

National Ageing Research Institute

Depression in older age: A scoping study

Final Report
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Executive Summary

Depression affects people of all ages, but this study was particularly focused on the knowledge and information available about depression and anxiety amongst older people.

Aim

This study aimed to identify the gaps in current knowledge about diagnosis and treatment of depression and anxiety amongst older adults (those aged over 65 years) in Australia in order to identify priority areas for Australian research into older age depression.

Method

To identify the gaps in current knowledge about diagnosis and treatment of depression and anxiety amongst older adults the following was undertaken:

- A review of published peer reviewed literature;
- A survey of people currently undertaking research into older age depression;
- Advisory group consultations;
- Analysis of findings of a consumer survey (conducted by *beyondblue*);
- A review of *beyondblue*'s Depression Monitor.

Findings

Literature review

The literature review identified groups of older people most at risk of depression and anxiety, including older people in residential aged care, older people with multiple physical co-morbidities, older people with dementia, older people who are carers, older people in hospital, older women, older Indigenous people and older people from CALD backgrounds. This review summarised common screening tools and treatment approaches in late-life depression and anxiety. It also identified barriers to treatment and management of late-life depression. The review also found that older people with depression and anxiety have a much higher risk of suicide than the general population.

The literature review also identified some gaps in current research in late-life depression and anxiety.

Firstly, there is limited research in late-life anxiety compared to depression (although further research is required in both areas).

Secondly, regarding diagnosis and screening tools, there are limited studies on:

- Validation of common screening tools in specific population groups, including older Indigenous people and older people from Culturally and Linguistically Diverse backgrounds;
- Prevalence of depression and anxiety in older people from Culturally and Linguistically Diverse backgrounds and older Indigenous people;
- Diagnosis of depression and anxiety among people with dementia;
- Training and support of early identification of depressive and anxiety disorders for primary care.

Finally, research in relation to treatment and management is limited regarding:

- The efficacy of psychological interventions in depression in later life;
- Multi-factorial intervention approaches in depression in later life;
- The efficacy of other approaches in treatment of late-life depression;
- Cultural factors which can influence the coping strategies older people use and their willingness to seek help;

- Lack of access to specialist services, particularly in rural and remote communities.

Researcher survey and advisory group consultation

The researcher survey, review of websites and advisory group consultations revealed some common areas of research in this field, including:

- Risk factors and prevalence of late-life depression and anxiety;
- Efficacy of antidepressants in treatment of late-life depression;
- Depression and anxiety among particular subgroups of older people, including people living in residential aged care, with medical co-morbidities, living with dementia, carers, and people in rural areas.

Consistent with findings from the literature, there are also some gaps in current research on late-life depression and anxiety in Australia:

- Little research regarding people with special needs, including older Indigenous people, people from CALD backgrounds and people in rural and remote areas;
- A need for more research into the role of primary health care in detecting and managing depression and anxiety;
- Thirdly, there seems to be less research in late-life anxiety compared to late-life depression;
- There is limited research on the efficacy of psychological approaches to treatment of late-life depression and anxiety.

Consumer survey

The consumer surveys revealed that GPs are generally seen as helpful and are an important avenue for diagnosis, advice, treatment and referrals. Counselling was always seen as helpful. There were also some contradictory themes. Medication and exercise were seen as helpful by those using those treatments. The areas identified for further research include alternatives to medication, such as exercise and social programs as well as a focus on prevention.

Depression monitor

Themes emerging from the Depression Monitor indicate that there is a stigma surrounding depression among older people and mental health literacy seems to be poor in this group. General Practitioners are often the first point of contact for older people seeking diagnosis, advice, and treatment on depression. Counselling was not regarded as helpful; neither were other treatment options, such as medication, counselling, psychotherapy and exercise.

Recommendations

The following recommendations have been proposed to *beyondblue*:

Older age depression and anxiety a priority

beyondblue to make older age depression and anxiety a priority in the next research funding round.

National advisory panel on older age mental health

beyondblue to establish a national advisory panel on older age mental health.

National awareness campaign

beyondblue to promote a national awareness campaign to improve mental health literacy amongst older people.

Development of national guidelines

beyondblue to fund the development of national guidelines for identification and treatment of older age depression and anxiety.

1. Introduction

Depression is a serious condition for people of all ages, but for older people depression is often associated with other co-morbid conditions, such as physical disability (Baldwin, 2008; Chiu, Ames, Draper, & Snowdon, 1999) dementia (*beyondblue*, 2007) and anxiety (Ames, Flynn, Tuckwell, & Harrigan, 1994; Bryant, Jackson, & Ames, 2008) that exacerbate the distress experienced by older people and their carers.

There is ongoing debate as to whether the prevalence of depression increases or decreases with age (O'Connor, 2006). It appears that formal diagnoses of depression are less common in older people, with rates considerably lower than those in younger populations (Australian Bureau of Statistics, 1998, 2008). However, when broader measures are used, including those that do not exclude from diagnosing contextual conditions that are more common in older people, such as bereavement or dementia, prevalence rates of between 6% and 20% have been reported in community-dwelling populations (Baldwin, 2008; Chiu et al., 1999), up to 50% in older people living in residential aged care (Cummings, 2002) and 48% in a hospital sample (Bryant, Jackson, & Ames, 2009).

While recognition of older age depression has improved in recent years (Llewellyn-Jones & Snowdon, 2007), there are still gaps in knowledge about assessment and diagnosis for particular population groups (Chiu et al., 1999). There is also insufficient knowledge about effective treatments for depression amongst older people. There have been a considerable number of drug trials over the past 40 years and since anti-depressant medication has become less toxic, it is therefore more likely to be prescribed for older people (Llewellyn-Jones & Snowdon, 2007). There are fewer studies on psychotherapy although there is evidence that cognitive behavioural approaches are effective with older people (Koder, Brodaty, & Anstey, 1996; Nordhus & Pallesen, 2003). Electro-convulsive therapy (ECT) has been found to be effective with older people who have severe depression (Chiu et al., 1999) but the available literature is sparse (Ames, 2001).

An earlier review conducted in Australia examined mental health research activity against the criteria of disease burden and health system costs and concluded that affective disorders and dementia were particularly under-researched given their contribution to burden of disease and health costs (Jorm, Griffiths, Christensen, & Medway, 2003). There is therefore a need for further research into older age depression and anxiety. The purpose of this study is to clarify the direction of future research into older age depression and anxiety in order to set priorities for research conducted by and/or on behalf of *beyondblue*.

2. Study aim and questions

Aim

This study aims to identify the gaps in current knowledge about diagnosis and treatment of depression and anxiety amongst older adults (those aged over 65 years) in Australia in order to identify priority areas for Australian research into older age depression.

Study questions

1. What groups of older people are most at risk of depression and anxiety and therefore most in need of treatment? These could include older people:
 - In residential aged care;
 - In hospital;
 - From Culturally and Linguistically Diverse (CALD) backgrounds or Indigenous backgrounds;
 - Receiving services at home;
 - Who are housebound;
 - Who are carers;
 - Who have experienced significant losses, including bereavement, loss of function, social networks and roles, and the losses associated with migration or being a refugee;
 - With multiple physical co-morbidities, in particular pain, dementia, falls and incontinence;
 - Who live in rural and remote areas.
2. What treatment and management strategies are known to be effective in these groups?
 - Medication treatment;
 - Behavioural approaches, such as physical activity, nutrition;
 - Psychological approaches;
 - Psycho-social approaches;
 - Innovative strategies including telehealth, internet and phone;
 - Strategies that work with the various sub-types of depression and anxiety.
3. What research is being undertaken currently in Australia (published or not yet published) into older age depression?
 - *beyondblue*;
 - NHMRC;
 - ARC;
 - Other Government funded.
4. What areas have been most neglected in research to date?
 - Psycho-social approaches;
 - Socio-economic approaches;
 - Multi-factorial approaches;
 - Translational research – how to translate research findings into action;
 - Assessment and diagnosis of those from CALD or Indigenous backgrounds;
 - GP assessment and care planning.

3. Method

To identify the gaps in current knowledge about diagnosis and treatment of depression and anxiety amongst older adults the following activities have been undertaken:

- A review of published peer reviewed literature;
- A survey of people currently undertaking research into older age depression;
- Advisory group consultations;
- Analysis of findings of a consumer survey (conducted by *beyondblue*);
- A review of *beyondblue*'s Depression Monitor.

3.1 Literature Review

Published peer-reviewed literature on older age depression was reviewed using the following strategy:

- Initially, the review was restricted to reviews and book chapters on older age depression written in the last 10 years. This provided an overview of current knowledge in the area. Where gaps were identified, further searching was conducted to identify any published literature in that area;
- On-line data bases including CINAHL (nursing and allied health), Pubmed (medical), Ovid (scientific and medical) and PsychInfo (psychological) were searched. In addition, project advisers were asked to identify relevant book chapters, government reports and other literature known to them;

The literature review is reported in section 4 below.

3.2 Survey of current research activity

A survey was conducted to capture information about current research in the area (see Appendix A for copy of survey). The findings of the survey are summarized in section 5 of this report. In addition, the websites of relevant funding organisations, including *beyondblue*, NHMRC, ARC, and Department of Health and Ageing (DoHA) were visited to document current research and funding in Australia in late-life depression and anxiety.

3.3 Consumer Survey

A survey was developed by NARI for dissemination by *beyondblue* (see Appendix B). This was sent to older representatives of the relevant consumer committees. The findings of this survey are outlined in section 6.

3.4 Depression Monitor

beyondblue have provided NARI with a summary of findings from their Depression Monitor that are relevant to older people. A brief summary of the relevant points is included in section 7.

3.5 Advisory Group

An advisory group was formed at the beginning of the project to oversee the progress of the project. The members of this panel included the project advisers, Prof. David Ames, Dr Christina Bryant and Dr Dina LoGiudice, a consumer representative, and a representative from *beyondblue*. This group met twice to provide feedback on the first stage of the literature review and the draft final report.

4. Literature Review

Depression and anxiety are serious mental disorders, that affect one in seven (14%) and one in four (26%) people respectively at some point in their lives (Australian Bureau of Statistics, 2008). Currently, one million people in Australia suffer from depression and 2.3 million suffer from anxiety (Australian Bureau of Statistics, 2008).

The term 'depression' in this report refers to all clinically significant forms of depressive disorders, including mild, major, and severe depression. The term 'anxiety' refers to anxiety disorders such as generalised anxiety disorder, specific phobia, social anxiety disorder, and panic disorder with/without agoraphobia. However, there seems to be variation in reference to the terms depression and anxiety in the literature and some studies reported in this literature review report on depressive and anxiety symptoms rather than the clinical disorders.

This literature review summarises current knowledge regarding groups of older people most at risk of depression and anxiety and the treatment and management strategies known to be effective in older people.

The search strategy used in this literature review is outlined in Appendix C. Please see appendix D for a full list of books, book sections, journal articles and reports included in the literature review.

4.1 *Depression and anxiety in older people*

It is a common misconception that depression is a normal part of ageing, but the evidence shows that multiple health problems often account for any initial association between depression and older age (Baldwin, 2008; Baldwin, Chiu, Katona, & Graham, 2002). Depression is essentially the same disorder across the lifespan, although certain symptoms are accentuated and others are suppressed in older people. For example, older people with depression typically report more physical symptoms and less sadness compared to younger people with depression (Baldwin, 2008; Chiu, Tam & Chiu, 2008). Additionally, psychotic symptoms, melancholia, insomnia, hypochondriasis, and subjective memory complaints are more likely to occur in older people with depression compared to younger people with depression (Baldwin, 2008; Baldwin et al., 2002). A recent review found that when confounding variables are controlled (for example, age at study entry), remission rates of depression in patients in late-life are not different from those in midlife, although relapse rates appear higher in older people (Mitchell & Subramaniam, 2005).

Anxiety disorders are also common among older people. However, research in this area is less compared to research undertaken in other mental disorders in older people, such as depression (Wetherell, Maser, & van Balkom, 2005). Of the anxiety disorders, phobic disorders and generalised anxiety disorder (GAD) are the two most common in older people (Beyer, 2004; Bryant et al., 2008; Rodda, Boyce, & Walker, 2008). There has been a certain amount of clinical interest in post-traumatic stress disorder (PTSD), because the survivors of the Second World War and the Holocaust are now well into old age. Moreover, Vietnam Veterans are also approaching old age with well-documented high levels of psychopathology (Owens, Baker, Kasckow, Ciesla, & Mohamed, 2005) that can also have serious effects on the mental health of family members (Galovskia & Lyons, 2003). Prevalence data on PTSD, however, are very limited (Sadavoy, 1997). American studies of Holocaust survivors have found that up to 46% meet criteria for PTSD (Sadavoy, 1997). Weintraub and Ruskin (1999)'s review emphasises the similarities between PTSD in older and younger groups. Other authors have disputed this, and further research is required to establish how different the presentation of PTSD is in older adults from that in younger people.

A recent Australian study found that 11.6% of men and 8.6% of women aged over 65 reported re-experiencing symptoms associated with past events (DSM IV criteria), and concluded that quality of life may be significantly affected in this group (Creamer & Parslow, 2008). This study highlights some of the difficulties in the application of the DSM IV criteria to older adults.

Research on interventions for older people with PTSD is very limited indeed. A recent review of assessment and treatment of PTSD in older combat veterans identified only five studies of psychotherapeutic intervention (Owens et al., 2005). All of these were case studies. A literature search carried out for this review did not identify any randomised controlled trials of psychological intervention for older people diagnosed with PTSD.

Comorbidity of depression and anxiety disorders is highly prevalent (Beekman et al., 2000). A community-based study in the Netherlands found 47.5% of older people with major depressive disorders also met criteria for anxiety disorders, whereas 26.1% of those with anxiety disorders also met criteria for major depressive disorders (Beekman et al., 2000). Mixed anxiety and depressive disorders (where symptoms of both anxiety and depression do not reach diagnostic criteria for either disorder) also frequently occur in older people (Chiu et al., 2008; Rodda et al., 2008). Older people with depression have a 35% lifetime and 23% current prevalence of a co-morbid anxiety disorder (Beyer, 2004). Furthermore, when anxiety symptoms first occur in a person over 60 years of age with no history of anxiety, it generally suggests underlying depression (Baldwin, 2008; Chiu et al., 2008). Indeed, it is quite uncommon that people develop late-onset anxiety disorders for the first time in later life (Chiu et al., 2008), although there are researchers who disagree with this (Wetherell, Maser et al., 2005). Older people with co-morbid depression and anxiety typically have more severe depressive symptoms, an increased likelihood of suicide ideation, lower social functioning (Beyer, 2004; Rodda et al., 2008) and poorer outcome (Schoevers, Beekman, Deeg, Jonker, & van Tilburg, 2003).

4.2 *Diagnosis and screening Tools*

Screening tools are useful in conjunction with a clinical examination in the diagnosis of depressive disorders (Chiu et al., 2008). The most widely accepted screening tool for depressive disorders in older persons is the self-administered Geriatric Depression Scale (GDS) (Yesavage, Roomi, Baldwin, & Connolly, 1983). Other tools include the Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977) and the Brief Assessment Schedule Depression Cards (BASDC) (Adshead, Cody, & Pitt, 1992). Some of the common screening instruments for anxiety disorders in older people are the State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsuch, & Lushene, 1970), the Geriatric Anxiety Inventory (GAI) (Pachana et al., 2007) and Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983). The Neuropsychiatric Inventory (NPI) (Cummings et al., 1994) screens for both depression and anxiety as well as ten other syndromes. A recent review (Watson & Pignone, 2003) showed that both the GDS and CES-D had good sensitivities and specificities in detecting late-life major depression. However, there seemed to be a lack of screening tools for subthreshold depressive disorders (Watson & Pignone, 2003).

Cultural influence is an important issue that needs to be considered in the diagnosis of depression, because of cultural differences in the definition, conceptualisation and experience of depression (Chiu et al., 2008). For example, the mainstream concept of mental health comes more from an illness or clinical perspective and focuses more on the individual and their level of functioning in their environment while the Indigenous concept of mental health is much broader and emphasises the importance of connection to land, culture, spirituality, ancestry, family and community, and how these affect the individual (Social

Health Reference Group, 2004). The difference in perception of mental health and depression gave rise to some concerns about cross-cultural aspects in the diagnosis of depression, with the risk of some symptoms being misinterpreted by mainstream mental health professionals (Thomson, Krom, Trevaskis, Weisssofner, & Leggett, 2005). A review of community prevalence of depression in later life found that the majority of outlying (both low and high prevalence) findings originated in non-English-speaking countries (Beekman, Copeland, & Prince, 1999). Although this finding might be taken as an indication of culture-based differences in rates of depression, it might also indicate systematic bias due to translation of screening instruments (Beekman et al., 1999).

A further issue in diagnosis of depression and anxiety is the difficulty in diagnosis for people with dementia. There are some screening tools that have been designed for older people with cognitive impairment, for example, the Cornell Scale for Depression in Dementia (CSDD) (Alexopoulos, Abrams, Young, & Shamoian, 1988) and the Rating Anxiety in Dementia Scale (Shankar, Walker, & Frost, 1999). However, diagnosing depression and anxiety in older people with dementia is particularly difficult as symptoms of depression and anxiety often overlap with symptoms of dementia (Jorm, 2000, 2001; Seignourel, Kunik, Snow, Wilson, & Stanley, 2008). Furthermore, there is some evidence that late onset depression can be a prodromal disorder for dementia (Schweitzer, Tuckwell, O'Brien, & Ames, 2002).

Of vital importance in the process of diagnosis is early recognition of depressive and anxiety symptoms in older people. However, studies have found that depression and anxiety is often undetected or under-diagnosed in older people (Alwahhabi, 2003; Snowdon, 1998; World Health Organization, 2001). General practitioners (GPs) are in a central position of early recognition of depressive and anxiety symptoms. However, some Australian studies have found that GPs were unaware of many depressive symptoms (O'Connor, Rosewarne, & Bruce, 2001b) and that depression symptoms are inadequately recognised and treated in nursing homes (Sandra, Stella, Daniel, & David, 2006). There is some evidence that training in the use of an assessment tool and an education session on late-life depression was associated with an improvement in GPs' recognition of late-life depression in nursing homes (Sandra et al., 2006).

4.3 Prevalence of depression and anxiety

The prevalence literature of older age depression is inconsistent, for example, a recent review of 122 papers in this area found that the reported prevalence of depression in older people ranged from 1% to 49% (Djernes, 2006). The wide difference in the figures is largely due to methodological differences (Beekman et al., 1999), such as the definition of depression, the sampling strategies and the sample sizes (Pirkis et al., 2009). For example, studies focusing on depressive symptoms tended to report higher prevalence than studies focusing on depressive disorders. Further, common diagnostic criteria, such as ICD-10 and DSM-IV-R, provide different specifications for depressive disorders. There is evidence that the prevalence of depression is affected by the diagnostic criteria adopted in the study and it is suggested that there should be more detailed specification of depressive disorders to improve our understanding of depression among older people (Henderson et al., 1993; Kay, Henderson, & Scott, 1985).

Studies with community dwelling participants also tended to have a lower prevalence than studies where participants were from institutions (e.g., residential aged care facilities). For older people living in the community, between 10-15% experience symptoms of depression (Baldwin, 2008; Baldwin et al., 2002; Cole, 2003). The 2007 National Survey of Mental Health and Wellbeing found that the 12-month prevalence for depression and anxiety was 2% and 5%, respectively for older people living in private dwellings (Australian Bureau of

Statistics, 2008). Another Australian study found that the prevalence of depression was 8.2% among a sample of 22,252 community-dwelling older people (Pirkis et al., 2009). However, the prevalence rate is much higher in residential aged care facilities and a recent Australian study found that 34.7% of aged care residents suffered from depression (Snowdon & Fleming, 2008).

Similar to studies in depression, the reported prevalence of anxiety among older people is inconsistent. It is estimated that approximately 10% of community-dwelling older people have a diagnosable anxiety disorder (Bryant et al., 2008). Some studies found that anxiety might be more prevalent in older people than depression (Beekman et al., 2000). For example, a recent Australian study found that of people aged between 70 and 74 years, 3% were classed as having GAD compared to 1.7% categorised as having depression (Bryant et al., 2008). The 2007 National Survey of Mental Health and Wellbeing also found that anxiety disorders are more prevalent than affective disorders in people aged 65 and over (Australian Bureau of Statistics, 2008).

There is limited Australian data on the prevalence of depression and anxiety in older Indigenous people and people from CALD backgrounds. However, there is some evidence that older Indigenous people and people from CALD backgrounds might be at greater risk of depression than the general community. A review of depression among older Asian immigrants in North America found that depression is prevalent among this population and the prevalence ranges from 18% to 31.1% (Kuo, Chong, & Joseph, 2008). A 2009 Australian Institute of Health and Welfare report found that over one quarter of Indigenous adults reported high or very high levels of psychological distress and that Indigenous Australians were twice as likely to report high or very high levels of psychological distress as non-Indigenous Australians (Australian Institute of Health and Welfare, 2009a). An earlier AIHW report found that more than three-fifths of people presenting to Aboriginal community controlled health services have a significant level of mental distress, principally depression (Australian Institute of Health and Welfare, 1998). Therefore, despite the lack of specific information about the incidence and prevalence of depression and anxiety among older Indigenous peoples, these data seem to support the conclusion that 'serious psychiatric disorders occur in Indigenous populations, and are at least as common as in the mainstream population' (Hunter, 2003, p. 140).

4.4 Aetiology of late-life depression and anxiety

It is now well accepted that causes of late-life depression and anxiety are multifactorial and that no single risk factor is responsible for late-life depression and anxiety (Baldwin, 2008; Beekman et al., 1998; Blazer, 2003; Chiu et al., 1999; Chiu et al., 2009; Chiu et al., 2008; Vink, Aartsen, & Schoevers, 2008). Instead, the development of late-life depression and anxiety is "the accumulation of risks over time" (Chiu et al., 2008, p. 24). Importantly, there is no evidence that ageing per se is a risk factor for depression or anxiety in late-life (Baldwin et al., 2002; Beekman et al., 1998).

4.4.1 Risk factors for late-life depression and anxiety

Studies that investigate the risk factors (including biological, physical and social factors) for depression and anxiety in older people are predominantly observational studies.

