THE EFFECTS OF SINGING IN A CHOIR COMPARED WITH PARTICIPATING IN A REMINISCENCE GROUP ON REDUCING DEPRESSION IN PEOPLE WITH DEMENTIA

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A thesis submitted in total fulfilment of the requirements for the degree of Master of Arts (Honours)

University of Western Sydney
School of Communication Arts

March 2008
Declaration

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

______________________________
Kirstin Robertson-Gillam
March 2008
Abstract

**Purpose**: To determine whether choir singing compared to reminiscence could reduce depression in people with dementia.

**Methods**: A randomised controlled mixed methods trial was conducted with residents of an aged care facility between May and August 2007. Qualitative data was examined for related themes which enhanced the quantitative analysis. There were 41 participants (age range: 74-93 years) all with a medical diagnosis of dementia. Informed consent and ethical approval was obtained. Participants were randomly assigned to one of three groups: Choir Therapy, Reminiscence Therapy or Control Group. The study was single blind as the researcher conducted the sessions with research assistants. Fifteen sessions of choir and reminiscence therapies were conducted twice weekly. Symptoms of depression were measured before and after the treatments using the Cornell Scale for Depression in Dementia. The Mini Mental State Examination was used to gauge the levels of cognitive functioning at baseline. Participants’ responses to the therapy sessions were concurrently collected and analysed for related themes as qualitative data.

**Results**: Average depression scores declined significantly for all groups over time. When the choir group was compared with the control group over time, there was a significant difference (p= 0.027), indicating that the choir group was more effective in reducing depression over time. The reminiscence group scores were also compared with the control group scores over time, revealing a reduction in depression which was less significant than the choir group scores (p = 0.111). Themes from the qualitative data showed improvements in the following areas: safety and security needs; increased communication and social interaction; increased positive moods; increased motivation; and, expanded attention spans.

**Conclusion**: All three groups showed decreased depression with the greatest fall in the choir group. This indicated that choir when compared to reminiscence has higher efficacy in mitigating symptoms of depression in people with dementia. Both therapies were shown to be effective and safe.
Acknowledgments

There are many individuals who contributed to the production of this thesis through their moral support, advice and participation.

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My gratitude to Richard Morphew, my singing teacher, who encouraged me and gave me valuable feedback and advice on the singing techniques used throughout the study.
Dedication

To my husband John
for his patience and helpfulness whilst I was writing this thesis.
He was tireless in his efforts to find journal articles, his helpfulness in editing, and
in being a total support through some very strenuous times.

To my brother John Saunders
who helped with proof reading, encouragement, advice and editing.
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<tr>
<td>AER</td>
<td>Apparent Emotion Rating Scale</td>
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<td>CSDD</td>
<td>Cornell Scale for Depression in Dementia</td>
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<tr>
<td>EBAS-Dep</td>
<td>Even Briefer Assessment Scale for Depression</td>
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<td>ECT</td>
<td>Electro-convulsive Therapy</td>
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<td>MMSE</td>
<td>Mini Mental State Examination</td>
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<td>UWS</td>
<td>University of Western Sydney</td>
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Publications arising from this work

1. Conference proceedings


This paper focused on the field work with an aged care population and the conduct of the choir and reminiscence sessions which are reported in this thesis.


This paper was presented at the UWS College of Arts conference to report student research in progress. The paper focused on the field work with an aged care population and the conduct of the choir and reminiscence sessions which are reported in this thesis.


This paper referred to a comparison of three choirs; the first choir was not formally studied; the second was a pilot study conducted during October 2005 to March 2006 with an aged care population comparing choir work and reminiscence work to a control group, and the third was the randomised controlled trial with a dementia-specific population conducted during April to August 2007. This trial, as reported in this thesis, was carried out as a replication of the original pilot study.
2. Book chapter


This invited, peer-reviewed chapter refers to the randomised controlled Pilot Study conducted during October 2005 to March 2006 with an aged care population comparing choir work and reminiscence work to a control group. This work was undertaken as a proving study and to analyse outcomes in preparation for the randomised controlled Trial reported in this thesis.
Chapter 1
Introduction

Depression is a serious health issue for elderly people living in aged care facilities. Fleming (2004) found that more than 50% of elderly people living in care suffered from some form of depression. People with dementia are more likely to exhibit symptoms of depression than those without dementia. Even though depression is now well recognised as a major health issue for elderly people (Burrows, 2004), little is reported about effective psychosocial treatments. According to Burrows (2004), “suffering depression for long periods without treatment could put people at risk of developing dementia” (p.1). Traditional pharmaceutical and ECT treatments for depression need to be judiciously applied to elderly people with dementia in residential care as they may be more likely to experience severe side effects (Burrows, cited in Peric, 2004). However, in some instances, these treatments when used carefully can be life-saving even in the frail elderly.

A Cochrane Review (Vink, 2006; Woods, 2005) found that music and reminiscence therapies were safe but their effectiveness was unsubstantiated due to the quality of the reported research. This current study is an attempt to fill the need for more tightly controlled, randomised trials of these therapies so that they might be proven and used more regularly to mitigate the symptoms of depression and improve quality of life for people with dementia.

Whereas there is ample evidence that singing can enhance mental and physical health (Cohen, 2006; Kreutz, 2004; Clift & Hancock, 2001; Sixsmith & Gibson, 2007), little has been done to investigate the effect of singing on reducing
depression in elderly people with dementia. This study aimed to increase an understanding of how singing in a choir could reduce the symptoms of depression in people with dementia.

The study was originally commissioned by the Hammond Care Group where the researcher worked. Hammond Care provided the participants for the study. All of them had a diagnosis of dementia and resided in Hammond Care’s Woy Woy aged care facility just north of Sydney, Australia. A collaboration was established with the University of Western Sydney and the University of Wollongong for the study to proceed under strict academic supervision and ethical approval.

