1847

NHS
Greater Glasgow and Clyde

22 October 2009

Mrs Alison Campbell
Trainee clinical psychologist
Dumfries and Galloway NHS Board
Dept of Psychological Services
Nithbank,
Dumfries DG1 2SA

Dear Mrs Campbell

Study Title:	**Recognition and treatment of depression in older adults presenting at GP surgeries.**
REC reference number:	**09/S0701/96**
Protocol number:	**Version 4**

Thank you for your letter of 09 October 2009, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information was considered by a sub-committee of the REC at a meeting held on 22nd October 2009. A list of the sub-committee members is attached.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.
Where the only involvement of the NHS organisation is as a Participant Identification

Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.

Sponsors are not required to notify the Committee of approvals from host organisations.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Covering Letter		10 September 2009
REC application		10 September 2009
Investigator CV		11 September 2009
Evidence of insurance or indemnity		27 July 2009
Letter from Sponsor		31 August 2009
Interview Schedules/Topic Guides	Version 1	11 September 2009
Questionnaire: Validated		
CV - Student		11 September 2009
Interested in Taking Part Form	Version 3	25 July 2009
Post GP Consultation Form	Version 3	25 July 2009
Protocol	Version 5	07 October 2009
Participant Information Sheet: GPs	Version 1	07 October 2009
Participant Information Sheet	Version 5	07 October 2009
Participant Consent Form: GPs	Version 1	07 October 2009
Participant Consent Form	Version 4	07 October 2009
Opt-In Form for Patients	Version 4	07 October 2009
Response to Request for Further Information		09 October 2009

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports

West of Scotland REC 3

Attendance at Sub-Committee of the REC meeting on 22 October 2009

Committee Members:

Name	*Profession*	*Present*	*Notes*
Mrs Liz Jamieson	Committee Co-ordinator	Yes	
Mr Eoin MacGillivray	Lay Member	Yes	
Dr Robert McNeill	General Practitioner	Yes	

APPENDIX 15

RESEARCH AND DEVELOPMENT

CORRESPONDENCE AND APPROVAL

Research and Development Support Unit
Ground Floor
Dumfries and Galloway Royal Infirmary
Bankend Road
Dumfries
DG1 4AP

NHS Dumfries & Galloway

26th October 2009
Recognition and Treatment of Depression in Older Adults Presenting at GP Surgeries

Dear Ms Campbell

Thank you for sending me details of your study with a request for management approval. I can confirm that the study review team has reviewed the documentation and on this basis I am pleased to inform you that your study has management approval for commencement within NHS Dumfries and Galloway on condition that you obtain an Honorary Contract from Dr Gwen Baxter at this department.

It is a condition of this approval that everyone involved in this study abides by the guidelines/protocols laid down by this Health Board in respect of confidentiality and Research Governance. It is your responsibility to ensure you are familiar with these; please do not hesitate to seek advice if you are unsure. (Copies of Research Governance Framework document available via the website www.sehd.scot.nhs.uk/cso and then use the publications link).
We also note that it is the sponsor's responsibility to ensure that appropriate training is in place for all local investigators.

As part of the Health Board's responsibilities under Research Governance a sample of studies will be monitored, it is therefore important that all records, in connection with the study, are kept up to date and available for review. We are also required to inform you that details of your study will be entered onto our R&D database.

Please advise the R&D Support Unit immediately if you require to alter your protocol in any way. I understand that performance of this study will not infringe on NHS Dumfries and Galloway's ability to deliver our usual level of service.

May I take this opportunity to wish you every success with your project. Please do not hesitate to seek help and advice from the R&D Support Unit (ext 33164 and 33165) if there is anything which you feel you would like assistance with. I look forward to hearing about your work as it progresses.

Yours Sincerely,

J.R Lawrence
R&D Director