There is evidence that depressive disorders and disability are highly correlated (Baldwin et al., 2002). For example, the depression rate in older people receiving a high level of support at home is approximately twice as high as less frail community-dwelling older people (Baldwin et al., 2002). Therefore, older people in settings where disability is high, such as residential aged care facilities,

hospitals, older people with chronic illness and frail older people at home, are at greater risk of depression. Other risk factors identified for late-life depression include a history of depression, low socio-economic status, external locus of control, bereavement, new medical illness, poor self-rated health, being female and being unmarried (Baldwin, 2008; Baldwin et al., 2002; Beekman et al., 1999; Beekman et al., 2000; Cole, 2003, 2005; Vink et al., 2008). The loss of a significant other, including spouse, family member, close friend, or pet, is also associated with an increased risk of depression (Baldwin et al., 2002). It is important to remember, however, that not all significant life events/losses are followed by depression, and not all older people with depression experience significant life events/losses beforehand.

Risk factors of having an anxiety disorder in later life include previously having a psychological disorder(s), poor coping strategies, stressful life events, and being female (Vink et al., 2008).

The literature regarding the effects of retirement on older people's mental health is inconsistent (Butterworth et al., 2006). While some studies found increased depression and/or anxiety (Richardson & Kilty, 1991), others reported lower rates of depression and anxiety following retirement (Butterworth et al., 2006; Villamil, Huppert, & Melzer, 2006).

Vink, Aartsen and Schoevers (2008) provided a comprehensive overview of risk factors for late-life anxiety and depression. The review revealed considerable overlap between the risk profiles for anxiety and depression in older people, such as chronic diseases, disability and bereavement. However, the review also found some differences in risk factors for late-life anxiety and depression. Biological factors, including chronic health conditions, cognitive impairment and functional limitations, may be more important in predicting depression. Also, there seems to be a differential effect of social factors on depression and anxiety. For example, stressful events are important predictors for both anxiety and depression, but traumatic events are predictors for only anxiety.

A community-based study in the Netherlands found that external locus of control was the only common risk factor for pure depression and pure anxiety in later life while family history was associated with concurrent anxiety and depression (Beekman et al., 2000).

4.4.2 Groups of older people most at risk

Based on research evidence on prevalence and risk factors of depression and anxiety in older people, it appears that the groups of older people at most risk of depression and anxiety are:

Older people in residential aged care

A recent Australian study (Snowdon & Fleming, 2008) found that the prevalence of depression was 34.7% in aged care residents. Other studies reported prevalence rates from 14 to 45% (Baldwin et al., 2002; Menzel, 2008; Rodda et al., 2008), depending on the methodology and diagnostic criteria used. Older people living in residential aged care also have a higher rate of anxiety disorders than other groups of older people (Rodda et al., 2008).

Older people with multiple physical co-morbidities

It is well established that a common issue with diagnosing depression and anxiety in older people is multiple physical co-morbidities (Pfaff et al., 2009; Schoevers et al., 2003). Indeed, the high risk of depression and anxiety in older people is significantly accounted for by the high prevalence of physical illness (Beyer, 2004; Menzel, 2008; Rodda et al., 2008). Medical comorbidity is also a risk factor for inferior treatment response and poor antidepressant tolerability among older

people with depression (Mitchell & Subramaniam, 2005) and is often associated with a worse outcome in the follow-up (Cole, Bellavance, & Mansour, 1999; Licht-Strunk, van der Windt, van Marwijk, de Haan, & Beekman, 2007). Moreover, depression and anxiety are risk factors for the development and progression of disability (Lenze et al., 2001). However, the relationship between depression/anxiety and health problems is complex and bi-directional: while depression and anxiety are risk factors for some physical conditions such as stroke and cardiovascular disease, disability due to physical illness is a risk factor for depression and anxiety (Baldwin et al., 2002; Beyer, 2004).

Older people with dementia

It is estimated that 20% of older people with Alzheimer's disease experience moderate to severe depression (Baldwin, 2008). Furthermore, depression accelerates functional decline in older people with dementia (Baldwin et al., 2002). There is growing evidence that depression increases the risk of older people later developing cognitive impairment or dementia (Baldwin, 2008; Blazer, 2003; Chiu et al., 2008; Jorm, 2000, 2001). Prevalence estimates of anxiety in older people with dementia vary greatly, from 5-21% for anxiety disorders and 8-71% for anxiety symptoms (Seignourel et al., 2008). A recent Australian study found that clinical depression in nursing home facilities most often occurs in residents who also exhibit pronounced cognitive impairment (McSweeney & O'Connor, 2008). There is also some evidence that clinically significant anxiety symptoms may predict accelerated cognitive decline (Beaudreau & O'Hara, 2008) and that older people with cognitive impairment are associated with worse outcomes for depression in follow-up (Cole et al., 1999).

Older people who are carers

Older carers of people with chronic illness, such as dementia, are at increased risk of developing depression (Baldwin, 2008; Baldwin et al., 2002) and anxiety (Cooper, Balamurali, & Livingston, 2007). A recent Australian study found that up to 23.5% of carers of older people with dementia are reported to have anxiety disorders (Bryant et al., 2008).

Older people in hospital

The prevalence of depression among older people in hospital ranges from 10 to 45%, averaging around 20% (Baldwin, 2008; Baldwin et al., 2002; Koenig & Blazer, 2004). Older people in hospital have high levels of anxiety symptoms (up to 65%) and anxiety symptomatology is a potential risk factor for poorer outcome (Bryant et al., 2008).

Older women

Females are at greater risk of developing depression throughout the lifespan, including the later years, with a female to male ratio of 2:1 (Baldwin, 2008; Baldwin et al., 2002; Koenig & Blazer, 2004). Older women are also more likely to have anxiety disorders, such as GAD, than older men (Beyer, 2004). These findings are consistent with the 2007 National Survey of Mental Health and Wellbeing, which found that older women are more likely than older men to suffer affective disorders and anxiety disorders. (Slade et al., 2009)

Older Indigenous people

Although there is limited data on prevalence of depression among older Indigenous people, there is some evidence that depression is prevalent in this population (Thomson et al., 2005). The 'impact of history and the past and ongoing effects of colonisation' have been found to be the primary causes for mental illness and mental health problems among Indigenous people (Swan & Raphael, 1995, p. 67). Although the impact and effects have varied over time and

across Australia, they have resulted in trauma, grief and loss for successive generations of Indigenous people (Thomson et al., 2005).

Older people from CALD backgrounds

There is some preliminary evidence that depression is prevalent among older people from CALD backgrounds (Kuo et al., 2008). Depression among this group is linked to experience of immigration, English proficiency, acculturation, service barriers, and family relationship (Kuo et al., 2008).

4.5 Treatment and management

4.5.1 Approaches in treatment and management

The treatment of depression occurs through medical (such as antidepressant medication, electroconvulsive therapy) and psychological interventions (such as cognitive behaviour therapy and interpersonal therapy) (Baldwin et al., 2002; Chiu et al., 2008). Antidepressant medication is usually used for more severe symptoms, while psychosocial interventions focus on precipitating and maintaining psychological and social factors (Australian Institute of Health and Welfare, 1998).

Medical approaches

There has been some evidence on the efficacy and safety of antidepressant medication and electroconvulsive therapy on the treatment of late-life depression (Baldwin et al., 2002; Chiu et al., 2008; Frazer, Christensen, & Griffiths, 2005; Salzman, Wong, & Wright, 2002). However, most published studies examine small sample sizes and some do not include common co-morbid psychiatric and medical conditions (Taylor & Doraiswamy, 2004).

A recent Australian Institute of Health and Welfare publication reports on the patterns of mental health related prescriptions seeing a decline in the last 4-5 years:

Overall, mental health-related prescriptions decreased from 20.7 million in 2003–04 to 20.4 million in 2007–08, at an annual average rate of 0.4%. The rate of prescriptions (per 1,000 population) declined from 1,035 in 2003–04 to 962 in 2007–08 at an average annual rate of 1.8%. There were increases in the number of psychostimulants and nootropics, and antipsychotics prescribed (on average by 12.0% and 8.7% per year, respectively). However, prescriptions for hypnotics and sedatives decreased on average by 3.5% per year, while prescriptions for anxiolytics, antidepressants and other medications prescribed by psychiatrists decreased on average by around 1% per year (Australian Institute of Health and Welfare, 2009b, p. 123).

However, data appear not to be available on prescribing patterns by age groups.

Psychological approaches

There has been some evidence on the efficacy of psychotherapy in late-life depression (Pinquart, Duberstein, & Lyness, 2006; Skultety & Zeiss, 2006) and anxiety (Hendriks, Voshaar, Keijsers, Hoogduin, & vanBalkom, 2008; Nordhus & Pallesen, 2003; Wetherell, Sorrell, Thorp, & Patterson, 2005). In particular, cognitive behaviour therapy and interpersonal psychotherapy have been shown as effective treatments for depressed older people, either alone or as an adjunct to antidepressant medication (Frazer et al., 2005; Steinman et al., 2007). There is also some evidence that older adults with minor depression or dysthymia may be more likely to benefit from psychotherapeutic interventions than from antidepressants (Pinquart et al., 2006).

However, many of these efficacy studies are limited to older people who reached a diagnostic threshold and excluded those with 'subcase level depression' (Freudenstein, Jagger, Arthur, & Donner-Banzhoff, 2001). As less severe depression is far more common than severe depression in older people, more research is required in this area (Frederick et al., 2007; Freudenstein et al., 2001).

Some recent studies found that the use of pharmacotherapy, but not interpersonal psychotherapy, is effective to prevent recurrent depression (Reynolds et al., 2006) and preserve overall wellbeing (Dombrowski et al., 2007) in older people with depression at the 2 year follow-up. However, the lack of follow-up data precluded conclusions on the long-term efficacy of psychological therapy in late-life depression and anxiety (Hendriks et al., 2008; Nordhus & Pallesen, 2003).

The importance of an integrated approach

These different medical and psychological interventions for late-life depression should be thought of as synergistic rather than mutually exclusive (Chiu et al., 2008) and treatment of depression needs to take an integrated and multidisciplinary approach to reflect the multiple factors affecting the development and course of depressive disorders. A recent Australian study has found that the outcome of depression among elderly people in residential care can be improved by multidisciplinary collaboration and by enhancing the clinical skills of general practitioners and care staff (McSweeney & O'Connor, 2008). Another study trialled a program that incorporated several strategies, including staff training, the life story initiative, regular 'talk and walk' program, training and support group for family carers (Jordan, Byrne, & Bushell, 2009). The study found that these strategies not only help the staff to improve their knowledge and self-efficacy in recognising and managing late-life depression, but also help residents to be more positive as they adjust to their new environment. However, more studies are needed to provide a better evidence base for the integrated and multidisciplinary approach in treatment of late-life depression and anxiety.

Other approaches

There is some preliminary evidence for other approaches, such as physical activity interventions (Singh, Clements, & Singh, 2001; Strawbridge, Deleger, Roberts, & Kaplan, 2002), reminiscence and life review (Bohlmeijer, Smit, & Cuijpers, 2003; Hsieh & Wang, 2003), behavioural approaches and psychosocial approaches for treatment of late-life depression. However, further research is needed to provide a better evidence base.

Other important issues

An important issue in studies on treatment is that cultural factors can influence the coping strategies older people use and their willingness to seek help from general practitioners and mental health personnel (Chiu et al., 2008; Murray et al., 2006; Zivin & Kales, 2008). A recent study in Western Australia found that Indigenous participants perceived depression as a characteristic of the individual concerned stating 'that's just the way he is' (Vicary & Westerman, 2004, p. 6). They also found that 'Aboriginal people did not perceive depression as a state that could be addressed via treatment' (Vicary & Westerman, 2004, p. 6). Therefore, for many Indigenous people with depression and/or anxiety, successful treatment needs to be a blend of mainstream treatments (such as medication, counselling and hospitalisation) and Indigenous strategies, such as building resilience against harmful spirits and increasing wellness and involving traditional healers and the person's family (Thomson et al., 2005; Vicary & Westerman, 2004).

There are also other barriers to attaining effective treatment, including lack of access to specialist services, particularly in rural and remote communities (Australian Institute of Health and Welfare, 1998). A systematic review of evaluations of two Australian web-based mental health programs (MoodGYM and BluePages Depression Information) found that Internet-based applications were effective in reducing depressive symptoms and stigmatising attitudes to depression and in improving depression literacy (Griffiths & Christensen, 2007). As accessibility of mental health services and professionals in rural areas is very low by comparison with major cities, the Internet might be an alternative for the delivery of help for depression in rural regions.

4.5.2 Barriers in treatment and management

This section identifies a range of additional barriers in the treatment and management of depression in older people.

Stigma and poor mental health literacy

Studies have found that older people are particularly affected by traditional stigma surrounding depression (Griffiths, Christensen, & Jorm, 2008; Murray et al., 2006) and have poorer mental health literacy (Farrer, Leach, Griffiths, Christensen, & Jorm, 2008). These factors may affect whether appropriate help is sought, whether it is adhered to, and how people respond to others with mental disorders (Jorm, 2007; Zivin & Kales, 2008). Stigma and poor mental health literacy might explain the result of an Australian study, which found older patients often do not report depressive symptoms to their medical practitioner (O'Connor, Rosewarne, & Bruce, 2001a). It might also explain the finding of the 2007 National Survey of Mental Health and Wellbeing, which found that older people are least likely to use mental health services compared to other age groups, with less than one quarter of older people having used services for mental health problems in the previous 12 months (Slade et al., 2009).

Community surveys have found that *beyondblue*: the national depression initiative had a positive effect on some beliefs about depression, including greater awareness of depression, improved beliefs about treatments and about the benefits of help-seeking in general (Jorm, Christensen, & Griffiths, 2005, 2006). However, consideration should be given to developing targeted programs for older people to reduce stigma and increase mental health literacy for depression (Farrer et al., 2008).

Ageism

Ageism, that is, holding negative attitudes or beliefs about older people and acting on these prejudices to treat older people differently from other age groups, is another barrier in treatment and management of late-life depression and anxiety. Ageism can be expressed in a wide range of phenomena, from subtle avoidance of contact to outright disdain and dislike, and discriminatory practices in employment and public services (Butler, 1969). These public services include health services, where stereotyping can contribute to the risk of misdiagnosis or poor care decisions. There is a wide body of literature on ageist behaviour in medical settings, with health professionals frequently tending to patronise, to listen less to the patient's views, to give less time to the interview, to order fewer diagnostic tests, and to attribute symptoms to age rather than to treatable conditions (Adelman, Greene, Charon, & Friedman, 1990; Allman, Ragan, Newsome, Scoufos, & Nussbaum, 1999; Beisecker & Beisecker, 1996; Greene, Adelman, Charon, & Hoffman, 1986). Mental health is a particularly neglected area, where elderly patients are referred less frequently to psychiatrists than younger patients with the same symptoms (Cuddy & Fiske, 2002).

Lack of professionals specialised in late-life depression/anxiety

A number of studies have suggested that there is a reluctance to work with older people among health students, including nursing students (Lovell, 2006), medical students (Reuben, Fullerton, Tschann, & Crougban-Minihane, 1995), clinical psychology trainees (Lee, Volans, & Gregory, 2003) and social work students (Cummings, Adler, & DeCoster, 2005). This finding among health students is consistent with other studies that have found a low percentage of clinical psychologists specialising in working with older people (Koder & Helmes, 2006a; 2006b). The shortage of professionals working with older people also means a shortage of placements for students to have positive experiences with older people.

4.5.3 Suicide and older people

Older people have a much higher risk of suicide than the general population (World Health Organization, 2001). Moreover, of those who attempt suicide, older people are most likely to complete the attempt (Rodda et al., 2008), with males 3-4 times more likely to suicide than females (Rodda et al., 2008). Therefore, any suicide attempt by an older person should be taken seriously, even those attempts deemed not medically serious (Chiu et al., 2008). Up to 83% of older people who complete suicide suffered from depression (Baldwin et al., 2002; Rodda et al., 2008). Additional risk factors for suicide in later life are previous suicide attempts, other psychiatric conditions, serious physical illness, social isolation, poor social support, and significant loss including bereavement (Baldwin et al., 2002; Chiu et al., 2008).

Anxiety increases older people's risk of mortality, both from suicide and physical illness such as cardiovascular disease (Bryant et al., 2008).

Furthermore, there is some evidence that although primary care physicians are capable of recognising suicidal ideation in older people, they are less willing to use and less optimistic about the usefulness of therapeutic strategies among older people (Uncapher & Arian, 2000).

4.6 Summary

The literature review has identified groups of older people most at risk of depression and anxiety, including older people in residential aged care, older people with multiple physical co-morbidities, older people with dementia, older people who are carers, older people in hospital, older women, older Indigenous people and older people from CALD backgrounds. This review has summarised common screening tools and treatment approaches in late-life depression and anxiety. It also identified some barriers in treatment and management of late-life depression and anxiety, including low mental health literacy, ageism and lack of professionals specialised in late-life depression/anxiety. The review also found that older people with depression and anxiety have a much higher risk of suicide than the general population.

The literature review has identified some gaps in current research in late-life depression and anxiety.

Firstly, there is limited research in late-life anxiety compared to depression (although further research is required in both areas).

Secondly, in relation to diagnosis and screening tools, there are limited studies on:

- Validation of common screening tools in specific population groups, including older Indigenous people and older people from Culturally and Linguistically Diverse backgrounds;

- Prevalence of depression and anxiety in older people from Culturally and Linguistically Diverse backgrounds and older Indigenous people;
- Diagnosis of depression and anxiety among people with dementia;
- Training and support of early identification of depressive and anxiety disorders for primary care.

Finally, research in relation to treatment and management is limited regarding:

- The efficacy of psychological interventions in depression in later life;
- Multi-factorial intervention approaches in depression in later life;
- The efficacy of other approaches (e.g., behavioural) in treatment of late-life depression;
- Cultural factors which can influence the coping strategies older people use and their willingness to seek help;
- Lack of access to specialist services, particularly in rural and remote communities.

5. Current Research in Australia

5.1 Researcher Survey

5.1.1 Introduction

A survey was conducted to capture information about current research in the area of depression and old age. The survey was distributed to key researchers in the area. The respondents targeted included professors of old age psychiatry in all states of Australia, researchers funded by *beyondblue* Centre for Research Excellence, National Health and Medical Research Council (NHMRC), Australian Research Council (ARC) and others identified who conduct research into depression that involves older people. Organisations that have an interest in research into older age depression, such as the Victorian Transcultural Psychiatry Unit were also targeted.

Thirty-five surveys were distributed and 15 (42.85%) were returned. Thirteen of these surveys were completed electronically and returned via email; one was completed via the telephone; one was completed face-to-face. The survey included an explanatory letter describing the study.

The survey included the following questions:

1. Could you please list all current research in the area of older age depression and anxiety that you are involved in?
2. Do you plan to undertake any (other) research in the area of depression/anxiety and older people in the next five years?
3. Can you identify any gaps in current research in the area of older age depression/anxiety? This could include but is not limited to treatment and management, diagnosis, groups at risk, service gaps, issues for GPs, limited services.
4. What should *beyondblue* be funding in relation to older age depression/anxiety research (e.g. research areas, target groups, research methodologies, groups at risk, etc)? Please provide rationale and data (if available)?
5. Do you have any other suggestions?

5.1.2 Survey findings

Current research

There was a wide range of research currently being conducted by the survey respondents. The following broad areas were identified.

Prevalence and risk factors

There are a number of studies investigating factors associated with depression and anxiety in late-life. These include studies investigating:

- Cohort factors;
- Lifestyle, life events, social circumstances, medical comorbidity, and biochemical, neuroimaging and genetic markers;
- Marital status and social networks;
- Anterior cingulate and hippocampal volume (MRI);
- Treatment-resistant depression;
- Predictors of clinically significant anxiety.

There are also a number of studies where depression is one measure in a broader longitudinal study of older people's health. These include:

- Depression and comorbidity longitudinal trends – using the MELSHA and DYNOPTA datasets;
- Mid and older cohorts of the Australian Longitudinal Study on Women's Health
- The Longitudinal Ageing Women study at the Royal Brisbane Hospital;
- Memory and ageing study – epidemiologic study examining rates of depression, anxiety and positive affect in population sample of 70-90 year olds;
- The impact of physical activity upon depressive status over time - using the MELSHA and DYNOPTA datasets.

Depression in specific sub-populations

Another group of studies investigate depression in specific sub-groups who are considered to be at risk of depression. These include:

- People who have had a stroke - rates, prognosis and predictors of depression after stroke;
- Predictors of anxiety and depression in a rural Australian cohort;
- People with cognitive decline and/or who are living with dementia;
- Carers - in-depth interviews with consenting carers – *beyondblue* funded a sub-study of an NHMRC study and PhD study looking specifically at the course of depression in subjects and carers, funded through Rotary Health.

Measurement

There is some research into measurement of anxiety and depression in older people, including:

- The validity of CIDI in measuring rates of anxiety and depression in aged respondents in community surveys;
- Development of a new scale to measure anxiety in older people, the 20-item Geriatric Anxiety Inventory (GAI);
- Indigenous assessment of depression in rural remote areas.

Treatment

Research into treatments includes one study investigating the impact of antidepressant medication on someone with dementia, and two psycho-educational trials, including:

- Exercise vs psycho education trial for mild/moderate depression in older war widows with a focus on the role of bereavement and successful ageing parameters in mood;
- The DEPS-GP project – a clustered RCT of GP depression education and effects on patient outcomes for depression and suicidal ideas.

There are also two multi-factorial trials including a randomised trial investigating the efficacy and effectiveness of lifestyle and pharmacological interventions on short and medium term depression outcomes and a multi-centre research project on suicide prevention in older adults.

Residential aged care

Given the high prevalence of depression in residential aged care, it is not surprising that this is the focus of much of the current research. Studies include:

- The effectiveness of "best practice" psychosocial and pharmacological treatments of depression in aged residential facilities (*beyondblue*);
- The effectiveness of group counselling in reducing levels of depression and anxiety in the spouses of people living in aged residential facilities (Wicking Trust);

- Reviews by GPs of antidepressant prescriptions in residential aged care facilities (Wicking Trust);
- The effectiveness of lavender oil in reducing agitation in people with dementia living in residential aged care facilities (NH&MRC; Brockhoff Trust);
- The effectiveness of Montessori-type activities in reducing agitation in people with dementia living in residential aged care facilities (Dementia-CRC);
- SMILE study – humour intervention for depression in nursing homes.