The actual field work was conducted between April and August 2007 and the analysis of data and documentation continued on until March 2008. This study took the analysis of choir compared with reminiscence in aged care from the previous anecdotal evidence of a pilot study into a full randomised controlled mixed methods trial. A mixed methods design was utilized in order to convey the needs of the people with dementia who are a marginalized and underrepresented group in society (Hanson et al., 2005).

The significance of this study also lay in its demonstration of the efficacy of choir singing to enhance quality of life for people with dementia. Growing old has been viewed as a “sad and negative occurrence, crossed with loss, poverty, loneliness, sickness and impotence” Sperry (1992, p. 387). The present study contended that this societal myth need not be the case for the elderly in residential care. Indeed, it proposed an intervention model that is practical, person-centred and could be replicated in all facilities for the elderly.

A further significance of this research was that it highlighted the lack of studies focused on choir therapy for increasing quality of life and decreasing depression in people with dementia. A thorough literature search found that no controlled trial had been conducted and published to show how effective this type of intervention could be for elderly people and how the method could be easily
transferred to other types of disabilities such as mental health disorders and acquired brain injuries which often occur in early to middle adulthood.

Chapters two, three, four and five provide an in-depth literature review on dementia, depression, choir therapy and reminiscence therapy. The nature of depression and its serious health issues are discussed with special focus on its impact upon elderly people, many of whom are vulnerable to reactive depression due to grief and loss issues and the psychosocial effects of ageing. Types of dementia are discussed including the link between dementia and depression, as well as the incidence of dementia in older people and its implication for the individual, their families and society in general.

Chapter six explores details of the methodologies used and details of the choir and reminiscence therapy sessions.

Chapter seven records the results of the study and provides a statistical analysis. It also includes a report of responses from the participants as recorded by the researcher and her assistants after each session.

Chapter eight reports on the qualitative data from the themes arising of responses by participants to each session and linking them to psychoanalytic and existential theories.

Chapter nine discusses the significance of the data and how the study is supported in the literature. It elaborates on the results of the data gathering and discusses the difficulties encountered when doing this type of field work. It also argues that choir and reminiscence therapies are effective in reducing depression.

Chapter ten summarises the findings of the study with references to the earlier literature that support the findings. It highlights the greater effectiveness of choir therapy over reminiscence therapy in mitigating the symptoms of depression in people with dementia. Choir therapy merits further study in the field of dementia and depression in order to validate its usefulness as an effective intervention for the elderly living in residential care.
Chapter 2
Dementia literature review

2.1 Classification and symptoms of dementia

According to the Diagnostic & Statistical Manual of Mental Disorders, fourth edition, [DSM-IV], (APA, 1994), the diagnosis of dementia derives from the identification of multiple cognitive disorders that are more severe than what might be expected from the normal decline of cognitive functioning that occurs with ageing. The most prominent disorders covered by this term are given in Table 2.1 together with their global prevalence:

Table 2.1: Forms of dementia and their estimated prevalence (Alzheimer's Australia, 2007)

<table>
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<th>Dementia Type</th>
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<td>55%</td>
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<tr>
<td>Vascular dementia</td>
<td>20%</td>
</tr>
<tr>
<td>Other dementia’s including fronto-temporal dementia and Pick’s disease</td>
<td>25%</td>
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2.2 Dementia demographics

All types of dementia are considered to share a common symptom of memory loss but vary with complex and different signs and behaviours according to the type of dementia. Henderson & Jorm (1998) conducted a meta-analysis in 1998 which found that the average rate of moderate to severe dementia among Australians was one-in-fifteen aged over sixty-five; one-in-nine in those aged eighty to eighty-four.
and one-in-four in those aged over eighty-four. According to Pfizer Australia (2004), there are nearly one million Australians who were affected vicariously by dementia because they care for a loved one who suffers from the condition.

Because the condition of dementia requires so much caring, it has become a costly disability burden which now ranks as the second disability burden after depression. Moreover, by 2016, “dementia will be the largest source of disability burden” in Australia (Access Economics, 2003).

Dementia greatly reduces quality-of-life and the life expectancy of a person diagnosed with the disorder. In general, a person is expected to live for approximately four to eight years from the time of diagnosis. However, this figure depends on gender because females tend to live longer (Jorm, 2001). Other medical conditions may also complicate dementia depending on the severity of the condition at the time of diagnosis (Larson et al, 2004). Jorm (2001) predicted that by 2016 dementia will be the largest source of burden of disease (a concept that embraces both mortality and disability) for women and the fifth largest for men.

There are currently 227,300 people with a diagnosis of dementia in Australia. This figure is expected to increase to 731,000 by 2050 (Access Economics, 2006a). Research is currently looking at ways to reduce symptoms and prevent the predicted increase in the disease (Access Economics, 2006a). Estimates indicate that 57,000 new cases will be diagnosed in Australia in 2008 and that between 2000 and 2050, an increase in the incidence of dementia of 327% in Australians is expected, even though the total population is expected to increase by less than 40% (Access Economics, 2006a). These figures are a cause for serious concern for future generations of older people in Australian society.

Dementia is commonly recorded as the major determining factor for elderly people moving into residential care. There are up to 60% of people with dementia in high care facilities and 30% of people with dementia in low care accommodation. Nursing home residents who are diagnosed with cognitive impairment in high care comprise 90% of the people who live in residential care;
while 54% of residents in low care are classified as having an obvious cognitive impairment (Rosewarne et al., 1997).

Dementia is ranked as the fourth leading cause of death in the population over 65 years (Gaminiratne, 1996). Approximately half of the population of older people live in their own homes with care support or in their carer’s homes while the other half live in residential care (Henderson & Jorm, 1998).