There are also two different intervention studies in residential aged care examining levels of and change in depression symptoms. One is examining levels and change in depression symptoms as part of a longitudinal study of the effects of community aged care services and another examining levels of depression and anxiety symptoms as part of an epidemiological survey of cognitive ageing and dementia in older persons.

Service effectiveness

Finally, a group of studies are focusing on the effectiveness of the existing service system. These include:

- Psychological autopsy of middle-aged and older suicide victims – a focus is depression, anxiety and the last contact that they had with health professionals;
- Examination of hospital based service delivery for anxiety and depression in older people using National Hospital Morbidity Database;
- NHMRC funded study focusing on dementia and whether GPs identify and distinguish memory problems against depression.

Five-year plan

Most survey respondents were planning to build on their existing research within the next five years. New areas identified included:

- The role of pharmacists in assisting staff and GPs to monitor the mood and behaviour of people in residential aged care facilities who are prescribed antidepressants and/or antipsychotics;
- Health services study with CRC – pilot funding to look at general practice nurses who can assist with dementia diagnosis and depression;
- The development, implementation and evaluation of a depression assessment tool for use in the management of chronic stroke survivors;
- The impact of physical activity (probably strength training) on depressive status in people with: (a) mild cognitive impairment (b) dementia;
- Caregiver depression and anxiety, and also interventions for carers as well as persons with dementia in residential aged care facilities;
- A multi-centre clinical research project trying to streamline treatment protocols for older adults with depression across states and services;
- Follow up Indigenous older people including assessment, diagnosis of depression;
- CALD assessment tools including depression.

Gaps

Respondents identified a number of gaps in the current research. The most frequently identified gap was research into depression and anxiety in CALD and Indigenous groups, with six respondents identifying this gap.

The second most frequently identified gap was diagnosis and treatment of depression and anxiety in primary care. The need for GPs to be more aware of depression and anxiety in older people, to be able to differentially diagnose depression and dementia and to detect those at risk of suicide was identified as an area for future research. There were also questions raised about the potential

role of nurses in primary care, as practice nurses, advanced practitioners and/or mental health nurses.

The third most frequently identified gap was research into older age anxiety. This was seen as under researched compared with depression, although there were many unanswered questions relating to older age depression.

There were also areas in which current knowledge may or may not apply to older people. These included questions about the applicability of the current diagnostic criteria; the impact of co-morbidities, such as stroke and dementia on depression and anxiety; and the impact of anti-depressant medication on older people.

Rural and remote populations were seen as being under-researched as was depression in older people in residential aged care. Carers were also identified as an at-risk group requiring further investigation.

Finally, there were some treatment modalities that were seen as under researched in older people. These included psychological interventions, such as Cognitive Behaviour Therapy, and alternative therapies, including fish oil.

5.2 Web search

***beyondblue*, NHMRC and ARC**

The websites of relevant funding organisations, including *beyondblue*, NHMRC and ARC, were visited to document current funding on Australian research in late-life depression and anxiety. Appendix D includes a list of recently funded projects by *beyondblue* (n=19) and the NHMRC (n=6, of which depression/anxiety was not the main focus of one of these projects). The ARC did not fund any projects related to late-life depression or anxiety. It appears that there was only one project (NHMRC funded) that had a focus specifically on anxiety.

The projects were analysed by study areas and target groups. In terms of study areas:

- Nine of the 25 projects focused on treatment (e.g. physical exercise), management or care for older people with depression/anxiety;
- Eight projects focused on diagnosis, screening or recognising late-life depression;
- Four projects focused on improving awareness and knowledge of late-life depression/anxiety;
- Four projects focused on other areas (carers on-line; improving health and wellbeing; depression, anxiety, substance use and cognitive change; assessing the health needs of older Indigenous Australians).

For target groups, nine projects did not specify their target groups. For the remaining 16 projects, the target groups included¹:

- Older people in residential aged care facilities (n=6);
- Professional carers (n=4);
- People with dementia (n=4);
- GPs (n=3);
- Carers (n=3);
- People in rural areas (n=1);
- People from CALD backgrounds (n=1);

¹ Please note that each project might include more than one target group.

- Indigenous people (n=1).

Department of Health and Ageing (DoHA), Ageing Research Online (ARO) websites and other information

The Department of Health and Ageing website was also searched; however, there is no section on depression funded projects or research. Contact with DoHA suggests that there are few current projects related to depression and anxiety in older people.

The Ageing Research Online (ARO) website was also searched. A search by the keyword "depression" produced 35 results and the search by "anxiety" produced 12 results. Of these projects, five appeared in both sections and three have been included as projects funded by *beyondblue* and NHMRC. A further 25 projects were excluded either because depression or anxiety was not a focus of the project or because the project was conducted before 2000. As a result, a total of 14 projects were identified as relevant for the current study (see Appendix E for the list of these projects). Six of the projects have a focus on anxiety, another six have a focus on depression, and the remaining two have a focus on both depression and anxiety. As with projects funded by *beyondblue* and NHMRC, these projects were further analysed by study areas and target groups of the study.

For study areas:

- Four projects focused on treatment or care for older people with depression/anxiety;
- Three projects focused on impact of anxiety on different aspects of daily life;
- One project focused on screening measures of late anxiety;
- The remaining six projects focused on a range of other areas.

For target groups, the following were identified²:

- Older people in residential aged care facilities (n=3);
- Women (n=2);
- People with physical illness (n=2);
- Carers (n=1);
- People from CALD backgrounds (n=1);
- Veterans (n=1);
- Men (n=1).

In NSW, the State Department supports a Stakeholder Group that informs the State Health Department about older people's mental health issues. This initiative allows older people to have direct access to policy officers and contribute to policy development. Appendix F provides additional information about this Stakeholder group.

5.3 Summary

This chapter has revealed some common areas of research in this field, including:

- Risk factors and prevalence of late-life depression and anxiety;
- Efficacy of antidepressants in treatment of late-life depression;

² Please note that each project might include more than one target group.

- Depression and anxiety among particular subgroups of older people, including people living in residential aged care, with medical co-morbidities, living with dementia, carers, and people in rural areas.

Consistent with findings from the literature, there are also some gaps in current research on late-life depression and anxiety in Australia. Firstly, there is little research regarding people with special needs, including older Indigenous people, older people from CALD backgrounds and people in rural and remote areas. Secondly, there is a need for more research into the role of primary health care in detecting and managing depression and anxiety. Thirdly, there seems to be less research in late-life anxiety compared to late-life depression. Finally, there is limited research on the efficacy of psychological approaches to treatment of late-life depression and anxiety.

6. Consumer Survey Findings

6.1 Demographics

In late July 2009, the consumer survey was sent out by *beyondblue* to 8 BlueVoices members who are aged over 65. Five members completed and returned the survey (response rate: 63%). The respondents were all male. The average age was 74.6 years (range 65-88 years). One respondent had cared for his wife with depression and all respondents (including the carer) had depression themselves. Four gave a length of time since diagnosis and the average length of time was 27.25 years (range 11 to 52 years).

All respondents were born in Australia and were English speaking and four were married and one widowed. Three were from Queensland, one from South Australia and one from Victoria.

6.2 Survey findings

6.2.1 Community awareness

Four respondents had ideas about improving community awareness of depression and anxiety amongst older people, suggesting that people with depression be encouraged to tell their own stories (especially those who have successfully treated their depression) and that these stories be given broad public airplay, preferably on television. One thought that residential aged care facilities were an important point of contact with older people.

"Get those with depression anxiety to speak to those concerned (including doctors and health professionals) with their story in a formal and controlled manner."

"Get those people who have had success with controlling depression/anxiety (past sufferers) to speak to doctors/sufferers."

"More publicity given to well-known people who have dealt with or are dealing with depression. This should be a national media initiative. The stories of every day Australians should be told too. After all, it is not only the well known who suffer but others as well. The public should be reminded that depression is an illness and as such needs public understanding and how sufferers can still play an important role in society."

Other suggestions for dissemination of information about depression and anxiety included GP surgeries; clubs, including service clubs, Probus and Rotary clubs; newspaper advertisements; and limited computer based media.

6.2.2 Role of GP and other health services

The GP had played an important role in recognising and treating or making appropriate referrals for four of the five respondents. The fifth said that he only had one visit to the GP and that neither the GP nor he had followed up. One respondent was receiving adequate treatment from his GP. *"My GP explained my problem and put me on anti-depressants. This has worked well for me..."*. Another had initially been diagnosed with depression by his GP but the GP had then referred him to a psychiatrist whom he had continued to see. Another described the GPs he had seen as helpful and sympathetic.

"GPs have been helpful and sympathetic. As a returned serviceman, I was first diagnosed in an air force medical centre. In my current relationship

with my GP, we talk about mental and physical health. He put me on medication and suggested exercise. He also sent me to a psychologist."

None of the respondents had used community services but one mentioned he had sought counselling from a private psychologist. They had had various treatments recommended to them including: diet and exercise; limiting alcohol consumption; electro convulsive therapy; and various medications. The treatments reported as most useful were medication (3), counselling (2), exercise (2), diet (1), alcohol control (1), and support of wife and psychiatrist (1). Two respondents had consulted a psychologist and one did not find it helpful. Only one person identified a barrier to treatment, which was the negative attitude of others towards recognising depression as a Workcover issue, including deliberate obstruction of his claim.

6.2.3 Knowledge and ideas regarding research

Only one of the five respondents had any knowledge of current research, citing the Queensland Institute of Medical Research for whom he had written a story about his experience. They all had ideas about the focus of future research including:

- Prevention (3);
- Nutrition (2);
- Physical activity (2);
- Technology (1);
- Therapy (1);
- Social programs (1);
- Identification, treatment of depression in residential aged care (1).

Many of the suggestions regarding dissemination and awareness raising described above were reiterated as ways to involve older people in research. There was a repeated proposal to get people who have had depression to tell their story. *"Again, get those who have suffered and beaten the condition to talk to researchers."*

Finally, most commented that they thought *beyondblue* should be doing research into depression and anxiety amongst older people (if they weren't already) but that they had insufficient knowledge of *beyondblue's* work in this area to make specific recommendations. One respondent identified older people in residential aged care as being particularly at risk of depression.

"As I am not aware of what beyondblue is doing in this area, I am not qualified to comment on this question. However, if beyondblue is not participating in depression/anxiety in older people I believe it would be appropriate for them to do so."

6.3 Summary

The consumer surveys reveal that General Practitioners are generally seen as helpful and are an important avenue for diagnosis, advice, treatment and referrals. Counselling was always seen as helpful but two respondents had found it beneficial. There are also some contradictory themes. Medication and exercise were seen as helpful by those using those treatments. The areas identified for further research are in line with those suggested by the literature and researcher surveys. In particular, alternatives to medication, including exercise and social programs were suggested as well as a focus on prevention.

7. Review of *beyondblue*'s Depression Monitor

7.1 Introduction

The Depression Monitor is a telephone survey tool developed by *beyondblue* to measure awareness, understanding and attitudes relating to depression and mental health. The survey was completed by people 18 years of age and older. Of the 50 items, the first 11 relate to general health and wellbeing, seven items seek demographic information, and the remaining 32 items concern depression, anxiety and bipolar disorder.

The sample data were collected between October 2007 and February 2008. *beyondblue* provided the NARI team with summary notes from the analysis of the data. In this analysis, the responses of people over 65 are compared with younger groups divided into 18-24 years; 25-34 years; 35-44 years; 45-54 years; and 55-64 years.

7.2 Findings from the Depression Monitor

The review of the *beyondblue* notes from the Depression Monitor identifies the key areas where there are distinct differences between the responses of older people and the other age groups. The main points of difference are:

- Older people's knowledge and personal experience of these conditions is limited. They are less likely to have lived with or had a family member with depression, or to have been exposed to stories about people with depression through literature, films or television;
- Older people are less likely to know about the lifetime prevalence of depression, less likely to think they might be personally touched by depression, and more likely to view Alzheimer's and dementia as a major mental health problem;
- Older people attach stigma to depression and anxiety, have less trust in people with severe depression and are unlikely to seek their company;
- Older people would go to their GP if they required professional help or information about depression, and are less likely to go to a counsellor or a psychologist as a first choice;
- Older people tend to rate antidepressant medication, exercise, counselling and psychotherapy less highly than younger groups, but believe talking and listening can be helpful. They are also more likely to think an occasional alcoholic drink would be helpful;
- Older people are more likely than younger groups to think people with severe depression will often get better without treatment, can often cope on their own, or should pull themselves together;
- Older people were far less likely to have felt 'hopeless' during the past 30 days, less likely to have heard of bipolar disorder, and less likely to be aware of organisations related to depression.

7.3 Summary

There are some themes emerging from Depression Monitor that are similar to those that emerged from the literature and the consumer surveys. There is clearly a stigma surrounding depression among older people and mental health literacy seems to be poor in this group. General Practitioners are often the first point of contact for older people seeking diagnosis, advice, and treatment on depression. However, some of the themes differ to some degree from the findings of the consumer survey. For example, in the Depression Monitor sample, although counselling was seen as helpful, it was not as highly regarded by older people as by younger groups. The same applies to other treatment options, such

as medication, psychotherapy and exercise. However, talking and listening were viewed as potentially helpful by the older group in this sample.

8. Conclusion and Recommendations

This project has investigated the scope of current Australian research into depression and anxiety in older people from a range of perspectives. The research literature has been searched, Australian researchers and older people with depression have been surveyed and a search of relevant websites has been conducted.

The literature review identified groups of older people most at risk of depression and anxiety, including older people in residential aged care, older people with multiple physical co-morbidities, older people with dementia, older people who are carers, older people in hospital, older women, older Indigenous people and older people from CALD backgrounds. This review summarised common screening tools and treatment approaches in late-life depression and anxiety. It also identified some barriers to treatment and management of late-life depression and anxiety, including low mental health literacy, ageism and lack of professionals specialised in late-life depression/anxiety. The review also found that older people with depression and anxiety have a much higher risk of suicide than the general population.

The literature review also identified some gaps in current research in late-life depression and anxiety.

Firstly, there is limited research in late-life anxiety compared to depression (although further research is required in both areas).

Secondly, in relation to diagnosis and screening tools, there are limited studies on:

- Validation of common screening tools in specific population groups, including older Indigenous people and older people from Culturally and Linguistically Diverse backgrounds;
- Prevalence of depression and anxiety in older people from Culturally and Linguistically Diverse backgrounds and older Indigenous people;
- Diagnosis of depression and anxiety among people with dementia;
- Training and support of early identification of depressive and anxiety disorders for primary care.

Finally, research in relation to treatment and management is limited regarding:

- The efficacy of psychological interventions in depression in later life;
- Multi-factorial intervention approaches in depression in later life;
- The efficacy of other approaches (e.g., behavioural) in treatment of late-life depression;
- Cultural factors which can influence the coping strategies older people use and their willingness to seek help;
- Lack of access to specialist services, particularly in rural and remote communities.

The researcher survey and review of websites revealed some common areas of research in this field, including:

- Risk factors and prevalence of late-life depression and anxiety;
- Efficacy of antidepressants in treatment of late-life depression;
- Depression and anxiety among particular subgroups of older people, including people living in residential aged care, with medical co-morbidities, living with dementia, carers, and people in rural areas.

Consistent with findings from the literature, there are also some gaps in current research on late-life depression and anxiety in Australia.

Firstly, there is little research regarding people with special needs, including older Indigenous people, older people from CALD backgrounds and people in rural and remote areas. Secondly, there is a need for more research into the role of primary health care in detecting and managing depression and anxiety. Thirdly, there seems to be less research in late-life anxiety compared to late-life depression. Finally, there is limited research on the efficacy of psychological approaches to treatment of late-life depression and anxiety.

The consumer surveys revealed that GPs are generally seen as helpful and are an important avenue for diagnosis, advice, treatment and referrals. Counselling was always seen as helpful; two respondents had found it beneficial. There are also some contradictory themes. Medication and exercise were seen as helpful by those using those treatments. The areas identified for further research are in line with those suggested by the literature and researcher surveys. In particular, alternatives to medication, including exercise and social programs were suggested as well as a focus on prevention.

There are some themes emerging from the Depression Monitor that are similar to those that emerged from the literature and the consumer surveys. There is clearly a stigma surrounding depression among older people and mental health literacy seems to be poor in this group. General Practitioners are often the first point of contact for older people seeking diagnosis, advice, and treatment on depression. However, some of the themes differ slightly from the findings of the consumer survey. For example, in the Depression Monitor sample, although counselling was seen as helpful, it was not as highly regarded by older people as by younger groups; the same applies to the other treatment options, such as medication, psychotherapy and exercise.

8.1 Summary

8.1.1 The literature review

1. Identified groups of older people most at risk of depression and anxiety:
 - Older people in residential aged care;
 - Older people with multiple physical co-morbidities;
 - Older people with dementia;
 - Older people who are carers;
 - Older people in hospital;
 - Older women;
 - Older Indigenous people;
 - Older people from CALD backgrounds.
2. Summarised common screening tools and treatment approaches in late-life depression and anxiety.
3. Identified some barriers to treatment and management of late-life depression and anxiety:
 - Low mental health literacy;
 - Ageism;
 - Lack of professionals specialised in late-life depression/anxiety.
4. Found that older people with depression and anxiety have a much higher risk of suicide than the general population.

5. Identified some gaps (or limitations) in current research in late-life depression and anxiety, including:
 - Late-life anxiety compared to depression (although further research is required in both areas);
 - Validation of common screening tools in specific population groups, including older Indigenous people and older people from Culturally and Linguistically Diverse backgrounds;
 - Prevalence of depression and anxiety in older people from Culturally and Linguistically Diverse backgrounds and older Indigenous people;
 - Diagnosis of depression and anxiety among people with dementia;
 - Training and support of early identification of depressive and anxiety disorders for primary care;
 - The efficacy of psychological interventions in depression in later life;
 - Multi-factorial intervention approaches in depression in later life;
 - The efficacy of other approaches (e.g., behavioural) in treatment of late-life depression;
 - Cultural factors which can influence the coping strategies older people use and their willingness to seek help;
 - Lack of access to specialist services, particularly in rural and remote communities.

8.1.2 The researcher survey and review of websites

Areas of current research

- Risk factors and prevalence of late-life depression and anxiety;
- Efficacy of antidepressants in treatment of late-life depression;
- Depression and anxiety among particular subgroups of older people, including people living in residential aged care, with medical co-morbidities, living with dementia, carers, and people in rural areas.

Gaps in current research

- Little research of people with special needs, including older Indigenous people, older people from CALD backgrounds, carers and people in rural and remote areas;
- A need for more research into the role of primary health care in detecting and managing depression and anxiety;
- Currently less research in late-life anxiety compared to late-life depression;
- Limited research on the efficacy of psychological approaches to treatment of late-life depression and anxiety.

Suggestions for *beyondblue*

- Fund research in the areas identified as gaps above;
- Set up a national panel of experts to advise on research and practice directions for older age mental health;
- Establish mechanisms for multi-centre collaboration and data sharing, especially of existing longitudinal data;
- Develop national treatment guidelines for depression;

- Develop strategies for improving mental health literacy amongst older people – education campaign;
- Assist in the development of specialists in older age mental health research through funding scholarships.

8.1.3 The consumer surveys

- GPs are generally seen as helpful and are an important avenue for diagnosis, advice, treatment and referrals;
- Counselling was not always seen as helpful but two respondents had found it beneficial;
- Contradictory themes - medication and exercise were seen as helpful by those using those treatments;
- Suggestions for future research - alternatives to medication, including exercise and social programs; a focus on prevention.

8.1.4 Depression Monitor

Themes similar to the literature review and consumer survey:

- Stigma surrounding depression among older people;
- Lower levels of mental health literacy in this group;
- GPs often the first point of contact for older people seeking diagnosis, advice and treatment on depression.

Themes in contrast to findings of the consumer survey:

- Medication, counselling, psychotherapy and exercise not highly rated as helpful.

8.2 Recommendations for *beyondblue*

Older age depression and anxiety a priority

beyondblue to make older age depression and anxiety a priority in the next research funding round, specifically to fund research focusing on the following questions and groups.

- The groups who are most at risk and/or where there are gaps in knowledge are:
 - Older people from Culturally and Linguistically Diverse backgrounds;
 - Older people living in residential aged care;
 - Socially isolated older people living in the community, including those in receipt of community services;
 - Older Indigenous Australians;
 - Older people in rural and remote areas;
 - Older carers;
 - Older people with co-morbidities including physical illness, stroke and dementia;
 - Older women.
- The questions that should be the focus of this research are:

- Validity and reliability of existing diagnostic criteria for depression and anxiety in older people;
- Validity, reliability and appropriateness of existing screening and assessment tools for older people from CALD and Indigenous backgrounds;
- Efficacy of treatments for older people, including pharmacological, psychological and psycho-social;
- Efficacy of preventive health strategies for preventing and/or reducing symptoms of depression and anxiety in older people;
- Development and trial of service system interventions, particularly in primary care, such as:
 - Expanding the role of GPs in identification and treatment of depression and anxiety;
 - Considering the use of nurse practitioners;
 - Consideration of employing social workers in GP practices;
- Exploration of the potential application of E-Health technologies, particularly in rural and remote areas.

National advisory panel on older age mental health

beyondblue to establish a national advisory panel on older age mental health (see attached Terms of Reference and membership for NSW Advisory Group as an example). This could build on the initiative by Professor Osvaldo Almeida, commenced in March 2009, a network (Depression in Older Age Network) comprising psychogeriatricians, researchers, and other experts from around Australia with common interest in the field.

National awareness campaign

beyondblue to promote a national awareness campaign to improve mental health literacy amongst older people

Development of national guidelines

beyondblue to fund the development of national guidelines for identification and treatment of older age depression and anxiety. These could be developed using the process for development of NHMRC guidelines.

8.3 Concluding remarks

This project has investigated the scope of current Australian research into depression and anxiety in older people from a range of perspectives. The research literature has been searched, Australian researchers and older people with depression have been surveyed and a search of relevant websites has been conducted.

The key findings have been documented and a range of recommendations have been proposed for further action by *beyondblue*.

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Appendices

Appendix A: Researcher survey

1. Could you please list all current research in the area of older age depression and anxiety that you are involved in?

2. Do you plan to undertake any (other) research in the area of depression/anxiety and older people in the next five years?

3. Can you identify any gaps in current research in the area of older age depression/anxiety? This could include but not be limited to treatment and management, diagnosis, groups at risk, service gaps, issues for GPs, limited services.

4. What should *beyondblue* be funding in relation to older age depression/anxiety research (e.g. research areas, target groups, research methodologies, groups at risk, etc)? Please provide rationale and data (if available)

5. Do you have any other suggestions?

Thank you for your time and your contribution. Please return the completed survey to b.haralambous@nari.unimelb.edu.au by 24th July 2009

Appendix B: Consumer survey

Dear Sir/Madam,

You are invited to complete and return the attached survey. You have been invited to take part in this research project because you are

This survey, undertaken by *beyondblue*: the national depression initiative, will provide information to a National Ageing Research Institute (NARI) study. The National Ageing Research Institute has been funded by *beyondblue* to undertake a study on knowledge, diagnosis and treatment of depression and anxiety in people over 65. This project will assist *beyondblue* to identify gaps in current knowledge about depression and anxiety in older people and to identify priorities for further research into older age depression and anxiety.

The findings from this survey will be provided to NARI for their study.

The purpose of this survey is to gather opinions from older people who have experienced depression or anxiety and/or their carers. This survey includes questions about:

- Your demographic information, including age, suburb and cultural background;
- Your opinion about community awareness of depression and anxiety among older people;
- Your experience of services for older people experiencing depression or anxiety;
- Your suggestions for research into depression and anxiety for older people.

There is nothing in the survey that will identify you as an individual so your responses are completely anonymous. When *beyondblue* provides your completed survey to NARI, we will not provide NARI with any additional information that could be used to identify you, for example, your name or email address. There are no right or wrong answers to these questions; the researchers are keen to obtain your perceptions.

It will take you about 20 minutes to complete the survey. Once you have completed the survey, please return it to *beyondblue* via email. If you do not want to email the survey, we are able to supply a reply paid envelope for you to send it.

Please contact from *beyondblue* if you have any questions about this survey. Thank you for your time and for contributing to this project.

Yours Sincerely,

Part One: Demographic information

1. Please write in the postcode and suburb of your area of residence

Postcode _____ Suburb _____

2. You are

Person with depression and/or anxiety

Care for a person with depression and/or anxiety

3. What is your gender?

Male

Female

4. What is your date of birth?

_____(Date)/_____(month)/_____(year)

5. Were you born in Australia?

Yes

Born in another country, please specify the country you were born in and the year you came to live in Australia: Country: _____; Year: _____

6. What language do you speak at home?

English

Another language, please specify _____

7. Do you live on your own?

Yes

No

8. Are you now married?

Married / partner

Never married

Widowed

Divorced / separated

9. If you are a person with depression and/or anxiety, how long ago were you diagnosed with depression and/or anxiety? _____ years

10. If you are a carer, how long you have been providing care to a person with depression or anxiety? _____ years

Part Two: Survey questions

1. Do you have any suggestions for raising community awareness about depression and anxiety amongst older people?

2. Do you have any suggestions for improving older people's access to information on depression and anxiety, e.g., Help lines, brochures at GP clinics, websites, TV advertisements, newspapers

3. In your experience, what role did your GP play in diagnosing and treating your depression/anxiety?

4. What role did community/health services play in diagnosing and treating your depression/anxiety?

5. What types of treatments have health professionals recommended to you/the client?

6. Are you aware of other possible treatment/management approaches?

Yes No

If yes, what are the other possible approaches (e.g. social support groups, therapy, counselling, medication, diet, exercise)?

7. Were you provided with options about other/alternative treatment and management strategies by your health professional?

Yes No

If yes, were there pros and cons associated with these options? Please describe.

8. What barriers have you experienced during the diagnosis and treatment process, e.g. language, access to counsellors, cost, referrals from GPs?

9. Do you know of current research on depression/anxiety in older people?

Yes No

If yes, how did you find out about the research and what is your knowledge of this research?

10. Are you personally involved in any research about depression or anxiety in older people?

Yes No

If yes, how do you get involved and what is your experience in this research?

11. What areas do you think researchers should focus on to improve the wellbeing of older people with depression/anxiety, e.g. medicine, social programs, physical activity, nutrition, technology, therapy, prevention?

12. Do you have any suggestions on how researchers in this area can involve older people more in their research?

13. Do you have any suggestions for *beyondblue* regarding research in this area?

Thank you for your time.

Appendix C: Search strategy

The CINAHL (nursing and allied health) and PubMed (medical) databases were searched. The literature search strategy included Australian and international published research. Articles before 1999 and those that considered people under the age of 65 years have been excluded.

Firstly, a literature search was conducted using combinations of the words below to locate literature review articles about specific high-risk groups of older people and depression and anxiety:

- Review;
- Depressed; depression; anxiety;
- Old(er); age(d); elderly; geriatric; senior; late(-)life; later(-)life;
- Nursing home; residential care; permanent care; aged care; resident(s);
- Primary care; hospital;
- CALD; culture; cultural background; ethnic(ity); indigenous; Aboriginal; migrant; migration; refugee;
- Home; community;
- Housebound; house bound; homebound; home bound;
- Carer(s); care giver(s);
- Social; loss; bereavement; function; functional decline;
- Co()morbidity; physical co()morbidity; condition; injury; pain; dementia; fall(s); incontinence;
- Rural; remote; country; isolated.

Combinations of the words below were used to locate literature review articles about the treatment and management options for specific high-risk groups of older people with depression and anxiety;

- Review;
- Depressed; depression; anxiety;
- Old(er); age(d); elderly; geriatric;
- Treatment; management; therapy; intervention;
- Medication; drugs; pharmaco* (pharmacological; pharmacotherapy);
- Behavio(u)r(al); physical (activity); exercise; nutrition; diet;
- Psycho* (psychology; psychological); psychopharmaco* (psychopharmacology; psychopharmacotherapy);
- Innovative; telehealth; telephone; phone; computer; internet; psychosocial;
- Mild depression; moderate depression; severe depression; dysthymic disorder; dysthymia;
- Generalized anxiety disorder (GAD); social anxiety disorder; social phobia; specific phobia; phobia; panic disorder; obsessive-compulsive disorder; post-traumatic stress disorder; anxiety secondary to medical condition; acute stress disorder (ASD); substance-induced anxiety disorder.

Retrieved literature reviews were assessed for relevance, with irrelevant articles excluded.

Secondly, groups of older people and treatment/management strategies that were found to have little coverage in expert textbooks and published reviews were identified. Then, *enter names of databases used* were searched for original research articles investigating these groups or treatment/management strategies.

Appendix D: Literature review table

1) Book included in the literature review

Authors, year, title, publisher	Aim/Target audience	Content
<p>Baldwin et al. (2002)</p> <p><i>Guidelines on depression in older people: Practising the evidence</i></p> <p>Martin Dunitz Ltd.</p>	<p>The aim of the book is to bridge the gap between knowledge and practice by providing a concise summary of available evidence which will then serve as guidance for practice.</p>	<p>The book covers:</p> <ul style="list-style-type: none"> • Signs and symptoms of depression in later life • Disease burden • Types of depressive disorder in later life • Prevalence of depressive disorders in later life • The aetiology of late life depression • Comorbidity and depressive disorders • Screening and assessment • Management • Course and outcome, and • Prevention.
<p>Chiu et al. (2008)</p> <p><i>WPA educational program on depressive disorders: Depressive disorders in older persons</i></p> <p>World Psychiatric Association</p>	<p>To help the physicians to develop the knowledge and skills to recognise, diagnose, and adequately treat depressive disorders in older people.</p>	<p>The book covers:</p> <ul style="list-style-type: none"> • Clinical presentation, detection, and diagnosis • Epidemiology and impact of depressive disorders in the elderly • Aetiology of depressive disorders in older persons • Course of illness, and • Management and prevention.
<p>Rodda et al. (2008)</p> <p><i>The Old Age Psychiatry Handbook: A Practical Guide</i></p> <p>John Wiley & Sons</p>	<p>The book is a compact "pocket guide" for doctors working in old age psychiatry. This guide is an indispensable reference for GPs, community psychiatric nurses and other members of the multidisciplinary team.</p>	<p>The book provides a comprehensive but concise overview of psychiatric, medical and practical issues that may arise within the speciality. The book includes chapters on basic history and mental state examination, specific psychiatric syndromes and prescribing for elderly psychiatric patients. It also discusses the social and legal issues faced by health care practitioners, patients, and their relatives, including mental capacity, financial entitlements and placement.</p>
<p>Spielberger et al. (1970)</p> <p><i>Manual for the State-Trait Anxiety Inventory</i></p> <p>Consulting Psychologists Press.</p>	<p>The State-Trait Anxiety Inventory is a definitive instrument for measuring anxiety in adults. The STAI differentiates between the temporary condition of "state anxiety" and the more general and long-standing quality of "trait anxiety." The book is recommended for people studying anxiety in research and clinical settings.</p>	<p>Contents of manual include:</p> <ul style="list-style-type: none"> • Procedures for administering and scoring the scales • Normative data and the N's of these populations with percentile tables • Empirical support for the scales • Psychometric data of the scales • Correlations with other tests

2) **Book chapters included in the literature review**

Authors, year, section title	Book title, Publisher, Aim/Target audience	Content
Adelman et al., (1990) <i>Issues in the physician-geriatric patient relationship</i>	<i>Communication, health, and the elderly</i> Manchester: Manchester University Press This book is intended to be of interest to academics in communication, gerontology, social work, sociolinguistics and the psychology and sociology of ageing, as well as to graduate students in these disciplines. The emphasis throughout the book is on the central role of communication in the provision of health care and social support for the elderly.	This chapter sought to document the existence of ageism in the medical encounter and to examine how it is manifested in the physician – patient relationship. It was found that ageism may be present in the medical encounter, but is exhibited in subtler ways than was expected.
Allman et al., (1999) <i>Elderly Women Speak About Their Interactions with Health Care Providers</i>	<i>Language and Communication in Old Age: multidisciplinary perspectives</i> Garland Pub This book explores physiological and psychological changes in speech among the elderly, drawing on 20 years of research on the physical and emotional aspects of language and communication.	This chapter documents the stories of 20 older women about their interactions with health care providers. Their stories appeared to echo the literature indicating that ageism may be present in the physician – elderly patient relationship. Some recommendations for improving dynamic encounters between physician and elderly patients were discussed.
Baldwin (2008) <i>Mood disorders: Depressive disorders</i>	<i>Oxford Textbook of Old Age Psychiatry</i> Oxford University Press This book has been regarded as a standard textbook in its field. The textbook is targeted at all old age psychiatrists and trainees. Geriatricians and other health professionals working with older people will also find the book a handy resource when dealing with psychiatric disorders in older people.	This chapter provides an overview of the literature in the area, including definition, epidemiology, clinical presentation, pathophysiology and management of late life depression.
Beyer (2004)	<i>The American Psychiatric Publishing</i>	Beyer (2004) covers: epidemiology, diagnostic classification and

Authors, year, section title	Book title, Publisher, Aim/Target audience	Content
<p><i>Anxiety and panic disorders</i></p> <p>Koenig & Blazer (2004) <i>Mood disorders</i></p>	<p><i>Textbook of Geriatric Psychiatry</i></p> <p>American Psychiatric Publishing</p> <p>The book is designed to inform both the scholar and the clinician about the current state of scientific understanding as well as provide the practical skills and knowledge base required for dealing with mental disorders in later life.</p>	<p>phenomenology, differential diagnosis, and treatment.</p> <p>Koenig & Blazer (2004) cover: epidemiology of late-life depression, diagnosis and differential diagnosis of late-life affective disorders, diagnostic workup of the depressed older adult, and treatment.</p>
<p>Chiu et al., (1999) & Chiu et al., (2009)</p> <p><i>Depressive disorders in the elderly: a review</i></p>	<p><i>Depressive disorders</i></p> <p>Wiley & Sons, Ltd.</p>	<p>This chapter provides an overview of the literature in the area, particularly in terms of clinical presentation, epidemiology, correlates, aetiology, risk factors, treatment and prognosis. The chapter also draws the attention of the readers to a number of important issues related to this condition.</p>

3) Journal articles and reports included in the literature review

Note: Levels of evidence based on the National Health and Medical Research Council (NHMRC) guidelines were applied to all articles. Selected articles were appraised and rated based in the level of evidence solely on their study design.

Level of evidence	Description
I*	Evidence obtained from a systematic review of relevant randomised controlled trials.
II	Evidence obtained from at least one properly designed randomised controlled trial.
III-1	Evidence obtained from well designed pseudo-randomised controlled trials (alternate allocation or some other method).
III-2	Evidence obtained from comparative studies with concurrent controls and allocation not randomised (cohort studies), case control studies, or interrupted time-series with a control group.
III-3	Evidence obtained from comparative studies with historical controls, two or more single-arm studies, or interrupted time series without a parallel control group.
IV	Evidence obtained from case series, either post-test or pre-test and post-test.

*Level evidence 1 is considered the best available evidence.

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Adshead et al. (1992)</p> <p><i>BASDEC: a novel screening instrument for depression in elderly medical inpatient</i></p> <p>England</p> <p>Aim: to compare the use of the GDS with the BASDEC in screening geriatric inpatients for depression.</p>	<p>The study was conducted in the wards of the Hammersmith Hospital (London) with 72 cognitively intact patients (21 were men, 51 women, mean age of 78-9).</p>	<ul style="list-style-type: none"> • BASDEC proved an effective, user friendly way of screening medically ill elderly patients for depression in a ward setting. • The GDS took twice as long to administer, and more patients refused it. • The author concluded that the BASDEC is a novel, highly acceptable, and sufficiently valid depression screening tool and should be tried wherever a high prevalence of depression among the elderly is expected. It may also prove useful in general practice. 	IV
<p>Alexopoulos et al. (1988)</p> <p><i>Cornell Scale for</i></p>	<p>Participants were patients with primary degenerative dementia (n = 52), patients with multiinfarct dementia (n = 18), and patients</p>	<ul style="list-style-type: none"> • The scale has high inter-rater reliability, internal consistency, and sensitivity. 	IV

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p><i>depression in dementia</i></p> <p>America</p> <p>Aim: to investigate the validity and reliability of the Cornell Scale for Depression in Dementia.</p>	<p>with mixed primary degenerative dementia and multi-infarct dementia (n = 13).</p>		
<p>Alwahhabi (2003)</p> <p><i>Anxiety symptoms and Generalized Anxiety Disorder in the elderly: A review</i></p> <p>Canada</p> <p>Aim: to review literature on epidemiology, phenomenology, assessment, and treatment for anxiety and GAD in the elderly.</p>	<p>The review involves a PubMed search of the literature from 1966 to 2001. Key words included "anxiety, GAD, elderly" with "epidemiology", "consequences", "phenomenology", "assessment", or "treatment". A total of 119 articles were included in the review.</p>	<ul style="list-style-type: none"> • Prevalence: The prevalence of anxiety symptoms in the elderly is estimated to be as high as 20%. GAD is considered one of the most common anxiety disorders in the elderly. • Comorbidity: There is little evidence that the onset of anxiety symptoms or GAD occurs late in life in the absence of comorbid cerebrovascular disease, mood disorder, or cognitive impairment. • Phenomenology: Anxiety often manifests in the elderly as somatic symptoms. The elderly may also be more likely to report a high number of symptoms, but fail to qualify for a diagnosis of GAD. • Assessment: The validity and reliability of the currently available anxiety-rating scales for measuring anxiety in older individuals have not been sufficiently tested. • Treatment: • Clinical trials using psychotherapeutic interventions such as CBT are desperately needed. • There are limited studies on the safety and efficacy of antidepressant medications for GAD in the elderly. 	I
<p>Australian Bureau of Statistics (2008)</p> <p><i>National Survey of Mental Health and Wellbeing: Summary of Results</i></p>	<p>This publication presents a summary of results from the 2007 National Survey of Mental Health and Wellbeing, conducted by the Australian Bureau of Statistics (ABS) from August to December 2007. The survey collected information from</p>	<ul style="list-style-type: none"> • 14.4% (2.3 million) of Australians aged 16–85 years had a 12-month anxiety disorder and 6.2% (995,900) had a 12-month affective disorder. • Women experienced higher rates than men of anxiety (18% and 11% respectively) and affective disorders (7.1% and 5.3% respectively). 	IV

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
Australia	approximately 8,800 Australians aged 16–85 years. The survey provides information on the prevalence of selected lifetime and 12-month mental disorders by three major disorder groups: Anxiety disorders (eg Social Phobia), Affective disorders (eg Depression) and Substance Use disorders (eg Harmful Alcohol Use).		
AIHW (1998) <i>National Health Priority Areas Report - Mental Health: A report focusing on depression</i> Australia	This report is one of a series of biennial reports to Australian Health Ministers on each of the five National Health Priority Areas. This report is designed to give an overview of issues in the mental health priority and focuses specifically on depression.	<ul style="list-style-type: none"> • The prevalence of depression declines in older age, except for older people in residential care settings. • The experience of depressive symptoms is much more common than depressive disorders, but also causes considerable disability and distress. Even more disability results when depression is comorbid with another mental or physical disorder. • Depression is particularly likely to be comorbid with anxiety. • Prevention and early intervention activities are particularly relevant for groups that may be at high risk of depressive symptoms and disorders, including older people in residential care, carers, Aboriginal peoples and Torres Strait Islanders, refugees, and people experiencing adverse life events (such as physical illness and bereavement). 	Not applicable
AIHW (2009a) <i>Measuring the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples</i> Australia	This report provides current national data on the social and emotional wellbeing of Aboriginal and Torres Strait Islander peoples, reviews the effectiveness of the interim social and emotional wellbeing module, and makes recommendations for improving measures of social and emotional wellbeing.	<ul style="list-style-type: none"> • Over one-quarter (27%) of Indigenous adults reported high or very high levels of psychological distress. • Indigenous Australians were twice as likely to report high or very high levels of psychological distress as non-Indigenous Australians. • Almost one in 10 Indigenous Australians had visited a doctor or health professional in the 4 weeks prior to interview due to feelings of psychological distress. • In relation to life stressors, four in 10 Indigenous adults 	IV

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
		indicated that they or their family or friends had experienced the death of a family member or close friend in the previous year, 28% reported serious illness or disability and 20% reported alcohol related problems.	
AIHW (2009b) <i>Mental health services in Australia 2006-07</i> Australia	This report drew data from the 2007 National Survey of Mental Health and Wellbeing and provided detailed information on the national response to the mental health care needs of Australians.	<ul style="list-style-type: none"> • General practitioners (GPs) are often a first contact point for mental health concerns. • In 2007–08, there were 20 million mental health-related prescriptions subsidised by the Pharmaceutical Benefits Scheme (and for veterans), accounting for just over one in ten of all prescription claims, costing over \$700 million. Prescriptions for antipsychotics (49%) and antidepressants (43%) accounted for the major part of the spending. 	IV
<i>Beaudreau & O'Hara (2008)</i> <i>Late-Life Anxiety and Cognitive Impairment: A Review</i> America Aim: to review evidence of more prevalent anxiety in cognitively impaired older adults.	Information not provided.	<ul style="list-style-type: none"> • There is some support to illustrate that clinically significant anxiety has a detrimental effect on general cognitive abilities. • Clinically significant anxiety symptoms may predict accelerated cognitive decline. • Anxiety symptoms and the risk of cognitive impairment are more prevalent in older, medically ill populations. 	I
Beekman et al. (1998) <i>Anxiety Disorders In Later Life: A Report From The Longitudinal Aging Study Amsterdam</i> The Netherlands	The Longitudinal Aging Study Amsterdam (LASA) is based on a random sample of 3,107 older adults, stratified for age and sex, which was drawn from the community registries of 11 municipalities in three regions in The Netherlands. Anxiety disorders were diagnosed using the Diagnostic	<ul style="list-style-type: none"> • The overall prevalence of anxiety disorders was estimated at 10.2%. • Generalised anxiety disorder was the most common disorder (7.3%), followed by phobic disorders (3.1%). Both panic disorder (1.0%) and obsessive compulsive disorder (0.6%) were rare. • Ageing itself did not have any impact on the prevalence in both bivariate and multivariate analyses. • Vulnerability factors (female sex, lower levels of 	IV

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Aim: to study the prevalence and risk factors of anxiety disorders in the older population of The Netherlands.</p>	<p>Interview Schedule in a two-stage screening design. The risk factors under study comprise vulnerability, stress and network-related variables. Both bivariate and multivariate statistical methods were used to evaluate the risk factors.</p>	<p>education, having suffered extreme experiences during World War II and external locus of control) appeared to dominate, while stresses commonly experienced by older people (recent losses in the family and chronic physical illness) also played a part.</p> <ul style="list-style-type: none"> • Of the network-related variables, only a smaller sized network was associated with anxiety disorders. 	
<p><i>Beekman et al. (1999)</i> <i>Review of community prevalence of depression in later life</i> The Netherlands Aim: to assess the prevalence of late-life depression in the community.</p>	<p>The review involved a literature search in Medline (1989-1996). The search was limited to community based studies regarding elderly subjects (55 years and older). Thirty-four studies were included in the review.</p>	<ul style="list-style-type: none"> • The reported prevalence rates vary enormously (0.4-35%). • Major depression is relatively rare among the elderly (weighted average prevalence 1.8%), minor depression is more common (weighted average prevalence 9.8%), while all depressive syndromes deemed clinically relevant yield an average prevalence of 13.5%. • There is consistent evidence for higher prevalence rates for women and among older people living under adverse socio-economic circumstances. • Methodological differences between studies preclude firm conclusions about cross-cultural and geographical variation. Improving the comparability of epidemiological research constitutes an important step forward. 	I
<p>Beekman et al (2000) <i>Anxiety and Depression in Later Life: Co-occurrence and Community of Risk Factors</i> The Netherlands Aim: to examine the comorbidity of and communality of risk</p>	<p>A random age- and sex-stratified community-based sample (N=3,056) of the elderly (age 55-85 years) in the Netherlands was studied. A two-stage screening design was used. Risk factors were measured with well-validated instruments and represented a broad range of vulnerability and stress-related factors associated with anxiety and depression. Multivariate analyses examined risk factors associated with pure major</p>	<ul style="list-style-type: none"> • Comorbidity was highly prevalent: 47.5% of those with major depressive disorder also met criteria for anxiety disorders, whereas 26.1% of those with anxiety disorders also met criteria for major depressive disorder. • External locus of control was the only common risk factor for depression and anxiety in later life. • The only variables associated with pure major depressive disorder were younger age and external locus of control, risk factors associated with pure anxiety disorders represent a wide range of both vulnerability and stress. 	IV