There is an increasing non-English speaking group of people who are developing dementia in Australia, in particular those from Asian and Middle Eastern cultures. Current estimates indicate that 12.4% of Australians with dementia do not speak English at home. This is a ratio of one in eight people with dementia (Access Economics, 2006b). Furthermore, it is predicted that there will be a relative fall in people with dementia who speak English or European languages in Australia from 2001 to 2050, with figures falling from 83.8% to 82.4% for those who speak English and from 7.6% falling to 6.0% for those who speak other European languages (Access Economics, 2006b).

In the Australian indigenous population, particularly in the Kimberley region of Western Australia, there is a population of 2,100 indigenous people aged over forty-five and the incidence of dementia of 12% is almost five times higher than the non-indigenous Australian population which has a rate of 2.6% of people with dementia. In the Kimberley region, the highest number of indigenous people with dementia are males, whereas in the general Australian community, the rate is generally higher for females (Alzheimer’s Australia, 2007).

The financial burden of dementia for Australian society is high. In 2002, the total figure was $6.6 billion – a cost of over $40,000 per annum per person with dementia. By 2051, this will increase to 3.3% of the gross domestic product (Access Economics, 2003). Although family carers provide up to 80% of informal care without compensation (Alzheimer’s Australia, 2007), the loss of earnings from loss of employment and absenteeism is estimated at A$355.3 million per annum (Access Economics, 2003). At least $1 of every $40 in the Australian health system is spent on dementia needs (Access Economics, 2003). The disability burden for Australia from dementia is enormous. In 2002, more than
5,000 people died from dementia-related conditions. Of this figure, females comprised 62% of the burden of the disease and 62% of people over 75 (Access Economics, 2003).

In the United States, the number of people with Alzheimer’s disease was estimated at 2.32 million in 1997 (Aldridge, 2005). Of these, 68% were predicted to be female. It was projected that the US prevalence would nearly quadruple over the next 50 years with approximately 1 in 45 people in the US being afflicted by the disease (Brookmeyer, Gray & Kawas cited in Aldridge, 2005). These figures may be the same in other first world Western countries.

At a global level, there were 29.8 million people with dementia in 2008 with a projected rise to 81.1 million by 2050 (Access Economics, 2006b). This means that 4.6 million new cases will be diagnosed every year with one new diagnosis every 7 seconds. The number of people to develop dementia is predicted to double every 20 years, rising to 81.1 million by 2040 (Ferri et al, 2005).

2.3 Diagnostic features of dementia

The DSM-IV (APA, 1994) outlines general diagnostic features for dementia. Memory impairment is listed as the criterion A1 for an early diagnosis. “Deterioration of language function (aphasia)” is listed by the DSM-IV as criterion A2a for a diagnosis (APA, 1994, p. 134). “Impaired ability to execute motor activities despite intact motor abilities, sensory function and comprehension of the required task are the symptoms of the condition known as apraxia which is listed as criterion A2b for diagnostic purposes” (APA, 1994, p. 134). “Failure to recognize or identify objects despite intact sensory function are symptoms of agnosia which forms criterion A2c” (APA, 1994, p. 134). Disturbances in executive functioning which may be related to “disorders of the frontal lobe or associated subcortical pathways involves the ability to think abstractly, to plan, initiate, sequence, monitor and stop complex behaviour” forms criterion A2d for diagnosis (APA, 1994, p. 135). According to the DSM-IV (APA, 1994), the manifestations of dementia are varied and individual, often depending on the social setting of the person being diagnosed. For instance, “the same level of
cognitive impairment may significantly impair an individual’s ability to perform a complex job, but not a job that is less demanding” (APA, 1994, p. 135). “Standardized rating scales can be used to measure the severity of the impairment” (APA, 1994, p. 135).

Most forms of dementia are irreversible and progressive and can lead to mental and behavioural disturbances such as delusions, hallucinations, depression, anxiety and agitation. These symptoms add to the burden and suffering of patients and their caregivers. There may be as many as 70%-90% of people with dementia who will experience at least one mental or behavioural disturbance during their illness (Steinberg et al, 2003). These disturbances may go beyond the normal trajectory of cognitive and functional decline with dementia and can be closely associated with lowered quality of life (Steinberg et al, 2003, p. 340).

2.4 Types of dementia

2.4.1 Alzheimer’s Disease

Alzheimer’s Disease is the most common type of dementia. Over 50% cases of memory loss in people over sixty-five years are due to Alzheimer’s Disease which is a degenerative neurological condition characterized by memory loss and declining thinking skills, leading to behavioural changes, loss of language skills, disorientation, confusion and increasing dependency (Brodaty, 2001). The cause is still unknown. However, recent research has been focused on making an early and accurate diagnosis so that interventions and lifestyle changes can be made in order to increase quality of life during the early stages of the disease (Brodaty, 2001). Magnetic Resonance Imaging [MRI] can scan the brain and show evidence of atrophy of the hippocampus and medial temporal lobe in the brain which highlights the pathological process of the disease. However, MRIs are not conclusive although regular MRI’s may delineate the progressive atrophy in this part of the brain (Brodaty, 2001). Other tests such as perfusion, Single-Photon Emission Computed Tomography [SPECT] and Magnetic Resonance Spectroscopy [MRS] as well as Positron Emission Tomography [PET] may add further accuracy to the diagnosis (Brodaty, 2001).
According to Brodaty (2001) “rare mutations can cause early-onset autosomal dominant familial Alzheimer’s Disease” (p. 3). However, these types of mutations are extremely rare and genetic testing is available. Autosomes comprise 22 pairs of chromosomes apart from the pair that forms the sex chromosome. “Mutations in the presenilin genes (presenilin 1 and 11) and the amyloid precursor protein [APP] gene affect the amyloid precursor protein and its metabolism, thus supporting the amyloid cascade hypothesis of Alzheimer’s disease pathogenesis. This hypothesis suggests that accumulation of beta-amyloid, by either overproduction or a failure to break down APP in the normal way, leads to amyloid deposition, thereby causing amyloid plaques, neurofibrillary tangles and cell death in the brain” (Plassman et al, 2000, cited in Brodaty, 2001, p. 3).