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factors for major depressive disorder and anxiety disorders in later life.	depressive disorder, pure anxiety disorders, and comorbid conditions.		
Beisecker & Beisecker (1996) <i>Research Issues Related to Physician-Elderly Patient Interactions: Introduction</i> America	Research On Ageing has compiled a special issue on research related to physician-elderly patient interaction following an invitation conference on this topic. This introduction provided background information of the conference and introduced articles included in the issue.	Within the context of population ageing, researchers must explore the implication of physician-elderly patient interaction and design interventions to improve the medical and economic consequence for both individual patients and society as a whole.	Not applicable
Blazer (2003) <i>Depression in late life: Review and commentary</i> America Aim: to provide a comprehensive review on depression in late life.	Information not available.	<ul style="list-style-type: none"> • Depression in late life is frequently comorbid with other physical and psychiatric conditions, especially in the oldest old. • There were no differences between early onset and late onset depression in elderly people in severity, phenomenology, history of previous episodes and neurological performances. • Prevalence of clinically significant depressive symptoms among community-dwelling older adults ranges from 8% to 16%. • Medical comorbidity, functional impairment and comorbid dementing disorders all adversely influence the outcome of depression. Depression, in turn, adversely affects the outcome of the comorbid problems. • Antidepressant medications have become the foundation for the treatment of moderate to severe depression in older people, but less efficacious in treating less severe depression. • Psychotherapy remains an infrequently prescribed therapy for depressed older adults, although it has received much attention over the past 20 years. CBT and IPT have been the most frequently studied approaches in 	I

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		psychotherapy; however, exact mechanisms that render CBT and IPT effective remain unclear. <ul style="list-style-type: none"> • The extant psychiatric literature suggests virtually no empirical evidence of psychosocial primary prevention. 	
Bohlmeijer et al. (2003) <i>Effects of reminiscence and life review on late-life depression: a meta-analysis</i> The Netherlands Aim: To assess the effectiveness of reminiscence and life review on late-life depression.	The review involved a literature search in Medline (1966–2001) and Psychinfo (1960–2001). Key words included 'depression', 'reminiscence' and 'life review'. Twenty controlled outcome studies were included in the meta-analysis.	<ul style="list-style-type: none"> • The meta-analysis reported a statistically and clinically significant effect of reminiscence and life review on depressive symptomatology in elderly people and this effect size is comparable to the effects commonly found for pharmacotherapy and psychological treatments. • Reminiscence and life review are potentially effective treatments for depressive symptoms in the elderly and may thus offer a valuable alternative to psychotherapy or pharmacotherapy, especially in non-institutionalised elderly people—who often have untreated depression—it may prove to be an effective, safe and acceptable form of treatment. • Randomised trials with sufficient statistical power are necessary to confirm the results of this study. 	I
Bryant et al. (2008) <i>The prevalence of anxiety in older adults: Methodological issues and a review of the literature</i> Australia Aim: to review literature on the prevalence of anxiety in both community and clinical settings.	The review involved a systematic search of articles published from 1980–2007. Articles were included for review if they reported the prevalence of anxiety symptoms, anxiety disorder or specified anxiety disorders in adults aged over 60 in either community or clinical settings. A total of 49 articles were included in the review.	<ul style="list-style-type: none"> • The prevalence of anxiety in community samples ranges from 1.2% to 15%, and in clinical settings from 1% to 28%. • The prevalence of anxiety symptoms is much higher, ranging from 15% to 52.3% in community samples, and 15% to 56% in clinical samples. • The discrepancies in the prevalence rates are partly attributable to the conceptual and methodological inconsistencies that characterise this literature. • Generalised Anxiety Disorder is the commonest anxiety disorder in older adults. • Issues in relation to comorbidity and the nature of anxiety in old age remain unresolved. 	I
Butterworth et al. (2006)	Data were from the 1997 National Survey of Mental Health and Well-	<ul style="list-style-type: none"> • The prevalence of common mental disorders diminished across increasing age groups of men and women. 	IV

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<p><i>Retirement and mental health: analysis of the Australian national survey of mental health and well-being</i></p> <p>Australia</p> <p>Aim: to explore the relationship between retirement and mental health across older adulthood.</p>	<p>being. The prevalence of depression and anxiety disorders was analysed in the sub-sample of men (n = 1928) and women (n = 2261) aged 45–74 years. Mental health was assessed using the Composite International Diagnostic Instrument. Additional measures were used to assess respondents' physical health, demographic and personal characteristics.</p>	<ul style="list-style-type: none"> • Women aged 55–59, 65–69, and 70–74 had significantly lower rates of mental disorders than those aged 45–49. In contrast, only men aged 65–69 and 70–74 demonstrated significantly lower prevalence compared with men aged 45–49. • Amongst younger men, retirees were significantly more likely to have a common mental disorder relative to men still in the labour force; however, this was not the case for retired men of, or nearing, the traditional retirement age of 65. Men and women with poor physical health were also more likely to have a diagnosable mental disorder. • The findings of this study indicate that, for men, the relationship between retirement and mental health varies with age. The poorer mental health of men who retire early is not explained by usual risk factors. 	
<p>Cole (2005)</p> <p><i>Evidence-based review of risk factors for geriatric depression and brief preventive interventions</i></p> <p>Canada</p> <p>Aim: to identify the risk factors for depression among elderly community subjects and to explore the feasibility and effectiveness of brief preventive interventions.</p>	<p>The review consisted of two literature searches. For the literature on risk factors for depression, the search was conducted in MEDLINE (1966 to 2005) and PsychINFO (1967 to 2005). Twenty studies met the inclusion criteria. For the literature on brief preventive interventions, the search was conducted in MEDLINE (1966 to 2005), PsychINFO (1974 to 2005), and HEALTHSTAR (1975 to 2005) Nine trials met the inclusion criteria, including two non-randomized and seven randomized studies.</p>	<ul style="list-style-type: none"> • Bereavement, sleep disturbance, disability, previous depression, and female gender appear to be important risk factors for depression among elderly community subjects. • Many brief preventive interventions were feasible across a broad range of populations and settings. • Three interventions appeared to have the potential to prevent depression in older subjects, including educational interventions for subjects with chronic illness, cognitive-behavioral interventions to reduce negative thinking, and life review. 	I
<p><i>Cole et al. (1999)</i></p>	<p>The review involved a literature search in MEDLINE (1981 to 1996)</p>	<ul style="list-style-type: none"> • A meta-analysis of outcomes at 24 months estimated that 33% of subjects were well, 33% were depressed, and 	I

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<p>Prognosis of Depression in Elderly Community and Primary Care Populations: A Systematic Review and Meta-Analysis</p> <p>Canada</p> <p><i>Aim: to determine the prognosis of depression in elderly community and primary care populations</i></p>	<p>and PsycINFO (1984 to 1996). Twelve studies met the inclusion criteria. The validity of these studies was assessed according to the criteria for prognostic studies described by the Evidence-Based Medicine Working Group.</p>	<p>21% had died.</p> <ul style="list-style-type: none"> • All of the studies had some methodologic limitations. There was statistically significant heterogeneity in the outcomes across studies. • The length of follow-up and lower age limit for enrolment explained part of the heterogeneity for the percent who were well but not for the other outcomes. • Physical illness, disability, cognitive impairment, and more severe depression were associated with worse outcomes but inconsistently so. • Depression in elderly community and primary care populations has a poor prognosis, is perhaps chronic or relapsing or both, and is probably undertreated. 	
<p>Cole et al. (2003)</p> <p><i>Risk factors for depression among elderly community subjects: A systematic review and meta-analysis</i></p> <p>Canada</p> <p><i>Aim: to review literature on risk factors for depression among community elderly.</i></p>	<p>The review involved a systematic search of MEDLINE (from 1966 to 2001) and PsycINFO (from 1967 to 2001). A total of 20 studies were included in the review.</p>	<ul style="list-style-type: none"> • Risk factors identified by both univariate and multivariate techniques in at least two studies each were disability, new medical illness, poor health status, prior depression, poor self-perceived health, and bereavement. • Risk factors identified in the quantitative meta-analysis were: bereavement, sleep disturbance, disability, prior depression, and female gender. 	I
<p>Cooper et al. (2007)</p> <p><i>A systematic review of the prevalence and covariates of anxiety in caregivers of people with</i></p>	<p>The review involved a literature search in six electronic databases (Allied and Complementary Medicine, British Nursing Index, CINAHL, EMBASE, MEDLINE and PsycINFO). Thirty-three studies met</p>	<ul style="list-style-type: none"> • Clinically, significant anxiety affects about a quarter of caregivers for people with dementia and was more common than in matched controls. • Confrontative and escape avoidance coping, caregiver burden and poorer caregiver physical health are factors associated with higher anxiety levels from cross-sectional 	I

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<p><i>dementia</i></p> <p>England</p> <p>Aim: to explore: (1) the prevalence, predictors and covariates of anxiety disorders or anxiety caseness.</p>	<p>our inclusion criteria.</p>	<p>studies.</p> <ul style="list-style-type: none"> • Coping style may be more associated with anxiety than depression while other covariates (burden and poor physical health) are similar to those for caregiver depression. 	
<p>Creamer & Parslow (2008)</p> <p><i>Trauma exposure and post-traumatic stress disorder in the elderly: A community prevalence study</i></p> <p>Australia</p> <p>Aim: to examine lifetime exposure to trauma and 12-month PTSD in a large community sample</p>	<p>Data were drawn from the Australian National Survey of Mental Health. Of the total 10,641 participants, 1,792 were over the age of 65. The Composite International Diagnostic Interview was used to provide trauma exposure and diagnostic status.</p>	<ul style="list-style-type: none"> • A curvilinear pattern of lifetime exposure to trauma across the lifespan was obtained for women, whereas men showed a linear increase. This difference was explained by combat exposure. • PTSD prevalence reduced with age and participants over 65 reported negligible rates. • Around 10% of the elderly reported re-experiencing symptoms. 	IV
<p>Cummings et al. (1994)</p> <p><i>The neuropsychiatric inventory: Comprehensive assessment of psychopathology in dementia</i></p> <p>Canada</p>	<p>The neuropsychiatric inventory uses a screening strategy to minimise administration time, examining and scoring only those behavioral domains with positive responses to screening questions. Both the frequency and the severity of each behavior are obtained from a caregiver familiar with the patient's behavior.</p>	<ul style="list-style-type: none"> • The studies demonstrated the content and concurrent validity as well as between-rater, test-retest, and internal consistency reliability. • The tool has the advantages of evaluating a wider range of psychopathology than existing instruments, soliciting information that may distinguish among different aetiologies of dementia, differentiating between severity and frequency of behavioral changes, and minimising administration time. 	IV

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<p>Aim: to investigate the reliability and validity of the neuropsychiatric inventory.</p>			
<p>Cummings et al. (2005)</p> <p><i>Factors Influencing Graduate-Social-Work Students' Interest in Working with Elders</i></p> <p>America</p> <p>Aim: to obtain information about students' attitudes toward aging, gerontological knowledge, and factors predictive of interest in working with older adults.</p>	<p>The study used a cross-sectional research design. A total 382 2nd-year graduate-social-work students in three large Southern-state universities in America. In-class surveys were administered to the students 1 month prior to graduation. The survey included questions addressing the following domains: gerontological education, contact and rewards with older people, aging knowledge and skills, perception of and interest in aging-related work, attitudes toward aging.</p>	<p>Students' self-rated aging skills, contact frequency with older adults, rewarding interaction with older clients, and a stronger belief that gerontological social work offers good career opportunities were significant predictors of students' interest in aging related work. While only a minority of students had engaged in an aging-related internship, over 60% reported that they would have been likely to do so if a stipend had been included.</p>	IV
<p>Djernes (2006)</p> <p><i>Prevalence and predictors of depression in populations of elderly: a review</i></p> <p>Denmark</p> <p>Aim: to provide an update on prevalence and predictors of old age depression in</p>	<p>The review involved a systematic search in MEDLINE and PsycINFO (1993 – 2004). Search words included depression, prevalence, aged, predictors, epidemiology, community, and residential facilities. A total of 122 articles were included in the review.</p>	<ul style="list-style-type: none"> • The prevalence of major depression in older people ranges from 0.9% to 9.4% in private households, from 14% to 42% in institutional living, and from 1% to 16% among elderly living in private households or in institutions. Clinically depressive symptom cases in these settings vary between 7.2% and 49%. • The under-recognition and under-treatment of depression in the elderly seem severe. • The main predictors of depressive disorders and depressive symptom cases are: female gender, somatic illness, cognitive impairment, functional impairment, lack or loss of close social contacts, and a history of depression. 	I

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Caucasians.		<ul style="list-style-type: none"> The high prevalence of depression and the low rates of treatments represent a challenge that would seem to require general practitioner (GP) participation and collaboration between the GPs and old age psychiatrists. Methodological differences between the studies hinder consistent conclusions about geographical and cross-cultural variations in prevalence and predictors of depression. 	
<p>Dombrowski et al. (2007)</p> <p><i>Maintenance Treatment for Old-Age Depression Preserves Health-Related Quality of Life: A Randomized, Controlled Trial of Paroxetine and Interpersonal Psychotherapy</i></p> <p>Canada</p> <p>Aim: To determine the maintenance effect of antidepressant pharmacotherapy and interpersonal psychotherapy in health-related quality of life among older patients with depression.</p>	<p>The study was a 2 (paroxetine vs placebo) by 2 (monthly interpersonal psychotherapy vs clinical management) randomized, double-blind, placebo-controlled maintenance trial. A total of 116 patients aged 70 and older with major depression in a university-based clinic were included in the study and HR-QOL outcomes were assessed over 1 year.</p>	<p>After controlling for any effects of psychotherapy, maintenance pharmacotherapy conveys a modest benefit for overall quality of life of elderly patients seeking treatment for depression. No such benefit was evident for monthly interpersonal psychotherapy.</p>	II
<p>Farrer et al. (2008)</p> <p><i>Age differences in mental health literacy</i></p>	<p>Data were analysed from an epidemiological survey conducted during 2003–2004 with a national clustered sample of Australian</p>	<ul style="list-style-type: none"> Respondents in the oldest age group (70+) were less likely to correctly identify the mental illness described in the vignette, endorsed fewer sources of treatment as helpful, and were more likely to believe that 	IV

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<p>Australia</p> <p>Aim: to examine age differences in various elements of mental health literacy.</p>	<p>adults aged 18 years and over.</p>	<p>schizophrenia was related to character weakness.</p> <ul style="list-style-type: none"> Differences were also observed between younger and older age groups in terms of beliefs about the helpfulness of certain treating professionals and medical and lifestyle treatments for depression and schizophrenia. Differences in mental health literacy across the adult lifespan suggest that more specific, age appropriate messages about mental health are required for younger and older age groups. 	
<p>Frazer et al. (2005)</p> <p><i>Effectiveness of treatments for depression in older people</i></p> <p>Australia</p> <p>Aim: to systematically review the evidence for the effectiveness of a range of possible treatments for depression in older people</p>	<p>The review involved a literature search in PubMed, PsycInfo and Cochrane Library databases. Key words included: depressi* OR dysthym* OR mood OR affective and elder* OR old* OR late-life). Treatments were grouped under three categories: medical treatments, psychological treatments, and lifestyle changes/alternative treatments.</p>	<ul style="list-style-type: none"> The treatments with the best evidence of effectiveness are antidepressants, electroconvulsive therapy, cognitive behaviour therapy, psychodynamic psychotherapy, reminiscence therapy, problem-solving therapy, bibliotherapy (for mild to moderate depression) and exercise. There is limited evidence to support the effectiveness of transcranial magnetic stimulation, dialectical behaviour therapy, interpersonal therapy, light therapy (for people in nursing homes or hospitals), St John's wort and folate in reducing depressive symptoms. 	I
<p>Frederick et al. (2007)</p> <p><i>Community-Based Treatment of Late Life Depression: An Expert Panel-Informed Literature Review</i></p> <p>America</p>	<p>The review involved a systematic literature search for publications on community-based interventions for depression in older adults in the MEDLINE (from 1966 to 2005), CINAHL (from 1982 to 2005) and the PsycINFO (from 1967 to 2005). Key words included "old age," "depression," "community based," "prevention," and "treatment." An</p>	<ul style="list-style-type: none"> Depression care management was the only intervention rated as effective by the expert panel. Education and skills training for various medical conditions, geriatric health evaluation and management in clinic settings, and physical rehabilitation and occupational therapy received ineffective ratings. Other interventions, including psychotherapy, geriatric health evaluation and management at home and exercise received mixed effectiveness ratings. The review suggested that treating depressed elders may 	I

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<p>Aim: to identify effective interventions for depression in community-based older adults.</p>	<p>expert panel of mental health, aging, health services, and epidemiology researchers guided the review and voted on quality and effectiveness of these interventions. A total of 116 papers were included in the review.</p>	<p>require a multifaceted approach to ensure effectiveness.</p>	
<p>Freudenstein et al. (2001)</p> <p><i>Treatments for late life depression in primary care - A systematic review</i></p> <p>England</p> <p>Aim: to carry out a systematic review of trials of treatments for depression of patients over 60 years of age in primary care or population samples.</p>	<p>The review involved a literature search for trials of drug treatment, interpersonal psychotherapy, cognitive behavioural psychotherapy, counselling and social interventions for late life depression in Medline, Embase, Cinahl, the Cochrane Library, Psyclit, BIDS—Social Science and BIDS—Science Citation Indices (1980 – 1999). A total of five studies were included in the review.</p>	<ul style="list-style-type: none"> • There have been no trails of specific psychotherapies or counselling for older people with depression in the primary care setting. • With few exceptions, studies were limited to older people who reached a diagnostic threshold and excluded those with 'subcase level depression'. • Older people with less severe depression need to be included in the trials in primary care as they are far more common than those with severe depression. • As older people take more medication, making contra-indications to the use of antidepressant drugs more likely, there is a pressing need for studies of the efficacy of non-pharmacological interventions in primary care settings. 	I
<p>Galovskia & Lyons (2003)</p> <p><i>Psychological sequelae of combat violence: A review of the impact of PTSD on the veteran's family and possible interventions</i></p> <p>America</p>	<p>The review involved a literature search on the following terms: combat exposure, PTSD and veterans, intergenerational transmission, familial PTSD, vicarious traumatization, combat veterans and PTSD, and combat disorders. Approximately 100 papers were included in the review.</p>	<ul style="list-style-type: none"> • This review reveals that veterans' posttraumatic stress disorder (PTSD) following exposure to combat violence affects veterans' familial relationships and the psychological adjustment of family members. • Veterans' numbing/arousal symptoms are especially predictive of family distress. To a lesser extent, veterans' anger is also associated with troubled family relationships and secondary traumatization among family members. • Marital/family interventions have largely focused on improving relationships and reducing veterans' symptoms, rather than targeting improvements in the 	I

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Aim: to review how the veteran's combat exposure and PTSD impact their family.		psychological well-being of the spouse and children. Interventions directly addressing the needs of significant others, especially spouses, are advocated.	
<p>Greene et al. (1986)</p> <p><i>Ageism in the medical encounter: an exploratory study of the doctor-elderly patient relationship</i></p> <p>America</p> <p>Aim: to compare and contrast the language and behaviour of doctors with elderly and young patients.</p>	<p>The study was conducted at a major urban teaching hospital in New York City in the U.S. Data were collected in the general medical outpatient area of the hospital. The researchers audiotaped medical interviews and analysed the language and behaviour of physicians and patients. There were two samples included in the study. The first set of the sample consisted of five physicians interviewing eight patients: four young and four old patients. The young and old patients were matched on sex and race. The second sample included ten physicians, each interviewing four older patients. The majority of the hypotheses are tested on the first sample.</p>	<ul style="list-style-type: none"> • Medical issues predominate in the older patient interviews as they do in the younger patient interviews, and older patients do not raise more psychosocial issues than younger patients. • Older patients were less successful than younger patients in capturing the attention of their physicians. This phenomenon is subtle but definite evidence for ageism. 	III-2
<p>Griffiths & Christensen, (2007)</p> <p><i>Internet-based mental health care programs: a powerful tool in the rural medical kit</i></p> <p>Australia</p>	<p>The paper was a systematic review of evaluations of two Australian web-based mental health programs: MoodGYM and BluePages Depression Information. A total of 12 papers and reports from nine separate studies of MoodGYM and BluePages were included in the review. The sample sizes ranging from 78 to 19</p>	<ul style="list-style-type: none"> • Internet-based applications were effective in reducing depressive symptoms and stigmatising attitudes to depression and in improving depression literacy. • Depression self-help and information programs can be delivered effectively by means of the Internet. 	II

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Aim: To discuss the potential utility of Internet-based depression information and automated therapy programs in rural regions.</p>	<p>607 people.</p>		
<p>Griffiths et al. (2008)</p> <p><i>Predictors of depression stigma</i></p> <p>Australia</p> <p>Aim: to investigate and compare the predictors of personal and perceived stigma associated with depression.</p>	<p>The study included a survey of three samples: a national sample of 1,001 Australian adults; a local community sample of 5,572 residents of the Australian Capital Territory and Queanbeyan; and a psychologically distressed subset (n = 487) of the second sample. Personal and Perceived Stigma were measured using the two subscales of the Depression Stigma Scale. Potential predictors included demographic variables (age, gender, education, country of birth, remoteness of residence), psychological distress, awareness of Australia's national depression initiative beyondblue, depression literacy and level of exposure to depression. Not all predictors were used for all samples.</p>	<ul style="list-style-type: none"> • Personal stigma was consistently higher among men, older people, and those with lower educational levels and those born overseas. • Personal stigma was also associated with greater current psychological distress, lower prior contact with depression, not having heard of a national awareness raising initiative, and lower depression literacy. 	<p>IV</p>
<p>Henderson et al. (1993)</p> <p><i>The prevalence of depressive disorders and the distribution of depressive symptoms in later life: A survey using</i></p>	<p>Full text not available to the project team.</p>	<ul style="list-style-type: none"> • The point prevalence of depressive episodes as defined by the Draft ICD-10 diagnostic criteria was 3.3 %. • The rate for DSM-III- R major depressive disorder was 1.0 %. This prevalence rate is similar to those reported elsewhere for the elderly. • Evidence is accumulating that older persons may indeed have low rates for depressive disorders at the formal case 	<p>IV</p>

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<p><i>Draft ICD-10 and DSM-III-R</i></p> <p>Australia</p> <p>Aim: to estimate the point prevalence of depressive disorders in older people</p>		<p>level.</p> <ul style="list-style-type: none"> • A scale for depressive symptoms, based exclusively on those specified in Draft ICD-10 and DSM-III-R, showed that the elderly do experience many depressive symptoms. Contrary to expectation, these did not increase with age. • The number of depressive symptoms was correlated with neuroticism, poor physical health, disability and a history of previous depression. • Attention now needs to be directed to the clinical significance of depressive symptoms below the case level in elderly persons 	
<p>Hendriks et al. (2008)</p> <p><i>Cognitive-behavioural therapy for late-life anxiety disorders: a systematic review and meta-analysis</i></p> <p>The Netherlands</p> <p>Aim: to examine and estimate the efficacy of cognitive behavioural therapy (CBT) for late-life anxiety disorders</p>	<p>The paper was a meta-analysis of randomised controlled trials comparing CBT with i) a waiting-list control condition and ii) an active control condition controlling for non-specific effects in patients aged over 60 years and suffering from an anxiety disorder. Seven papers were included in the review, including nine randomized controlled comparisons for 297 patients.</p>	<ul style="list-style-type: none"> • Present evidence suggests that cognitive-behavioural therapy is a good alternative for treatment with antidepressants in late-life anxiety disorders. • The oldest old are under-represented in studies on late-life anxiety disorders. • The scarcity of follow-up data precluded conclusions on the long-term efficacy of cognitive behavioural therapy. 	I
<p>Hsieha & Wang (2003)</p> <p><i>Effect of reminiscence therapy on depression in older adults: a systematic review</i></p> <p>America</p>	<p>The review involved a literature search in MEDLINE, CIHNAL and PsycINFO. Key words included 'reminiscence', 'elderly (older adults)', and 'depression'. A total of nine studies were included in this review.</p>	<ul style="list-style-type: none"> • About half of these studies showed that reminiscence therapy resulted in a statistically significant decrease in depression. • The author suggested that before reminiscence therapy can be further tested, it should be considered as a viable, valuable and useful intervention to potentially reduce depression in older adults. 	I

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Aim: to review the effect of reminiscence therapy on depression in older adults outside of the primary care setting.</p>			
<p>Jordan et al. (2009)</p> <p><i>Improving Mental Health in Aged Care Facilities: A Feasibility Study</i></p> <p>Australia</p> <p>Aims: to examine the effectiveness of a staff depression training program.</p>	<p>The study included one intervention group (involving 5 nursing homes, 61 staff, 28 residents, 26 family members) and one control group (involving 4 nursing homes, 32 staff, 17 residents and 7 family members). There were three components of the study: a staff depression training program, interventions to assist newly admitted residents to settle down into the residential aged care facilities, training and support groups for family members.</p>	<ul style="list-style-type: none"> • The training program was positive received by the staff. • Staff knowledge and self-efficacy have increased significantly for the treatment group and maintained over time. • There were more positive feelings and reactions to entering the residential facilities among residents four to six months following entry. • The study found the program assisted staff and residents to get to know each other and provide respect and reassurance to the residents. 	IV
<p>Jorm (2000)</p> <p><i>Is depression a risk factor for dementia or cognitive decline? A review</i></p> <p>Australia</p> <p>Aim: to investigate whether depression in earlier life is a risk factor for subsequent dementia or for cognitive decline.</p>	<p>The review involved a systematic search in Medline for relevant articles from 1980. Key words included: 'dementia and depression and risk', and 'cognitive and (decline or impairment) and depression and risk'.</p>	<ul style="list-style-type: none"> • Depression was associated with an increased risk of subsequent dementia in both case-control studies and prospective studies. • There is sufficient evidence that depression is a risk factor for dementia and cognitive decline. • There was little support for the hypotheses of (1) depression treatments are a risk factor for dementia, and (2) dementia and depression share common risk factors. • Further work is needed to examine depression as a prodrome of vascular dementia, depression as an early reaction to perceived cognitive decline, the effects of depression on the threshold for manifesting dementia, and depression as a source of hippocampal damage through a glucocorticoid cascade. 	I
<p>Jorm (2001)</p>	<p>This review was an update of the</p>	<ul style="list-style-type: none"> • There is evidence that depression is a likely risk factor for 	I

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p><i>History of depression as a risk factor for dementia: An updated review</i></p> <p>Australia</p> <p>Aim: to provide updates on the author's earlier meta-analysis in this area.</p>	<p>author's 2000 meta-analysis of the data on history of depression as a risk factor for dementia. A Medline search up to 2000 was carried out to locate new research. A meta-analysis was carried out on results from seven case-control and six prospective studies. A qualitative review was carried out on the evidence related to the hypotheses to explain the association.</p>	<p>dementia in general and for Alzheimer's disease specifically.</p> <ul style="list-style-type: none"> • The association with vascular dementia requires more investigation before a conclusion can be reached. • The evidence did not clearly support any hypothesis explaining the association between depression and dementia. 	
<p>Jorm et al. (2005)</p> <p><i>The impact of beyondblue: the national depression initiative on the Australian public's recognition of depression and beliefs about treatments</i></p> <p>Australia</p> <p>Aim: to evaluate whether a campaign (<i>beyondblue</i>) has influenced the Australian public's ability to recognize depression and their beliefs about treatments.</p>	<p>Data from national surveys of mental health literacy in 1995 and 2003-04 were analysed to see if states and territories that funded beyondblue (the high-exposure states) had greater changes than those that did not (the low-exposure states).</p>	<ul style="list-style-type: none"> • Awareness of beyondblue in the states that provided funding was found to be around twice the level of those that did not. • Using the low-exposure states as a control group, the high-exposure states had greater change in beliefs about some treatments, particularly counselling and medication, and about the benefits of help-seeking in general. • Recognition of depression improved greatly at a national level, but slightly more so in the high-exposure states. • The data support the conclusion that beyondblue has had a positive effect on some beliefs about depression treatment. 	III-2
<p>Jorm et al. (2006)</p> <p><i>Changes in depression</i></p>	<p>Data from national surveys of mental health literacy in 1995 and 2003-2004 were analysed to see if</p>	<p>The data support the conclusion that beyondblue has had an effect on awareness of depression and of discrimination against depressed people</p>	III-2

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p><i>awareness and attitudes in Australia: the impact of beyondblue: the national depression initiative</i></p> <p>Australia</p> <p>Aim: to assess changes in depression awareness and attitudes in Australia and the effect that <i>beyondblue</i> has had.</p>	<p>states and territories that funded beyondblue (the high-exposure states) had greater changes than those that did not (the low-exposure states).</p>		
<p>Jorm & Kelly (2007)</p> <p><i>Improving the public's understanding and response to mental disorders</i></p> <p>Australia</p> <p>Aim: to summarise knowledge about the public's mental health literacy.</p>	<p>Not Applicable</p>	<ul style="list-style-type: none"> • Community surveys in Australia show that many people are unable to recognise mental disorders and that they hold beliefs about treatment that are different from those of professionals. This lack of knowledge may affect whether appropriate help is sought, whether it is adhered to, and how people respond to others with mental disorders. • There is evidence that public knowledge in Australia has improved in recent years. • A number of interventions have been shown to improve public knowledge, including community campaigns, school-based programs, websites and training courses. 	<p>III-2</p>
<p>Kay et al. (1985)</p> <p><i>Dementia and depression among the elderly living in the Hobart community: The effect of the diagnostic criteria on the prevalence rates</i></p>	<p>The study included 274 community dwelling persons aged 70 and over in Hobart. The prevalence of dementia and of depression was measured by interviewing participants using a modified version of the Geriatric Mental State Schedule (GMS) and the Mini Mental State Examination (MMSE). Rates of</p>	<p>The author concluded that more detailed specification of criteria is desirable if the comparative epidemiology of dementia and depression in old age is to advance.</p>	<p>IV</p>

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Australia</p> <p>Aim: to investigate the prevalence of dementia and of depression among an Australian sample.</p>	<p>morbidity were derived from the interview schedules or audiotapes of the interviews.</p>		
<p>Koder, & Helmes (2006a)</p> <p><i>Clinical psychologists in aged care in Australia: A question of attitude or training?</i></p> <p>Australia</p> <p>Aim: to explore the reasons for the limited number of psychologists who work with older people.</p>	<p>The study included 201 Australian psychologists in Sydney, Australia. The participants returned the survey which used the Reactions to Ageing Questionnaire and other questions to assess attitudes towards ageing and information about training, current practice, and interest in work with older adults.</p>	<ul style="list-style-type: none"> • Training within the subspecialty of geropsychology failed to predict whether a psychologist would work with older adults, with the latter being more influenced by interest in working with older people. • Age and years of clinical experience were related to working with older adults, and younger psychologists with less experience were more likely to specialise. • The study suggested that training in itself is not sufficient to overcome a reluctance to work with older adults. Supervised practice settings appear to be effective, but greater efforts are needed to increase both academic training and work settings for work with older adults in Australia. 	IV
<p>Koder & Helmes (2006b)</p> <p><i>The current status of clinical geropsychology in Australia: A survey of practising psychologists</i></p> <p>Australia</p> <p>Aim: to explore the</p>	<p>The study reports on figures from two surveys of 1,699 Australian psychologists. Participants were drawn from three sources: the Yellow Pages telephone directory of each capital city in each state and each country area; a list of Western Australian registered psychologists obtained via government gazette public access information; and the</p>	<ul style="list-style-type: none"> • Only 6% specialise in treating older adults. • The rate of psychology involvement in aged care is low and comparable to those from studies conducted overseas. 	IV

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
current status of clinical geropsychology in Australia.	APS Psychology and Ageing Special Interest Group.		
<p>Kuo et al. (2008)</p> <p><i>Depression and its psychosocial correlates among older Asian Immigrants in North America: A critical review of two decades' research</i></p> <p>Canada</p> <p>Aim: to review empirically based depression studies on older Asian immigrants in North America.</p>	<p>The review involved a literature search in multiple bibliographic databases, including PsychInfo, Medline, Sociology Abstract, and Abstracts in Social Gerontology. The keywords were "depression," "depressive symptom," and "psychological distress" with a combination of broad ethnic descriptors, "Asian American" and "Asian Canadian" or specific group designations, such as "Chinese American", "Korean American", "Japanese American". Twenty-four studies in were included in the review.</p>	<ul style="list-style-type: none"> • The results showed that depression is prevalent among older Asian immigrants and is linked to gender, recency of immigration, English proficiency, acculturation, service barriers, health status, relationship with children and family, and social support. However, there was considerable variability in the results, the sample sizes, and the use of measurements across these studies. 	I
<p>Lee et al. (2003)</p> <p><i>Trainee clinical psychologists' views on recruitment to work with older people</i></p> <p>England</p> <p>Aim: to explore the issue of under-recruitment of clinical psychologists to work with older people among trainee clinical psychologists</p>	<p>Questionnaires were posted to 25 of the clinical psychology training courses in the United Kingdom, and 371 trainees returned questionnaires. Among the questions posed, the trainees were asked to indicate their thoughts on why it might be difficult to recruit to the older adult specialty and how recruitment could be improved.</p>	<ul style="list-style-type: none"> • The study suggested that many trainees believe that clinical psychology, despite many recent advances, has less to offer older people than other age groups. • Ageism was evident in the responses: some trainees held negative attitudes not only to services for older people, but also to older people themselves. • The responses also contained evidence of fear of ageing and death. • The research highlights the need to encourage trainees to develop an increased knowledge about ageing, developmental issues in late life, and normal versus pathological ageing. 	IV

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Lenze et al. (2001)</p> <p><i>The association of late-life depression and anxiety with physical disability: A review of the literature and prospectus for future research</i></p> <p>America</p> <p>Aim: to study the association between late-life depression or anxiety and physical disability</p>	<p>The review involved a literature search in MEDLINE and PsycINFO (1990 to 2000). A total of 66 studies were included in the review.</p>	<ul style="list-style-type: none"> • Depression in old age is an independent risk factor for disability; similarly, disability is a risk factor for depression. • Anxiety in late life was a risk factor for disability, although not necessarily independently of depression. • Increased disability due to depression is only partly explained by differences in socioeconomic measures, medical conditions, and cognition. • Physical disability improves with treatment for depression; however, comparable studies have not been done for anxiety. 	I
<p>Licht-Strunk et al. (2007)</p> <p><i>The prognosis of depression in older patients in general practice and the community: A systematic review</i></p> <p>The Netherlands</p> <p>Aim: to summarize evidence on the course and prognostic factors of depression in older persons</p>	<p>The review involved a literature search in Medline (1966-2005) and PsycINFO (1967-2005). A total of 40 papers were included in the review, including data on 4 primary care and 17 community cohorts.</p>	<ul style="list-style-type: none"> • General practice studies did not provide strong evidence for any factor. • Community studies provided strong evidence for an association between persistent depression and baseline depression level, older age, external locus of control, somatic co-morbidity and functional limitations. 	I
<p>Lovell, M. (2006)</p>	<p>The paper involved a literature</p>	<ul style="list-style-type: none"> • The review of the literature revealed that nursing 	I

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p><i>Caring for the elderly: Changing perceptions and attitudes</i></p> <p>Canada</p> <p>Aim: to explore nursing students' attitudes towards older people and examine the role of all health care professionals to help change their attitudes and develop a more positive relationship with older people.</p>	<p>search in MEDLINE (PubMed) and CINAHL from 1990 to 2005.</p>	<p>students have a negative attitude toward the elderly. This may be affected by personal beliefs, values, culture, experience, or observations. Their perceived attitudes toward the gerontology field will make it difficult to recruit the nurses required in this area.</p>	
<p>McSweeney & O'Connor (2008)</p> <p><i>Depression among newly admitted Australian nursing home residents</i></p> <p>Australia</p> <p>Aim: to investigate the prevalence and course of depression in newly admitted nursing home residents.</p>	<p>The study included 51 newly admitted residents from six nursing homes located in Victoria, Australia. Depression was assessed at one month, three months and six months post-admission.</p>	<ul style="list-style-type: none"> • At one month post-admission, 24% of the participants were diagnosed with major depression (MD), and a further 20% with a non-major depressive disorder. At the second and third assessments, MD was observed in 14% and 15% of residents, respectively. • For residents who completed all three assessments, there was no appreciable change in the proportion diagnosed with a depressive disorder, nor was there a change in the levels of depressive symptomatology. • Only the cognitively impaired participants were diagnosed with major depression (MD) throughout the duration of the study • The study indicated that in nursing home facilities residents who exhibit pronounced cognitive impairment were at great risk of clinical depression. • Care staff and general practitioners must be trained in the identification of depression in dementia, and any interventions implemented in these facilities should be 	<p>III-3</p>

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Menzel (2008)</p> <p><i>Depression in the elderly after traumatic brain injury: A systematic review</i></p> <p>America</p> <p>Aim: to review recent research on depression in the elderly with traumatic brain injury.</p>	<p>The review involved a systematic search in MEDLINE and PsychINFO, using the following keywords: elderly, geriatric, ageing, age, traumatic brain injury, emotional functioning, psychosocial functioning and depression. Only one article met all inclusion criteria and was included in the review.</p>	<p>tailored to meet the unique needs of this group.</p> <ul style="list-style-type: none"> • Prevalence of depression in the elderly range from 1.8–8.9% in community-residing elders to 25% in nursing homes and long-term care settings. • Prevalence of depression in the overall traumatic brain injury population ranges from 15.3–42%. • Little research has been published on depression in the elderly following traumatic brain injury, but the available research report a prevalence of 21–37%.. 	<p>I</p>
<p>Mitchell & Subramaniam (2005)</p> <p><i>Prognosis of Depression in Old Age Compared to Middle Age: A Systematic Review of Comparative Studies</i></p> <p>England</p> <p>Aim: to identify research comparing the prognosis of depression in late life with depression in midlife.</p>	<p>The review involved a literature search in CINAHL (1982 to 2004), MEDLINE (1966 to 2004), PsycINFO (1887 to 2004), ASSIA (1987 to 2004), Embase (1980 to 2004) and the National Library of Medicine gateway. The search was limited to comparative work looking at depressed patients in late life and depressed patients with an index (presentation) or first episode in midlife.</p>	<ul style="list-style-type: none"> • Evidence suggests that response and remission rates to pharmacotherapy and ECT are not significantly different in old-age depression and middle-age depression. • Older patients and patients with late-onset depression are at increased risk of medical comorbidity. • Medical comorbidity is a risk factor for inferior treatment response and poor antidepressant tolerability. • Elderly patients with early-onset depression are more likely to have had a higher number of previous episodes, which also adversely influences prognosis compared to elderly depressed patients with late onset of illness. • With control for confounding variables, remission rates of depression in patients in late life are little different from those in midlife, but relapse rates appear higher. 	<p>I</p>
<p>Murray et al. (2006)</p> <p><i>Primary care professionals' perceptions of</i></p>	<p>Individual in-depth interviews were conducted with 30 general practitioners, practice nurses and practice counsellors working in 18 primary care centres in South</p>	<ul style="list-style-type: none"> • All three professional groups shared a predominantly psychosocial model of the causes of depression. • While presentation of somatic symptoms was seen as common in all age groups, identification of depression in older patients was complicated by co-existent physical 	<p>Qualitative study</p>

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p><i>depression in older people: a qualitative study</i></p> <p>England</p> <p>Aim: to gain a better understanding of the attitudes of depression in older patients among primary care professionals</p>	<p>London. The sample was selected purposively to include professionals working in different settings (single-handed and group practices) serving areas of contrasting socio-economic and ethnic characteristics.</p>	<p>illnesses.</p> <ul style="list-style-type: none"> • Participants thought that many older people regard depression as a "sign of weakness" and the perceived stigma of mental illness was widely recognised as a barrier to seeking help. Many older people were perceived to regard symptoms of depression as a normal consequence of ageing and not to think it appropriate to mention non-physical problems in a medical consultation. • Cultural variations in illness beliefs, especially the attribution of symptoms, were thought to profoundly influence the help-seeking behaviour of elders from minority ethnic groups. • Families were identified as the main source of both support and distress; and as such their influence could be crucial to the identification and treatment of depression in older people. 	
<p>Nordhus & Pallesen (2003)</p> <p><i>Psychological Treatment of Late-Life Anxiety: An Empirical Review</i></p> <p>Norway</p> <p>Aim: to provide a meta-analytic review of nonpharmacological interventions for late-life anxiety.</p>	<p>The review involved a literature search in PsycINFO and Medline (1967 – 2002). A total of 15 outcome studies were identified involving 495 participants and 20 separate treatment interventions were included in the meta-analysis.</p>	<ul style="list-style-type: none"> • The analysis indicated that psychological interventions were reliably more effective than no treatment on self-rated and clinician-rated measures of anxiety. • Maintenance of treatment gains (a minimum of 6 months follow-up) was insufficiently reported across studies for a conclusion on the long-term efficacy. 	I
<p>O'Connor et al. (2001a)</p> <p><i>Depression in Primary Care 1: Elderly Patients' Disclosure of Depressive</i></p>	<p>A survey was conducted in a stratified sample of 1,021 patients aged 70+ years of 30 GPs in Melbourne, Australia</p>	<ul style="list-style-type: none"> • Older patients often do not report depressive symptoms to their medical practitioner. • Men and patients lacking "psychological mindedness" may be at special risk for late life depression. • GPs' ratings of depression were best predicted by 	IV

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<p><i>Symptoms to Their Doctors</i></p> <p>O'Connor et al. (2001b) <i>Depression in Primary Care 2: General Practitioners' Recognition of Major Depression in Elderly Patients</i></p> <p>Australia</p> <p>Aim: to map some of the factors involved in (a) elderly patients' decision to report depressive symptoms to their physician, and (b) GPs' recognition of depression.</p>		<p>patients' past contact with a psychiatrist, the doctor's view that a patient did not have dementia, the number of current depressive symptoms, patients' disclosure of these symptoms, and current physical pain.</p> <ul style="list-style-type: none"> • GPs were unaware of many depressive symptoms and often rated patients as being depressed when they were not. • The use of a simple checklist of depressive symptoms was recommended by the author to improve the doctors' knowledge of patients' current psychiatric status. 	
<p>Owens et al. (2005)</p> <p><i>Review of assessment and treatment of PTSD among elderly American armed forces veterans</i></p> <p>America</p> <p>Aim: to summarize the literature on assessment and treatment of PTSD among elderly American armed forces veterans.</p>	<p>The review involved a literature search in PsycINFO, Medline, and the National Center for PTSDs' PILOTS database. Keywords included PTSD, elderly, veterans, older adults, assessment, and treatment. No restriction was placed on year of study.</p>	<ul style="list-style-type: none"> • Evidence suggests that elderly veterans generally present more somatic symptoms of PTSD. • Medical and psychological co-morbidities, such as depression, substance abuse, or cognitive deficits can further complicate the assessment process. • Cut-scores for existing instruments need to be further established with elderly veterans. • Use of exposure therapies with the elderly has not been adequately researched and mixed results have been obtained for supportive therapy for treatment of PTSD. Controlled research investigating pharmacological interventions for PTSD with the elderly is also limited. 	I