Recent research by the Queensland Brain Institute (Coulson, 2008) examined why cells die in neurodegenerative diseases. The Institute’s work indicated that a baby’s brain generates roughly double the number of nerve cells it needs to function. The cells that receive both chemical and electrical stimuli survive while the remaining cells die (Coulson, 2008). The Queensland Brain Institute has plans to test whether dying cells can be revived by receiving electrical stimulation only. This type of research points to potential future treatments for neurodegenerative diseases such as Alzheimer’s Disease, Multiple Sclerosis and Motor Neurone Disease. Until now, the only conclusive evidence for the diagnosis of Alzheimer’s Disease remains at post-mortem examination (Coulson, 2008).

2.4.2 Vascular dementia

Vascular dementia is the next most common type of dementia (Winblad et al, 1998, cited in Brodaty, 2001). According to the DSM-IV (1994), there must be evidence of cerebrovascular disease before a definitive diagnosis can be made. Some neurological signs and symptoms include deep tendon reflexes and weakness of an extremity (APA, 1994, p. 144). Its onset can appear earlier than Alzheimer’s Disease and is more frequently found in men than women (Brodaty, 2001). The onset can be abrupt, followed by a “stepwise and fluctuating course that is characterized by rapid changes in functioning rather than slow progression”
(APA, 1994, p. 145). Patterns of deficits can be patchy which is why this type of dementia was originally referred to as multi-infarct dementia, i.e., small frequent strokes that destroy brain tissue. “Early treatment of hypertension and vascular disease may prevent further progression” (APA, 1994, p. 145). Increasing evidence indicates that vascular dementia and Alzheimer’s Disease can coexist (Brodaty, 2001). This can further confuse an exact diagnosis of the cause of dementia. Furthermore, “vascular lesions in the brain can contribute to the progression of Alzheimer’s Disease” (Brodaty, 2001, p. 4).

There are many kinds of vascular dementia that show impaired cognition such as large infarcts (blood clots causing tissue death); lacunar infarcts suggesting poorly controlled hypertension; ischaemic changes (often referred to as multi-infarcts or TIA’s -- trans-ischaemic attacks, which show a stepwise and gradual decline and is also typical of Alzheimer’s Disease (Brodaty, 2001). The pattern of deficits in vascular dementia show different symptoms depending upon where the lesions occur in the brain; i.e., subcortical, cortical or mixed. Vascular dementia can be “preventable if prophylactic tactics are employed such as exercise, anti-platelet agents and anticoagulants, the control of hypertension, cardiac arrhythmias, embolic sources, carotid stenosis and controlled diabetes” (Brodaty, 2001, p. 4).

2.4.3 Other types of dementia

Fronto-Temporal Lobe Dementia (FTD) ‘was formerly referred to as Pick’s disease” (APA, 1994, p. 149) and is a degenerative disease of the brain. It affects the focal frontal and temporal lobes of the brain by causing atrophy. About 20% of this type of dementia is inherited with personality and behavioural disturbances along with semantic dementia and/or progressive aphasia.

Another neurodegenerative related-disease is termed Lewy body dementia which is due to diffuse Lewy bodies developing throughout the brain tissue and can be associated with Parkinson’s Disease (DSM-IV-R, 2005).
A type of dementia associated with degenerative disorders is Huntington’s Disease; an inherited degenerative brain disease that affects the mind and body. “The disease affects men and women equally” (APA, 1994, p. 149). Creutzfeldt-Jakob disease exhibits dementia symptoms and is caused by a protein particle called prion which is a transmissible “slow virus agent” and “may have a familial tendency in 5% to 15% of cases” (APA, 1994, p. 149). Its incidence is one in a million and rapid deterioration and death can result, although in some rare cases “it can progress more slowly over years and appear similar in its course to other dementias” (APA, 1994, p. 145).

2.5 Types of dementia in the participants of this study

All of the participants in the current study were diagnosed by their general practitioners as having dementia before they came to live in hostel care. Over half of the diagnoses were given as Alzheimer’s Disease but others were written down as vascular dementia or non – specific dementia. It is possible that many of the participants had a combination of vascular dementia and Alzheimer’s Disease as this is a common phenomenon. Residents’ medical histories (examined by consent) indicated this in some cases where such information about previous heart attacks or strokes was able to be obtained.

2.6 Psychosocial interventions for dementia

More attention is now being paid to the psychosocial issues and their applicability to the problems of mental health in residential care (Lie, 2003).

Dementia is a disease that has enormous impact on social and family networks as well as society as a whole. The losses experienced by people with dementia impact on family and social life. In Western societies, success, youthfulness and health are paramount. Dementia awakens peoples’ deepest fears with thoughts of mental cognition and physical abilities slowly deteriorating over time.
According to Aldridge (2005), “decline, physical and mental, is not readily faced within communities that expect youthful appearance, worldly success and physical ability as the outer sign of acceptable personhood” (p. 39).

The management of dementia is complicated by behavioural and psychological symptoms such as psychosis, depression, agitation, aggression and disinhibition (Brodaty et al, 2003). According to Opie et al (1999), many of the trials of psychosocial approaches have had significant methodological limitations but there are indications to support the use of activity programs, music, behaviour therapy, light therapy, carer education, and changes to the physical environment.