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Pachana et al. (2007)</p> <p><i>Development and Validation of the Geriatric Anxiety Inventory</i></p> <p>Australia</p> <p>Aim: to develop and to test the GAI in measuring anxiety in older people.</p>	<p>The authors first generated a large number of potential items by reference to existing anxiety scales, and reduced them to 60 through consultation with psychologists, psychiatrists and normal elderly people. These 60 items were piloted in 452 normal old people and 46 patients attending a psychogeriatric service. A 20-item version was developed Following the pilot. This version was validated in one clinical and two community samples.</p>	<p>The GAI has sound psychometric properties. Initial clinical testing indicates that it is able to discriminate between those with and without any anxiety disorder and between those with and without DSM-IV GAD.</p>	<p>III-2</p>
<p>Pfaff et al. (2009)</p> <p><i>Medical morbidity and severity of depression in a large primary care sample of older Australians: the DEPS-GP project</i></p> <p>Australia</p> <p>Aim: to estimate the prevalence of depression among older Australians with common medical morbidities.</p>	<p>The study included 20,183 community-dwelling adults aged 60 years and over, who were under the care of 383 general practitioners. The participants completed a postal questionnaire survey, which collected data on depressive symptoms, health status, social support, and demographic and lifestyle.</p>	<ul style="list-style-type: none"> • A total of 18 190 participants (90.1%) reported having at least one chronic physical health condition, while 1493 (7.1%) experienced clinically significant depression (3.1% major depressive syndrome; 4.0% other depressive syndrome). • Most chronic physical illnesses were associated with increased odds of depression, and participants with numerous medical morbidities and a high level of functional impairment were three to four times more likely to have a depressive illness. • Among older people who are medically unwell, the level of associated impairment may determine their risk of depression more than their acquired physical illness. • Many of the factors associated with depression in medically ill patients are amenable to treatment, and GPs are in a unique position to address this important public health issue. 	<p>IV</p>
<p>Pinquart et al. (2006)</p> <p><i>Treatments for later-life depressive conditions: A meta-analytic</i></p>	<p>Meta-analysis was used to integrate the results of 89 controlled studies of treatments focused on acute major depression (37 studies) and other depressive disorders (52</p>	<ul style="list-style-type: none"> • Psychotherapy and pharmacotherapy yield comparable effect sizes. • Older adults with minor depression or dysthymia may be more likely to benefit from psychotherapeutic interventions than from antidepressants. 	<p>I</p>

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p><i>comparison of pharmacotherapy and psychotherapy</i></p> <p>America</p> <p>Aim: to review the evidence on the comparative effects of pharmacotherapy versus psychotherapy in older people.</p>	<p>studies conducted with mixed diagnostic groups, including patients with major depression, minor depression, and dysthymia). A total of 5,328 older adults were included in the meta-analysis.</p>	<ul style="list-style-type: none"> • Comparisons of psychotherapy and pharmacotherapy must be interpreted with caution, in part because medication studies are more likely to use a credible active placebo, which may lead to smaller adjusted effect sizes in medication studies. • Given that psychotherapy and pharmacotherapy did not show strong differences in effect sizes, treatment choice should be based on other criteria, such as contraindications, treatment access, or patient preferences. • More controlled studies that randomly assign older depressed patients to pharmacotherapy, psychotherapy, and control conditions are needed. 	
<p>Pirkis et al. (2009)</p> <p><i>The community prevalence of depression in older Australians</i></p> <p>Australia</p> <p>Aim: to estimate the prevalence of depression among older adults in Australia.</p>	<p>The study used a two-stage recruitment strategy, which involved initial recruitment of general practitioners and subsequent recruitment of their older patients and invited them to complete a questionnaire. The questionnaire collected data on socio-demographic, clinical and quality of life variables. The Patient Health Questionnaire was used to collect information on depression. A total of 22,251 older people were included in the study.</p>	<ul style="list-style-type: none"> • The age-adjusted rate of clinically significant depression was 8.2%, with the age-adjusted rates for males being 8.6% and for females being 7.9%. • The overall, male and female age-adjusted rates for a major depressive episode were 1.8%, 1.9% and 1.7%, respectively. • The study suggests that depression among older people is a major public health problem. 	IV
<p>Radloff (1977)</p> <p><i>The CES-D scale, a self-report depression scale for research in the general population</i></p> <p>Aim: to investigate the</p>	<p>The scale was tested in household interview surveys and in psychiatric settings.</p>	<ul style="list-style-type: none"> • The scale was found to have very high internal consistency and adequate test-retest repeatability. • Validity was established by patterns of correlations with other self-report measures, by correlations with clinical ratings of depression, and by relationships with other variables which support its construct validity. • Reliability, validity, and factor structure were similar across a wide variety of demographic characteristics in 	IV

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reliability and validity of the CES-D.		the general population samples tested. The scale should be a useful tool for epidemiologic studies of depression.	
<p>Reuben et al. (1995)</p> <p><i>Attitudes of beginning medical students toward older persons: A five-campus study</i></p> <p>America</p> <p>Aim: to examine the attitudes of beginning medical students toward older persons and their medical care.</p>	<p>The study was conducted at the five University of California schools of medicine. All the surveys were distributed in person or by mail, with repeat mailings and telephone follow-up for non-responders. A total of 554 first year medical students responded to the survey. The survey collected data of demographic characteristics, personal contacts and previous coursework or research experience with older persons. Students' knowledge of aging was measured by some questions modified from the Facts on Aging Quiz. The attitudes of students toward older persons were assessed using the Aging Semantic Differential (ASD), the Maxwell-Sullivan Attitude Scale (MSAS), and two case scenarios.</p>	<ul style="list-style-type: none"> • Beginning medical students have already formed some unfavourable attitudes about older persons. • Few independent predictors (either sociodemographic or students' previous experiences) of student attitudes could be identified that would help in the selection of students who had more favourable attitudes toward older persons. Hence, attempts to generate physicians with good attitudes must rely on curricular efforts during medical school and residency training. 	IV
<p>Reynolds et al. (2006)</p> <p>Maintenance Treatment of Major Depression in Old Age</p> <p>America</p> <p>Aim: to test the efficacy of maintenance paroxetine and monthly interpersonal</p>	<p>The study was a 2 (paroxetine vs placebo) by 2 (monthly interpersonal psychotherapy vs clinical management) randomized, double-blind, placebo-controlled maintenance trial. A total of 116 patients aged 70 and older were randomly assigned to one of four maintenance-treatment programs for two years or until the recurrence of major depression.</p>	<p>The study found that the use of maintenance pharmacotherapy, but not interpersonal psychotherapy, was effective in preventing recurrent depression in people 70 years of age or older.</p>	II

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psychotherapy in older patients with depression			
<p>Richardson & Kilty (1991)</p> <p><i>Adjustment to retirement: Continuity vs. discontinuity</i></p> <p>America</p> <p>Aim: to identify differences in patterns of adjustment and differences in the discriminating variables that predict these patterns.</p>	<p>The study was longitudinal in design and included a pretest interview of 250 people at the time of retirement, a posttest interview of 242 retirees six months after retirement, and a one-year follow-up of 222 completed by mail.</p>	<ul style="list-style-type: none"> • The study found significant main effect for time for all three adjustment variables (well-being, morale, satisfaction), with well-being declining at six-month interval. • A discriminant analysis of three types of adjustment groups revealed that responses to retirement vary depending on several factors. 	III-2
<p>Sadavoy (1997)</p> <p><i>Survivors: A review of the late-life effects of prior psychological trauma</i></p> <p>America</p> <p>Aim: to review research on late-life effects of prior psychological trauma.</p>	<p>The review involved a literature search on the epidemiology, symptom picture, and treatment of elderly patients who have encountered serious psychological trauma earlier in life. Data are predominantly derived from studies of aging Holocaust survivors and combat veterans from World War II, the Korean Conflict, and Vietnam.</p>	<ul style="list-style-type: none"> • Survivor syndromes persist into old age, but patterns of expression vary. • Holocaust survivors appear to have adapted well to instrumental aspects of life, whereas combat warriors may show less functional life-adaptation. • Persisting symptoms include marked disruptions of sleep and dreaming, intrusive memories, impairment of trust, avoidance of stressors, and heightened vulnerability to various types of age-associated retraumatisation. • There have been some successful trials in group, individual, and family clinical interventions; however, there is a deficiency of controlled treatment studies of traumatised elderly patients. 	I
<p>Salzman et al. (2002)</p> <p><i>Drug and ECT Treatment of Depression in the</i></p>	<p>The review involved a literature search in Medline and Paperchase (1995 to 2001). A review of published chapters, review articles,</p>	<ul style="list-style-type: none"> • The review supports the conclusions that antidepressants and ECT are effective and safe treatments for depressed elderly patients. • Differences in efficacy and side effects appear to be slight 	I

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p><i>Elderly, 1996–2001: A Literature Review</i></p> <p>America</p> <p>Aim: to examine recent studies of drug and ECT treatment of depression in the elderly</p>	<p>and meta-analyses was also conducted. A total of 97 antidepressant reports and 12 ECT reports were included in the review. These paper were grouped into four categories: those reporting comparative studies, those in which the therapeutic agent was not compared with another, articles about ECT, and review articles.</p>	<p>among the various types of antidepressants.</p> <ul style="list-style-type: none"> • Research studies of depressed elderly increased markedly since 1995 compared with all previous years although more studies are still necessary. 	
<p>Sandra et al. (2006)</p> <p><i>The feasibility of a GP led screening intervention for depression among nursing home residents</i></p> <p>Australia</p> <p>Aim: to examine the feasibility of a brief intervention training for GP in the administration of a depression screening instrument among nursing home residents.</p>	<p>Ten GPs and 38 patients were included in the study. The GPs attended a single education session on late-life depression and were trained in the use of the Cornell Scale for Depression in Dementia. Following the intervention GPs reviewed their patients for depression. Diagnosis of depression pre and post intervention; changes in antidepressant medications post intervention were investigated.</p>	<ul style="list-style-type: none"> • This study demonstrated that a single education session on late-life depression was feasible and was associated with an improvement in GPs' recognition of depression among nursing home patients. • This study showed that training in late-life depression is sorely needed. A fundamental part of this training was to highlight the need for regular monitoring of patients diagnosed with depression. • The high rate of residents presenting with probable major depression despite being prescribed antidepressants indicates that depression symptoms are inadequately recognised and that existing treatments are ineffective for some patients in nursing homes. 	III-3
<p>Schoevers et al. (2003)</p> <p><i>Comorbidity and risk patterns of depression, generalised anxiety disorder and mixed anxiety-depression in</i></p>	<p>The study included 4,051 community living older persons in the Netherlands. The analyses include GMS-AGECAT diagnoses, demographic variables, environmental vulnerability, longstanding vulnerability,</p>	<ul style="list-style-type: none"> • The prevalence of pure depression was 12.2%, pure generalised anxiety 2.9%, mixed anxiety-depression 1.8%. • Comorbidity of depression and anxiety increased with higher severity levels of both depression and generalised anxiety. Comorbidity was also twice as likely in women than in men. 	IV

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p><i>later life: results from the AMSTEL study</i></p> <p>The Netherlands</p> <p>Aim: to investigate patterns of comorbidity and risk profiles for depression, generalised anxiety and mixed anxiety-depression in older people.</p>	<p>physical/functional stresses and gender.</p>	<ul style="list-style-type: none"> • Longstanding vulnerability was associated significantly more strongly with mixed anxiety-depression than with pure anxiety and pure depression. • Mixed anxiety-depression is a more severe form of psychopathology that is almost specific to women in this age group. 	
<p>Schweitzer et al. (2002)</p> <p><i>Is late onset depression a prodrome to dementia?</i></p> <p>Australia</p> <p>Aim: to investigate whether late onset depression is a prodromal disorder for dementia.</p>	<p>This paper was a review of clinical, epidemiological, structural neuroimaging and genetic investigations of late life depression performed over the past two decades.</p>	<ul style="list-style-type: none"> • Epidemiological data support a close association of depressive symptoms and cognitive decline or the development of dementia in the elderly. • The majority of available studies indicate that cognitive impairment may accompany the depressive syndrome rather than depression necessarily predating the onset of cognitive decline. • Late onset depression (LOD) patients are more likely to have cognitive impairment and to have more deep white matter lesions. • It is likely that LOD is not a prodrome for a particular type of dementia, but the majority of patients who do develop dementia will acquire Alzheimer's disease or a vascular dementia. • Pathophysiological mechanisms underlying the development of a depressive syndrome as a prelude to a chronic degenerative condition are not known. 	I
<p>Seignourel et al. (2008)</p> <p><i>Anxiety in dementia: A critical review</i></p> <p>America</p>	<p>The review involved a systematic search of PubMed and PsycINFO using the key words dementia and anxiety. In PsychINFO, the search also included the combination of subject words dementia and</p>	<ul style="list-style-type: none"> • Defining anxiety in individuals with dementia is complicated by the overlap between symptoms of anxiety, depression and dementia, and by the influence of the source of information. More research is needed to address the difficult issue of how to define, conceptualise and operationalise anxiety in dementia. 	I

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Aim: to provide an updated and comprehensive review on anxiety symptoms in dementia.</p>	<p>neuropsychiatry.</p>	<ul style="list-style-type: none"> • Several instruments are available to assess anxiety in people with dementia. The reliability of these instruments is acceptable, but their validity has not been sufficiently examined, and they may discriminate poorly between anxiety and depression. • There is a paucity of research on the role of environmental variables, social support and social stimulation on anxiety. • More research needs to be conducted regarding the clinical characteristics of anxiety in dementia. 	
<p>Shankar et al. (1999)</p> <p><i>The development of a valid and reliable scale for rating anxiety in dementia (RAID)</i></p> <p>England</p> <p>Aim: to examine the validity and reliability of a measure of anxiety in dementia.</p>	<p>The study included 83 patients (51 inpatients and 32 day-hospital patients) who qualified for the diagnosis of dementia based on the DSM-IV.</p>	<ul style="list-style-type: none"> • Anxiety scores were not related to sex, age, accommodation or DSM-IV diagnosis of the type of dementia. • Both subjects with physical illnesses and subjects with insight into their memory problems had significantly higher anxiety scores. • The scale had good reliability and validity (content validity, concurrent validity, and criterion validity). It should be a useful clinical and research instrument for assessing anxiety in dementia sufferers. 	IV
<p>Singh et al. (2001)</p> <p><i>The efficacy of exercise as a long-term antidepressant in elderly subjects: a randomized, controlled trial</i></p> <p>America</p> <p>Aim: to test the feasibility and efficacy of</p>	<p>The study included 32 community-dwelling older patients with major or minor depression or dysthymia. The participants were randomly allocated to the experimental or the control groups. The experimental group engaged in 10 weeks of supervised weight-lifting exercise followed by 10 weeks of unsupervised exercise. The control group attended lectures for 10 weeks. Both groups were monitored with a brief weekly phone</p>	<ul style="list-style-type: none"> • The BDI was significantly reduced at both 20 weeks and 26 months of follow-up in the experimental group compared to the control group, suggesting that the antidepressant effect of exercise is maintained. • Self-efficacy and morale in the experimental group continued to improve with exercise up to 20 weeks despite the withdrawal of supervision. At the 26-month follow-up, the experimental group were still actively exercising at target levels. • The study suggests that long-term changes in exercise behavior are possible in some patients even without supervision. 	II

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unsupervised exercise as a long-term treatment for clinical depression in elderly patients.	call in that period. No contact was made with either group after 20 weeks until final 26-month follow-up. Blinded assessment was made at 20 and 26 weeks. Depression was measured using the Beck Depression Inventory (BDI).		
<p>Skultety & Zeiss (2006)</p> <p><i>The treatment of depression in older adults in the primary care setting: an evidence-based review</i></p> <p>America</p> <p>Aim: to provide a recent review on psychosocial treatments for depression in older adults in primary care settings.</p>	<p>The review involved a literature search in PsycINFO and Medline (1994 – 2004). The search was limited to studies with samples aged 55 and older and randomized controlled trials that compared psychosocial interventions conducted within the primary care setting with “usual care” conditions. Eight studies met inclusion criteria and were included in the review.</p>	<ul style="list-style-type: none"> • Two types of treatment formats were evident in current treatment of depression in primary care: Geriatric Evaluation Management (GEM) clinics and an approach labelled integrated health care models. • Support was found for each model, with improvement in depressive symptoms and better outcomes than usual care; however, findings varied by depression severity, and interventions were difficult to compare. • The authors recommend the use of interdisciplinary teams and more implementation of psychosocial treatments. 	I
<p>Slade et al. (2009)</p> <p><i>The Mental Health of Australians 2</i></p> <p>Australia</p>	<p>This report provided more detailed data and further analyses of the 2007 National Survey of Mental Health and Wellbeing.</p>	<ul style="list-style-type: none"> • Females experienced much higher rates of anxiety disorders and depressive disorders compared to males. • The prevalence of affective disorders was not strongly associated with age. • The prevalence of anxiety disorders was related to age; however, this relationship was different for males and females. For females aged 16-54 years the prevalence was very similar but declined for females 55 years and over. For males, the prevalence peaked in the 35-44 year age group and then declined with increasing age. 	IV
Snowdon (1998)	Information not available	<ul style="list-style-type: none"> • Assessment is the vital first step in management of late-life depression. 	Not applicabl

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<p><i>Management of late-life depression</i></p> <p>Australia</p> <p>Aim: to provide health professionals with information on how best to recognise and treat depressive condition in older people.</p>		<ul style="list-style-type: none"> • Biological treatments (including medication and ECT) are more likely than psychological approaches to be effective in relieving severe depression. • If severe depression is associated with brain changes, eg white matter lesions, recovery is less likely. • A complex interplay of psychological and organic factors may account for depression associated medical conditions. • Psychological and psychosocial interventions may be appropriate in managing non-melancholic, loss-related or situational depression, though antidepressants are also effective in many cases. • Research is needed to compare the effectiveness of antidepressants and non-pharmacological treatments in non-melancholic and understandable depression. • An optimistic and persistent approach will lead to a good and maintained outcome in most cases of late-life depression. 	e
<p>Snowdon & Fleming (2008)</p> <p><i>Recognising depression in residential facilities: An Australian challenge</i></p> <p>Australia</p> <p>Aims: to determine the prevalence of depression in Australian aged care facilities and to explore factors associated with the presence of depressive symptoms.</p>	<p>Direct care staff in 168 aged care facilities administered the Cornell Scale for Depression in Dementia (CSDD) and the 15-item Geriatric Depression Scale (GDS-15) (in those able to be tested) to every fourth resident. Participants in seven of the 168 facilities were also clinically assessed and diagnosed by a psychiatrist where appropriate.</p>	<ul style="list-style-type: none"> • CSDD ratings by staff showed that 40% of high care and 25% of low care residents scored in the depressed range(>7). • GDS-15 self-report scores of high care residents exceeded a cut-point of 6/7 in 44%, and of 5/6 in 51%. The corresponding percentages of low care residents were 24% and 30%. • The CSDD ratings indicated far more subjects to be depressed than the proportion found to fulfil criteria for a DSM-IV depressive disorder. • The GDS functioned well in relation to the diagnoses made by the psychiatrist. • Among subjects who answered the GDS-15 questions, the factors most highly associated with development of depression were: (1) grief over loss of opportunities and abilities to take part in valued activities; (2) being described by a relative as having been depressed before 	IV

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		<p>admission; (3) not being involved in helping others; (4) attending but not taking part in activities; and (5) having problems settling in, particularly in establishing good relationships.</p> <ul style="list-style-type: none"> • No significant relationship was found between depression scale ratings and length of stay in, or the size of facilities. • The CSDD (and the GDS-15 in those without severe cognitive impairment) proved useful in identifying residents who were depressed. 	
<p>Social Health Reference Group (2004)</p> <p><i>A national strategic framework for Aboriginal and Torres Strait Islander peoples' mental health and social and emotional wellbeing 2004- 2009</i></p> <p>Australia</p>	<p>This Framework aims to respond to the high incidence of social and emotional well being problems and mental ill health, by providing a framework for national action. It has been developed under the auspices of the National Mental Health Working Group and the National Aboriginal and Torres Strait Islander Health Council, by the Social Health Reference Group, which was specially appointed to undertake this task.</p>	<ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander health is viewed in a holistic context that encompasses mental health and physical, cultural and spiritual health. • Achieving optimal conditions for health and wellbeing requires a holistic approach to respond to the specific health needs the Aboriginal people. 	Not applicable
<p>Steinman et al. (2007)</p> <p><i>Recommendations for Treating Depression in Community-Based Older Adults</i></p> <p>America</p> <p>Aim: to present recommendations for community-based treatment of late-life</p>	<p>An expert panel of mental health and public health researchers and community-based practitioners in aging was convened to form consensus-based recommendations. When making recommendations, panellists considered feasibility and appropriateness for community-based delivery, as well as strength of evidence on program effectiveness from a systematic literature review of articles published till 2005</p>	<ul style="list-style-type: none"> • The expert panel strongly recommended depression care management–modelled interventions delivered at home or at primary care clinics. • The panel recommended individual cognitive behavioral therapy. • Interventions not recommended as primary treatments for late-life depression included education and skills training, comprehensive geriatric health evaluation programs, exercise, and physical rehabilitation/occupational therapy. • There was insufficient evidence for making recommendations for several intervention categories, including group psychotherapy and psychotherapies other 	I

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depression.		than cognitive behavioral therapy.	
<p>Strawbridge et al. (2002)</p> <p><i>Physical Activity Reduces the Risk of Subsequent Depression for Older Adults</i></p> <p>America</p> <p>Aim: to compare the effects of higher levels of physical activity on prevalent and incident depression in older adults.</p>	<p>The study included 1,947 community-dwelling adults from the Alameda County Study (an American longitudinal study of health and mortality) aged 50–94 years at baseline in 1994 with 5 years of follow-up.</p>	<ul style="list-style-type: none"> • Greater physical activity was protective for both prevalent and incident depression over 5 years even with adjustments for age, sex, ethnicity, financial strain, chronic conditions, disability, body mass index, alcohol consumption, smoking, and social relations. • This finding supports the protective effects of physical activity on depression for older adults. 	III-3
<p>Swan & Raphael (1995)</p> <p><i>'Ways forward': national consultancy report on Aboriginal and Torres Strait Islander mental health: parts 1 & 2</i></p> <p>Australia</p>	<p>This report represents a national overview of the mental health needs and problems of the Aboriginal and Torres Strait Islander people around Australia. It follows the National Aboriginal Mental Health Conference, and incorporates many of the insights and recommendations supported by Aboriginal people at that meeting. It was also based on the views and recommendations made by Aboriginal people consulted around Australia.</p>	<ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander health is viewed in a holistic context, that encompasses mental health and physical, cultural and spiritual health. • The consultation process revealed extensive problems of Aboriginal mental health and high levels of unmet need. • Evidence was presented that mental health problems were a major difficulty for most communities, and that there were few health and mental health resources available to deal with them. • While data was generally inadequate, available evidence of a systematic kind indicated that Aboriginal people suffered mental health problems such as depression at a very high rate, compared to non-Aboriginal people, and that rates of self-harm and suicide are higher. • Trauma and Grief were seen as overwhelming problems, both related to past history of loss and traumatisation and current frequent losses with excess mortality in family and kinship networks. 	Not applicable

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		<ul style="list-style-type: none"> Evidence from the many Aboriginal people and organisations presenting to the consultancy highlighted the extent and severity of these problems and their strong relationship to mental and physical health problems. 	
<p>Taylor & Doraiswamy (2004)</p> <p><i>A Systematic Review of Antidepressant Placebo-Controlled Trials for Geriatric Depression: Limitations of Current Data and Directions for the Future</i></p> <p>America</p> <p>Aim: to provide evidence on antidepressant efficacy in the 'general' elderly population</p>	<p>The review involved a literature search in MEDLINE (1966– 2003) and PSYCINFO (1872–2003) for randomized, placebo-controlled antidepressant medication trials in populations over age 55 years. A total of 18 placebo-controlled trials were included in the review with a combined sample size of 2252. The mean sample size was 51 (range 20–728) and mean trial duration was 7 weeks.</p>	<ul style="list-style-type: none"> The studies support the clinical observation that antidepressants can effectively treat depression in the elderly. The paper found no significant difference between drug classes, although given the available trials, only TCAs and SSRIs could be compared. Most published studies examine small sample sizes and do not include common comorbid conditions. Efficacy studies examining relapse prevention are lacking. Large sample studies are urgently needed to address the unmet needs for data on safety and efficacy of antidepressants in this population. 	I
<p>Thomson et al. (2005)</p> <p><i>A scoping study of depression among Indigenous peoples</i></p> <p>Australia</p> <p>Aim: to summarise information about depression among Indigenous peoples.</p>	<p>The review involved a literature search for both published and the unpublished 'grey' literature between 1990 and 2005. Key literature published prior to 1990 was also included. The study also involved the identification of innovative programs and projects addressing depression and related mental health issues among Australia's Indigenous peoples.</p>	<ul style="list-style-type: none"> As with many other aspects of Indigenous health, information about the extent of depression and other issues of social and emotional wellbeing among Indigenous peoples is incomplete. Until recently, progress in the area has been limited because the social and emotional wellbeing initiatives were not closely linked with the major developments occurring as a part of the first two national mental health plans. Even though there was poor linkage between the Indigenous social and emotional wellbeing initiatives and general mental health developments in Australia, quite a large number of innovative programs and projects 	Not graded

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		addressing Indigenous mental health issues have been developed. These include programs and projects in the areas of awareness/education, prevention and treatment.	
<p>Uncapher & Areal</p> <p><i>Physicians Are Less Willing to Treat Suicidal Ideation in Older Patients</i></p> <p>Aim: to determine if an age bias exists among primary care physicians when they contemplate treating suicidal patients.</p>	<p>This study used a between-subjects experimental design. A total of 215 physicians from the University of California, San Francisco participated in the study. The randomly assigned experimental group received a vignette of a geriatric, retired patient who was depressed and suicidal (n = 100 participants). The control group received an identical but younger, employed patient (n = 115 participants).</p>	<ul style="list-style-type: none"> • The physicians in this study recognised depression and suicidal risk in both groups. • The physicians in the experimental group reported less willingness to treat the older suicidal patient compared with the control group. • The physicians in the experimental group were more likely to feel that suicidal ideation on the part of the older patient was rational and normal. They were also less willing to use therapeutic strategies to help the older patient, and they were not optimistic that psychiatrists or psychologists could help the suicidal older patient. • This study suggests that primary care physicians are capable of recognising suicidal ideation but are less willing to treat it if the patient is older and retired. 	III-1
<p>Vicary & Westerman (2004)</p> <p><i>'That's just the way he is': some implications of Aboriginal mental health beliefs</i></p> <p>Australia</p> <p>Aim: to investigate Indigenous people's view of mental health.</p>	<p>Seventy Aboriginal people were interviewed about their beliefs and attitudes towards mental health, western psychology and western practitioners, and strategies for improving mental health care delivery.</p>	<ul style="list-style-type: none"> • The study highlights that participants consistently perceived the course and treatment of depression as following a different aetiology from that of mainstream Australia. • Almost three in four respondents indicated that they believed that Aboriginal people did not perceive depression as a state that could be addressed via treatment. Instead they perceived it as a characteristic of the individual concerned stating 'that's just the way he is'. Subsequently they reported that individuals might not get the assistance they require in overcoming their illness. 	Qualitative
<p>Villamil, et al. (2006)</p> <p><i>Low prevalence of depression and anxiety is linked to statutory</i></p>	<p>The British Psychiatric Morbidity Survey (BPMS) 2000 was analysed, including 1875 men and 2253 women aged 45–75 years. Diagnoses were from the Revised</p>	<ul style="list-style-type: none"> • There are marked reductions in the prevalence of depressive episode after 60 years for women and 65 years for men, compared to the youngest age groups. • There are also remarked reductions in the prevalence of anxiety disorder in both men and women. 	IV

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<p><i>retirement ages rather than personal work exit: a national survey</i></p> <p>England</p> <p>Aim: to establish whether work status, age or other known risk factors account for the reduced prevalence of depressive episode and anxiety disorder around retirement ages for men and for women.</p>	<p>Clinical Interview Schedule (CIS-R). Logistic models were adjusted for sociodemographic factors, social network, work status, life events, physical illness and disability.</p>	<ul style="list-style-type: none"> • In fully adjusted multivariate models, the strong association between diagnoses and age groups remained, for both genders. • Work status was a significant factor for men but not for women. • There is a discontinuity in the prevalence of depressive episode for both men and women, coinciding with statutory retirement ages. 	
<p>Vink et al. (2008)</p> <p><i>Risk factors for anxiety and depression in the elderly: A review</i></p> <p>Netherlands</p> <p>Aim: to give a comprehensive overview of risk factors for clinically relevant anxiety and depression in later life.</p>	<p>The review involved a literature search in MEDLINE, PsycINFO and Sociological Abstracts (1995 – 2005). Key words included the names of different levels of anxiety and mood disorders, and “elderly” or “older adults” in combination of the terms “risk factor”, “etiology”, “diathesisstress”, “biopsychosocial”, “predictor”, “onset”, “determinant” and “vulnerability”. The review included a total of 88 studies. The abstracted risk factors from studies on anxiety (N=17) and depression (N=71) were clustered into the categories biological, psychological and social.</p>	<ul style="list-style-type: none"> • Personality traits, inadequate coping strategies, previous psychopathology, qualitative aspects of social network, stressful life events and female gender are risk factors associated with anxiety in the elderly. • Chronic diseases, poor self-perceived health, functional disability, personality traits, inadequate coping strategies, previous psychopathology, smaller network size, being unmarried, qualitative aspects of social network, stressful life events and female gender are risk factors associated with depression in the elderly. • There are many similarities between risk factors for anxiety and depression in old age, especially with regard to psychological risk factors. • There are also a number of differences between depression and anxiety in older people, particularly in differential effect of social factors on anxiety and depression. For example, stressful events are important predictors for both anxiety and depression, but anxiety seems better predicted by traumatic events. • This review is consistent with the idea that depression 	I

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		may be more strongly related to loss events, whereas anxiety may result from actual and more imminent threats.	
<p>Watson & Pignone (2003)</p> <p><i>Screening accuracy for late-life depression in primary care: A systematic review America</i></p> <p>Aim: to determine the accuracy of depression screening instruments for older adults in primary care.</p>	<p>The review involved a literature search in MEDLINE, PsycINFO and the Cochrane database (1966 - 2001), on depression, anxiety and neurosis. Eighteen articles are included in this review, representing 9 different screening instruments.</p>	<ul style="list-style-type: none"> • The most commonly evaluated were the Geriatric Depression Scale (30 and 15-item versions), the Center for Epidemiologic Studies Depression Scale, and the SelfCARE (D). • Differences in the performance of these 3 instruments were minimal; sensitivities ranged from 74% to 100% and specificities ranged from 53% to 98%. • More research is needed to determine the accuracy of depression screening instruments for demented individuals, and for those with subthreshold depressive disorders. 	I
<p>Weintraub & Ruskin (1999)</p> <p><i>Post-traumatic stress disorder in the elderly: A review</i></p> <p>America</p> <p>Aim: to review literature on post-traumatic stress disorder in the elderly.</p>	<p>Information not available.</p>	<ul style="list-style-type: none"> • Posttraumatic disorder (PTSD) in elderly persons impairs their ability to deal with subsequent life stress and to negotiate the developmental stages of late life successfully. • PTSD can stem from trauma at any point in life. • Symptoms may be persistent or intermittent, and the disorder may be time-limited or chronic. • Increasing severity of trauma and premorbid psychiatric illness predispose to the development of PTSD, and certain personality traits and good psychosocial support protect against it. • Elderly individuals do not appear more predisposed than young persons to develop PTSD, and symptoms of the disorder are similar across age groups. • Dysfunctions of the adrenergic system and the hypothalamic-pituitary-adrenal axis have been implicated in the neurobiology of PTSD, although there is no current evidence that the changes seen in these systems with 	I

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		<p>aging affect the development or presentation of PTSD in older individuals.</p> <ul style="list-style-type: none"> • Antidepressants, group therapy, and cognitive-behavioral therapy are presently the mainstays of treatment, although to date no systematic and controlled research has been done on the treatment of PTSD in this age group. 	
<p>Wetherell, Maser & van Balkom (2005)</p> <p><i>Anxiety disorders in the elderly: outdated beliefs and a research agenda</i></p>	<p>Editorial</p>	<ul style="list-style-type: none"> • Although it is generally believed that anxiety in older adults is less common than depression, epidemiological studies reveal that the opposite is true. • In contrast to current clinical opinion that the typical late-life anxiety presentation is a mixed anxiety–depressive state, the prevalence of mixed anxiety–depression is lower than the prevalence of either major depression or anxiety disorders. • Another common misunderstanding is that late-onset anxiety is very rare. 	<p>Not applicable</p>
<p>Wetherell et al. (2005)</p> <p><i>Psychological Interventions for Late-Life Anxiety: A Review and Early Lessons From the CALM study</i></p> <p>America</p> <p>Aim: to review the literature on psychological interventions for late-life anxiety and to evaluate a pilot study.</p>	<p>The author did not provide information on the literature review. The CALM study intervention consists of 12 sessions of individual therapy. The intervention included 14 modules to teach skills for dealing with problems and symptoms most commonly encountered among anxious older adults. Two modules were taught to every participant in the first and last sessions, respectively. A selection of the other modules were taught during the remaining 10 sessions based on each participant's individual needs. The protocol was piloted with 2 patients to date.</p>	<p>Findings from the literature review: There is some empirical evidence from the literature supporting various psychological treatment approaches (eg, progressive muscle relaxation, supportive therapy, CBT) for geriatric anxiety.</p> <p>Findings from the pilot study:</p> <ul style="list-style-type: none"> • The pilot study suggests that the CALM Study protocol does provide some benefit to anxious older adults, particularly with respect to symptoms of pathological worry. • Some lessons from the pilot included the importance of including family members when willing and available and the importance of devoting adequate time to thoroughly teach skills. 	<p>I</p> <p>IV</p>
<p>World Health</p>	<p>This report was prepared by a panel</p>	<ul style="list-style-type: none"> • Approximately 20% of elderly people above the age of 60 	<p>Not</p>

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Organization (2001) <i>Conquering Depression: You Can Get Out Of The Blues</i>	of experts from the South East Asia and provides valuable information on the current state of knowledge about depression.	have some depressive symptoms, but an identifiable diagnosis of depression is made only in 5% of the elderly population. <ul style="list-style-type: none"> • Depression occurs frequently among the medically ill elderly population where nearly 30% have associated depression. • Depression is very common among residents of old age homes also. • Depression among the elderly frequently remains undetected. Very often, depression is attributed to the ageing process and no intervention is sought or provided. • Elderly people have a much higher risk of suicide than the general population. 	applicable
Yesavage et al. (1983) <i>Development and validation of a geriatric depression screening scale, a preliminary report</i> Aim: to investigate the reliability and validity of the GDS.	Full text not available to the project team.	<ul style="list-style-type: none"> • The Geriatric Depression Scale (GDS), the Hamilton Rating Scale for Depression (HRS-D) and the Zung Self-Rating Depression Scale (SDS) were all found to be internally consistent measures, and each of the scales was correlated with the subject's number of Research Diagnostic Criteria (RDC) symptoms. • The GDS and the HRS-D were significantly better correlated with RDC symptoms than was the SDS. • The GDS represents a reliable and valid self-rating depression screening scale for elderly populations 	IV
Zigmond & Snaith (1983) <i>The Hospital Anxiety and Depression Scale</i> England Aim to examine the validity and reliability of the HAD.	Full text not available to the project team.	<ul style="list-style-type: none"> • The self-assessment scale was a reliable instrument for detecting states of depression and anxiety in the setting of a hospital medical outpatient clinic. • The anxiety and depressive subscales are also valid measures of severity of the emotional disorder. • The introduction of the scales into general hospital practice would facilitate the large task of detection and management of emotional disorder in patients under investigation and treatment in medical and surgical departments. 	IV

Authors, year, title, country, aim	Method, Study population, nature of intervention	Evidence of intervention effects/Major findings/comment	Level of Evidence
<p>Zivin & Kales (2008)</p> <p><i>Adherence to Depression Treatment in Older Adults: A Narrative Review</i></p> <p>America</p> <p>Aim: to provide a narrative review of the current evidence for key patient-level factors associated with depression treatment adherence among older adults.</p>	<p>The review was conceptualised under the theory of Reasoned Action, a model of health behaviours, and involved a literature review in MEDLINE (1950 - 2006) for research on key patient-level factors associated with depression treatment adherence among older adults. Key words included 'depression', 'adherence', and 'elderly'.</p>	<ul style="list-style-type: none"> • The factors were categorised into three groups according to how their impact on adherence might be affected by specialised treatment approaches or interventions as: (i) modifiable; (ii) potentially modifiable; and (iii) non-modifiable. • Based on current evidence, modifiable factors associated with depression treatment adherence include patient attitudes, beliefs and social norms. • Potentially modifiable factors associated with adherence to depression treatment include co-morbid anxiety, substance use, cognitive status, polypharmacy and medical co-morbidity, social support and the cost of treatment. • Non-modifiable factors include patient gender and race. • Importantly, non-modifiable factors may interact with modifiable factors to affect health behavioural intent (e.g. race and spiritual beliefs). Thus, adherence to depression treatment in older adults is associated with multiple factors. • Strategies to improve patient adherence need to be multidimensional, including consideration of age-related cognitive and co-morbidity factors, environmental and social factors, functional status and belief systems. 	<p>I</p>

Appendix D: List of *beyondblue* and NHMRC funded late-life depression and anxiety project

Year	Title	Chief Investigators	Amount of funding
<i>beyondblue</i>			
03-04	Linking the health and leisure sectors: using physical activity in the management of depressed older people	Dr Jane Sims	50,000
03-04	Recognising and screening for depression among older people living in residential care (An interdisciplinary approach to recognising and treating depression among older Australians living in residential care)	Prof. Marita McCabe	50,000
04-05	Development of a training program for professional carers in recognising late-life depression I	Prof. Marita McCabe	50,000
04-05	Caring for the depressed elderly in the emergency department: Establishing linkages between sub-acute, primary and community care	Dr Lynette Joubert	60,000
04-11	Beyond Ageing – a community based intervention study to determine what works for preventing depression in older people	Prof. Helen Christensen	1,650,083
2005	The feasibility of a GP-led screening intervention for depression among nursing home residents	Prof. Marilyn Liddell	150,000
05-06	Rural carers on-line: a feasibility study	Dr. Briony Dow	50,000
05-06	The <i>beyondblue</i> training program for professional carers in recognising late-life depression	Prof. Marita McCabe	70,000
2006	Maturity Blueprint - a training program for professional staff of Baptcare Community Aged Care Program	Partnership with Baptcare Community Aged Care Programs	30,000
2006	Specialist mental health consultation in the treatment of depression in nursing home residents with dementia	Prof. Daniel O'Connor	200,000
2006	Towards the identification and minimisation of depression and psychological distress in family caregivers of people receiving palliative care	Dr Peter Hudson	200,000
06-11	<i>beyond maturityblues</i> – COTA Peer Education Program – delivery of education sessions on depression for older people in the community	Partnership with all State/Territory COTAs via COTA SA	1,830,656
07-10	A GP intervention to assist the primary care and management of depression for carers of people with dementia	Prof. Dimity Pond	100,000
06-07	Depression Management and Prevention of Suicide Amongst the Elderly in General Practice Study (DEPS-GP)	Universities of - Western Australia, Melbourne, Sydney, Adelaide, New	50,000

Year	Title	Chief Investigators	Amount of funding
		South Wales, Queensland	
06-08	Multicultural Information on Depression online (MIDonline): Development and evaluation of an IT resource to improve depression literacy and assist in pathways to mental health care for people of CALD background	Dr Litza Kiroopoulos	200,000
06-14	45 and UP Study- Research to improve health and wellbeing	Sax Institute for Health Research, the Cancer Council NSW, the National Heart Foundation NSW division, NSW Health and <i>beyondblue</i> .	850,000
2007	Depression & Dementia Awareness Training	Partnership with Alzheimer's Australia SA Inc, on behalf of Alzheimer's Australia	162,000
2007	A randomised, controlled, final-stage evaluation of the <i>beyondblue</i> depression-training program for aged care staff: Impact on the delivery of health care services for older people with depression (an extension of a <i>beyondblue</i> VCoE 2004 Grant)	A. Prof. David Mellor	100,000
08-09	Telelink – raising awareness of depression via Telelink to reach isolated seniors in the community	COTA Victoria/Vision Australia	7,820
NHMRC			
2005	Reducing depression and suicide amongst older Australians	Prof. Osvaldo Almeida	753,275
2005	Assessing the health needs of older Indigenous Australians living in the Kimberley	Dr Dina LoGiudice	238,750
2005	The Diagnosis of Depression in Alzheimer's Disease	A. Prof. Sergio Starkstein	354,125
2008	Prevention and management of mental disorders in older Australians	Prof Helen Christensen	1,955,550
2009	Randomised trial of homocysteine lowering treatment of depression in later life	Prof. Osvaldo P Almeida	747,750
2009	A longitudinal study of depression, anxiety, substance use and cognitive change: PATH Through Life Wave 3	A. Prof. Kaarin Anstey	1,974,550

Appendix E: List of projects identified from Ageing Research Online

Year	Title	Chief Investigator(s)	Funding source(s)
90-02	Canberra Longitudinal Study	Prof Anthony Jorm, Professor Helen Christensen, Dr Bryan Rodgers, Trish Jacomb	NHMRC
00-04	An Intervention Trial to Prevent Cognitive Impairment and Depression in Older Men	Professor Leon Flicker, Professor Osvaldo Almeida, Dr Paul Norman, Dr Roger Clarnette, A/Prof Ralph Martins	NHMRC
00-08	Beyond Depression: Frail Elderly People Talk About Limited Lives and Resilience	Researchers: Assoc Prof Cherry Russell, Dr Taylor Dong	University of Sydney
Till 2003	Cross Cultural Studies of Depression in the elderly	Professor Andrew MacKinnon, Professor John McCallum	WHO
03-04	Transition to Aged Care	NA	DVA
03 - 06	The Contribution of Anxiety to Recovery from Physical Illness in Older People	Prof Henry Jackson	NHMRC
2004	Is mixed anxiety-depression a common feature of older women?	Professor Annette Dobson, Dr Nancy Pachana	NA
2005	The Effectiveness of Snoezelen Therapy to Decrease Anxiety and Restlessness in Nursing Home Residents	Researchers: Ms Lyn Reid	NA
05-06	Regenerate: Enhancing the physical and mental health of chronic post stroke patients	Dr Jane Sims	<i>beyondblue</i>
05 - 06	Assessing Health Knowledge Related to Driving, and Anxiety Related to Driving in Older Adults	Ms Janine Walker, Dr Kaarin Anstey, Dr Tim Windsor	NRMA - ACT Road Safety Trust
NA	Impact of anxiety and changes in driving behaviours on driving performance	Dr Nancy Pachana	University of Queensland
NA	Impact of anxiety on self-esteem and coping skills in menopausal women	Dr Nancy Pachana	NA
NA	Validation of an anxiety assessment instrument for older adults	Dr Nancy Pachana	University of Queensland
NA	Anxiety and depression in older adults	Professor H Brodaty, Dr Caroline Hunt, Ms Christina Donatti	NA

Appendix F: NSW Older People's Mental Health Working Group

Meet bimonthly for two hours in the Department of Health. Key representatives on Older People's Mental Health Working Group include³:

- NSW Older People's Mental Health Policy Unit. Mental Health and Drug & Alcohol Office, NSW Health
- Area Mental Health Representative
- NSW Health Area Specialist Mental Health Services for Older People (SMHSOP) Clinical Coordinators (1 rural and 1 metro)
- NSW Faculty of Psychiatry of Old Age (FPOA) representative
- Psychogeriatric Nurses Association Australia Inc. representative
- NSW Health Elderly Suicide Prevention Network representative
- NSW Health Area Director of Aged Care representative
- Aged Care Association Australia (NSW) representative
- Aged & Community Services Association (NSW) representative
- General Practitioner representative
- ARAFMI NSW (carer/consumer) representative
- NSW Consumer Advisory Group (carer/consumer) representative
- Council On The Ageing (community) representative
- Australian Government Department of Health & Ageing (NSW Office) representative
- Primary Health & Community Partnerships Branch (NSW Health Department) representative
- Aged Care Integration Unit, Inter-Government & Funding Strategies Branch (NSW Health Department) representative
- NSW Department of Ageing, Disability and Home Care representative
- Academic/researcher in old age psychiatry
- Trans-cultural Mental Health Centre representative
- Aboriginal community/service representative

One of the representatives should be from an allied health background.

Focus of group is that it:

- Oversees key projects (particularly partnership projects);
- Looks at issues of carers of people with mental health problems;
- Provides advice to the state government (informs government policy).

³ This is not the full list of representatives.