O’Connor & Ames (2008) undertook a detailed systematic review of 25 controlled trials of psychosocial treatments for dementia and concluded that the best were aromatherapy, bed baths, gentle sounds, individualised music, and muscle relaxation training. These studies did not discuss any adequate follow-up work which could have demonstrated the durability of these psychosocial treatments. Such follow-ups would have added weight to the value of this type of treatments.

The current trial aimed at addressing the gap in the literature by including choir and reminiscence therapies in the range of psychosocial activities.
Chapter 3
Depression literature review

3.1 Introduction and incidence

“Despite the growing evidence associated with depression in the elderly, there remains a general assumption among many clinicians that geriatric depression is a normal outgrowth of the ageing process rather than a clinical disease” (Sunderland & Draper, 2001, p. 1). In elderly individuals, it is often difficult to determine whether cognitive symptoms such as disorientation, apathy, difficulty in concentrating or memory loss are better accounted for by a dementia or by a Major Depressive Episode (APA, 1994, p. 344). The elderly commonly experience more losses than other age groups, i.e., loss of significant others, home and pets, loss of a range of abilities and skills due to loss of health. These losses could contribute to depressive symptoms. However, clinicians tend to be slow in prescribing medication treatments which could alleviate existing depressive symptoms. “As a result, major depression and depressive co-morbidity are often not adequately treated in the elderly” (Sunderland & Draper, 2001, p. 1).

According to Olver & Burrows (2007), if a person suffers from depression for long periods without treatment, it could put them at risk of developing dementia. Even though the management of depression may improve the patient’s mood, Olver & Burrows (2007) asserted that depression may still require specific management such as psychotherapeutic approaches in conjunction with antidepressant medications. Psychotherapy was suggested as the most effective therapy during the mild to moderate stages of depression. The authors asserted that cognitive behaviour therapy was the most effective non-pharmacological
intervention that challenged negative thinking using relaxation techniques, behaviour scheduling, regular exercise, socialisation and problem solving techniques. Burrows asserted that “the emotional effect of depression gradually makes physical changes to the brain with some studies showing dementia patients had a rate of depression as high as 50%. We now know that depression is probably a neuro-degenerative disorder like Alzheimer’s Disease, yet many people with depression go untreated and many others are not treated adequately. Withholding or delaying treatment for depression could harm the brain” (Burrows, 2004, p.1).

Depression can be a rather elusive disorder for the clinician making a diagnosis; it can be missed altogether or its symptoms mistakenly diagnosed as belonging to some other disorder. Although 80% of the ageing population with moderate to severe depression consult a general practitioner (GP), depression may be detected only in 25% of cases. Sunderland & Draper (2001) have outlined reasons why GP’s miss the presence of depression in the elderly. For instance, older people tend not to acknowledge their feelings of being down, sad or depressed. Other manifestations of depression, such as somatic disorders, pseudo-dementia, and behavioural disturbances are more likely to occur in older people (Brodaty, 2001). As a consequence, older people and their GP’s might miss depressive symptoms in favour of comorbid physical illnesses (Knauper & Wittchen, 1994). Many older people suffer from mild, reactive depression which can impact on their dementia and can be missed by GP’s who are looking for criteria for major depressive symptoms (Sunderland & Draper, 2001).

Depression can be a degenerative disease that is also related to organic changes in the brain (Burrows cited by Peric, 2004). The symptoms include feelings of hopelessness and helplessness, suicidal ideation, difficulties with sleep and reduced concentration. Depression is the most frequently occurring emotional disorder in older adults with 2% -10% of older adults affected (Blazer, Hughes & George, 1987), while 20% - 30% of older adults suffer from milder depressive symptoms (Butler et al, 1991).
Depression might be more prevalent in people living in residential care. Symptoms such as increased confusion, sleep disturbances, post traumatic stress disorder, loss and grief might not be recognised as depression in elderly people (Katon, 1995; Lie, 2003; Short, 2007).

Llewellyn-Jones (2004) reported that depression in later life is a public health problem affecting up to 1-in-5 elderly residents. Depression has been found to incur increased health costs with premature immobility problems (Koenigh & Kuchibhatia, 1999; Chiu et al, 2000; Llewellyn-Jones, 2004). It is critical to address the issue of depression in dementia in general aged care in order to increase quality of life and decreased health costs (Llewellyn-Jones, 2004).

3.2 Symptoms and diagnosis of depression

The main criteria for major and minor depression as found in the DSM-IV have been summarised by Sunderland & Draper (2001, p. 2) as follows:

A. A depressed mood most of the day nearly every day
   - Loss of interest or pleasure in almost all activities nearly everyday
   - Significant weight loss or gain (i.e., 5% body weight in a month) or change of appetite
   - Insomnia or hyposomnia nearly every day
   - Psychomotor agitation or retardation nearly every day
   - Fatigue or loss of energy nearly every day
   - Feelings of worthlessness or inappropriate guilt nearly everyday
   - Diminished ability to think or concentrate, displaying indecisiveness nearly everyday
   - Recurrent thoughts of death, recurrent suicidal ideation or suicide attempt.

B. The symptoms need to cause clinically significant distress or impairment in functioning

C. The symptoms should not be better accounted for by bereavement.
The DSM-IV also has criteria for diagnosing the depressive symptoms if the clinician feels that they are due to the effects of drug interactions, alcohol or a general medical condition in which case they become diagnosed as “substance-induced depressive disorder” (APA, 1994, p. 183). Furthermore, “if the depressive condition is considered to be accounted for by a bereavement, the diagnosis of depression can be applied if the symptoms persist for more than two months or the person experiences significant functional difficulties, constant preoccupation with worthlessness, suicidal ideation, psychotic symptoms or psychomotor retardation. These symptoms must last for at least two weeks” (APA, 1994, p. 321).

A major depression can be diagnosed if five or more symptoms listed in section A are evident with one of them being “depressed mood” or “loss of interest or pleasure” (APA, 1994, p. 339). A minor depression may be diagnosed when between two and four symptoms in section A are evident, as long as either “loss of interest” or “depressed mood” are present as one of those symptoms (APA, 1994, p. 339).

Depression scales can be useful for accurate diagnosis. The Hamilton Depression Rating Scale [HDRS] (Hamilton, 1960) is a standard tool for diagnosing people with depression, including the elderly. Its length and complexity cause it to become difficult to use in busy clinical settings. The Even Briefer Assessment Scale for Depression [EBAS-Dep] (Allen, 1994) is far easier for the General Practitioner (GP) to administer and more suitable for the elderly age group. It scores on symptoms experienced in the last month and “provides a description of responses that are scored positively. Scores of three or more suggest the probable presence of clinical depression and suggest the need for further assessment” (Sunderland & Draper, 2001, p. 2).

The Cornell Scale for Depression in Dementia (Alexopoulos et al, 1988) utilizes information and symptoms from both the carer and the patient during the previous fortnight. Scores of eight or more suggest depression and could indicate the need for further investigation.
The Geriatric Depression Scale (Yesavage et al, 1983) involves self report and patient interviews which can be difficult and diagnostically unreliable in people with dementia.

The DSM-IV (APA, 1994, p. 327) basic criteria for diagnosing a major clinical depressive episode are:

- Depressed mood that is very different from the feelings experienced from grief and loss after a death or another loss
- Symptoms of depression are worse in the morning
- Early morning awakening (usually 2 hours prior to normal)
- Marked psychomotor slowness or agitation
- Significant weight loss or anorexia
- Excessive or inappropriate guilt.

These melancholic symptoms suggest “biological correlates and are more likely to respond to anti-depressant medication and/or electro-convulsive therapy (ECT) (Sunderland & Draper, 2001, p. 2). These authors also suggest that if these melancholic features of depression are present, the 17-item HDRS is more reliable as a diagnostic tool than the EBAS-Dep.

3.3 Depression and dementia

It can be difficult to diagnose depression in an elderly person with dementia as one condition exacerbates the other with overlapping symptoms in many cases. Sunderland & Draper (2001) recommended that the diagnostic process should have two perspectives. The first perspective is when the patient initially presents and the second perspective is diagnosing depression in a person who already has been diagnosed with dementia.

Pseudodementia can “manifest over weeks to months with a relatively fast decline” (Sunderland & Draper, 2001, p. 4). Presenting symptoms are (Sunderland & Draper, 2001, p. 5):

- Memory impairment
• Behaviour and personality change
• Impaired social functioning
• Depressed mood
• Mood congruent delusion.

“The patient may be unmotivated, have negative affect, be distressed, be slow to respond to social cues, be fixated on personal shortcomings and be inconsistent in their usual daily performances. Their affect is often worse in the morning upon awakening and suicidal ideation is common. There may be memory disturbances but these could be inconsistent with poor recall, and psychomotor retardation. A family history of affective disorder is common” (Sunderland & Draper, 2001, p. 5).

Depression with significant cognitive impairment has a common thread of a clinically relevant depression (Emery & Oxman, 1992; Alexopoulos, 1988). In some cases, treatment of the depression can improve cognitive impairment to some degree, although it may not fully resolve. This may be due to the ageing process or due to some other condition such as stroke or Parkinson’s Disease (Sunderland & Draper, 2001). However, the presence of depression can often cause dementia-like symptoms and behaviours to such an extent that “neuropsychological batteries often fail to separate the two conditions” (Hofman et al., 2000). There can be high rates of relapse with this type of depression and so regular maintenance antidepressant therapy is recommended. The long-term outcome of this type of depression varies with 25% - 50% of people over sixty years developing dementia within 3-5 years of its onset (Sachdev et al., 1990; Copeland et al., 1992; Alexopoulos et al., 1988).

If depression first appears later in life, it may be a precursor to the development of dementia and may account for up to 10% of dementia cases (Visser et al., 2000; Linka et al., 2000). However, as previously reported, Burrows (2004) asserted that untreated depression over many years may create brain changes leading to dementia later in life. Accordingly, it appears that depression may often precede the dementia syndrome such as vascular dementia and other subcortical dementias (Ballard et al., 1996). Symptoms such as “apathy, poor memory, sleep
disturbance, appetite changes, weight loss, poor concentration, psychomotor changes, loss of interests, loss of libido, social withdrawal, self neglect, decreased pleasure in activities, irritability and anxiety are features of both mild dementia and depression”. Generally, patients with “clinically relevant depression and coexistent cognitive impairment warrant a trial of antidepressants” (Sunderland & Draper, 2001, p. 6).

3.4 Diagnosis of depression in the elderly

Clinical depression in the elderly can occur in 13.5% of cases (Beekman et al, 1999). Frequently, depression in the elderly is minor with dysphoric moods associated with debilitating health impairment as well as the numerous losses that the elderly experience. Minor depression in the elderly was not well researched as a disorder (Beck, 1996). It can be difficult to distinguish between minor depression and clinically insignificant depressive symptoms. However, this type of diagnosis should be based on the presenting levels of distress and impairment (Sunderland & Draper, 2001). It should be noted that people with dementia represent a fragile and vulnerable population. Symptoms of so-called minor depression can impact severely on their quality of life and their condition of dementia.

The prevalence of depression rates for complicating dementia in world literature vary widely from 0% to 86% (Ballard et al, 1996; Allen et al, 1994), although the mean rate for an actual depressive disorder is approximately 20% and major depression only constitutes 5-10% of this figure (Ballard et al, 1996; Allen et al, 1994). The wide variability in the reported incidence of depression in dementia is due to the difficulties in diagnosis.

One survey by Lyketsos et al, (2000), indicated that high rates of apathy (27%), depression (24%) and agitation/aggression (24%) were found in a group of Alzheimer’s patients. Often, symptoms might overlap. This further complicates accurate diagnosis as well as under-reporting of symptoms due to cognitive impairment. Furthermore, carers may misattribute apathy and social withdrawal to dementia rather than to depression (Sunderland & Draper, 2001).
There are other physical factors, which also may contribute to apathy and social withdrawal such as deafness, the inability to keep up with social conversations and visual impairments. This seems to indicate that dementia and depression are complex conditions which can interact with each other and cause lowered quality of life.

3.5 Management approaches to depression

The use of traditional treatments such as drug and electro-convulsive therapy may need to be carefully and judiciously considered for use in the elderly due to a wide prevalence of co-morbid medical conditions, physical frailty and a higher potential for adverse drug interactions and reactions (Butler et al., 1991; Winstead et al., 1990; Anderson, 2002). This issue strengthens the case for using psychosocial interventions. The benefits of psychosocial treatments are anecdotally high in their effectiveness as well as being biochemically harmless and safe. They have much to contribute in reducing depressive symptoms but require tighter controlled studies in order to demonstrate their effectiveness.

Butler (1995, cited in MacKinlay, 2003) suggested that depression is a highly treatable condition which could include other psychosocial factors for reducing social isolation and decreasing the incidence of depression. Quality of life can be improved thus enhancing meaning and purpose in elderly peoples’ lives.

Sunderland & Draper (2001) outlined various management treatment plans which include “psychotherapy, reminiscence therapy, behavioural therapy, validation therapy, music therapy, sensory stimulation such as aromatherapy and massage, diversional therapy, socio-environmental and suitably designed environments and supportive therapy such as positive reinforcement, physical touch, displays of affection and pet therapy. However, these non-pharmacological treatments are viewed anecdotally as effective and are more suited to group work than individual work” (Sunderland & Draper, 2001, pp. 11-12).

The suggestion was made by Sunderland & Draper (2001) that these approaches to mitigating depression should be provided in “dementia day care centres or
nursing homes by trained personnel under the supervision of consultant psychiatrists” (Sunderland & Draper, 2001, p. 9). Staff who are specialised in their own particular areas of therapy are usually employed in order to provide for this gap in care. Studies indicate that music therapy is safe but not scientifically validated for use in aged care (Vink et al, 2006).

Pharmacological interventions can induce side effects in people with dementia, such as “nausea, vomiting, diarrhoea, agitation, anxiety, insomnia, confusion, constipation, dry mouth, frequent falls and cardiac arrhythmias” (Sunderland & Draper, 2001, p. 13). However, it is considered medically correct to administer a trial of anti-depressants for those patients who exhibit cognitive impairment together with a diagnosis of clinical depression (Sunderland & Draper, 2001, p. 6). A trial of anti-depressants may well help to decrease clinical symptoms of depression and allow a more objective diagnosis for the co-existing conditions. This may decrease the incidence of premature entry into institutionalized care due to a diagnosis of pseudodementia (Sunderland & Draper, 2001).

There is a considerable interchange between depression and dementia and, as this literature review has indicated, the quality of diagnosis is important for identifying depression in people with dementia. Treatment regimes vary from pharmacological to psychosocial interventions. Many of the latter lack substantial successful trials to justify their efficacy (Sunderland & Draper, 2001). This current study used a randomized controlled trial of choir therapy in order to demonstrate its efficacy when compared with, or in association with traditional reminiscence approaches for mitigating depression in people with dementia.
Chapter 4
Music Therapy literature review

Music of the right kind can serve to orient and anchor
a patient when almost nothing else can.

Oliver Sachs (2007) Musicophilia

4.1 Historical aspects

Early anecdotal evidence by Bright (1972; 1991) pointed to the effectiveness of
music as an intervention for depression in people with dementia. She asserted that
“music brings a sense of individuality and a personal approach despite the decay
of every other faculty” (Bright, 1991, p. 29).

Bright (1972; 1991) also referred to depression as being common in dementing
conditions and that the “music function may be spared” while language and social
skills may be devastated (Bright, 1991, p. 29). This assertion was later validated
in more recent studies (Miller et al, 2000; Crystal et al, 1989; Cuddy & Duffin,
2005; Sixsmith et al, 2007; Cohen, 2006).

The musical experience of choir singing may provide “an intimate link between
sensation and consciousness, the space between Self and World” (Kenny, 1989,
p. 55). In the present study, this was an underlying issue for increasing awareness
in people who have dementia and who are trying hard to operate in a world that no
longer makes complete sense to them.
Clair (1996) speculated on research which indicated that many people may discontinue singing sometime in the middle stage of dementia (Clair, 1996; Clair & Bernstein, 1990, cited in Clair, 1996). She asserted that accurate pitch matching and lyrics are not employed by persons with middle to late stage dementia. She believed that it was still possible for people with dementia to sing songs learnt early in life (Clair, 1996; Clair & Bernstein, 1990; Prickett & Moore, 1991).

Historically, music therapy in aged care was not widely documented until the late 1980’s. Whereas in Great Britain, applied music therapy used live music and interactions with the therapist (Odell-Miller, 1995, p. 4), in the United States, it was primarily recorded and live music was used to change behaviours as well as being used as teaching and learning tools (Schoenberger & Braswell, 1971; Palmer, 1977). Early applications of music therapy in the United States were believed to be more focused on “the patients fitting in with the therapists’ music rather than vice versa” (Odell-Miller, 1995, p. 88).

Morgan & Tilluckdharry (1982) considered that singing could be regarded as a welcome release from the helplessness of being a patient, allowing thoughts to be communicated externally. These early writings gave credence to later research into the power of singing and its ability to decrease depression in people with dementia.

As Aldridge (1996) pointed out, published music therapy articles concerned with ageing populations were focused on group work (Christie, 1992; Olderog et al, 1989). Music therapy group activities were reported to increase socialization, communication, purposeful interactions with others as well as sensory, muscular stimulation and gross and fine motor skills (Segal, 1990). Some studies by Clair (1996; 2000) reported that participation in music group activities over a period of 15 months continued even though participants’ cognitive, physical and social abilities decreased markedly.

A study by Fitzgerald Cloutier (1993) showed that singing with an 81-year-old woman versus reading was carried out in order to compare for the degree of attentiveness. Both sessions were aimed at decreasing her wandering behaviour.
Results showed that the music sessions were more successful in keeping her seated and focused than the reading sessions.

4.2 More recent studies

Hays & Minichiello (2005) found evidence that music can contribute towards increasing self esteem, enhancing feelings of competence and independence, and thereby lessening the experience of social isolation which is so evident in people with dementia. They used classical music every evening in a dementia-specific facility in order to decrease the sundowning symptoms of agitation.

Miller et al, (2000), found that “patients with left-sided temporal lobe dementia offer an unexpected window into the neurological mediation of visual and musical talents” (p. 1). It seems that damage to this part of the brain can unblock the potential for creative activity (Miller et al, 1998). Miller’s study described how five patients with frontotemporal dementia (FTD) were interviewed regarding visual abilities. They all became visual artists in the early stages of their disease. Miller et al (1998) concluded that loss of function in the anterior temporal lobes may lead to a development of artistic skills, offering a window into creativity. This work validates earlier anecdotal evidence that music function may remain, even in the face of increasing cognitive impairment (Bright, 1972, 1991; Clair, 1996).

4.3 Singing and creativity in later life

Austin (1999) believed that singing connects a person to breath, physicality and emotion. As people with dementia often experience a sense of disconnection with parts of the self, singing can be a valuable avenue for bringing about a sense of coherence that is gradually disappearing due to cognitive decline. Austin (1999) developed a form of vocal improvisation as a psychoanalytically-oriented music therapist. Her methodology was focused on individual clientele, most of whom have experienced past traumas but do not necessarily have dementia. Austin (1999) believed that parts of the self are projected onto the voice and that this type of singing experience could lead to integration of body, mind and spirit. Austin’s
work is mentioned here because vocal improvisation was encouraged with each choir member during the present study, following the relaxation and vocal exercises.

Ansdell (1995) described the extraordinary impact of the singing voice on a patient called Herr G. who was in a coma as a result of a stroke. Dr Dagmar Gustorff (a music therapist at the University of Witten-Herdecke, Germany) used vocal improvisation as a means of connecting with Herr G. that resulted in his eventual recovery. He described his experience as being on a battlefield and that everyone was trying to kill him until he heard the music which he described as exquisite but which initially he didn’t recognize as a voice. He thought it was some medieval wind instrument. However, the second time, he did recognize the music as a voice and realized that there was someone there who didn’t want to kill him. He felt that “the music was my music. I decided to live when I first heard the music” (p. 63).

This case is mentioned because people in comas often experience quasi-psychotic states, not dissimilar to people in the later stages of dementia. Frequently, the general noise and bustle of a busy nursing home can be confusing for a person with dementia with the potential to induce agitative and challenging behaviours. Singing, on the other hand, can offer a “soft, personal element” which can engage a person with dementia, producing a validating and calming influence, even if only for the time that they engage in choir therapy (Ansdell, 1995. p. 64).

Clair (2000) suggested that making music together as a community helps to engage elderly people in life. She described how elderly people are reluctant to sing because they believe that they do not have a satisfactory voice quality due to the ageing process and early negative responses to their singing. The power of the voice can reflect internal states and reveal the physical and emotional conditions of the singer. (Clair, 2000).

Clair’s (2000) assertions were similar to those reported by Newham (1993) when he described the war neurosis of Alfred Wolfsohn, a German Jew who experienced severe psychological trauma while serving in the trenches during
World War 1 as a medic. He became riveted and disturbed by the cacophony of the voices of dying and suffering soldiers that were “pitched higher and lower than he would ever have thought physically possible” (Newham, 1993, p. 83). Wolfsohn called this phenomenon “the voice in extremis” (Newham, 1993, p. 83) and it plagued him for years until he finally sought his own cure by engaging in voice training. Wolfsohn eventually established his own voice research centre in London after World War 2 in which he sought to “utilize the potential range of the human voice as a probe and a mirror, investigating and reflecting the many aspects of the human psyche” (Newham, 1993, p. 84). He was deeply influenced by psychoanalytic theory, particularly the writings of Jung and his theory of the shadow (Newham, 1993).

Wolfsohn, who lived during the early part of the twentieth century, believed that the voice could be employed as an expression of the true nature of the psyche in its entirety and, that in order for this to happen, it must be connected to the shadow side of the psyche (Newham, 1993). Accordingly, “the voice must be permitted to yell, scream, sob and give voice to the animalistic, primal, pre-verbal utterances which are part of the rightful expression of the shadow” (Newham, 1993, p. 89). Wolfsohn’s work produced a quality in his pupils’ voices that was “wider and more malleable than any ever heard before” (Newham, 1993, p. 89).

Newham (1993; 1999) was inspired by Wolfsohn’s work to develop his own Voice Movement Therapy. Many people in later stages of dementia can be heard to groan, cry, shout and wail. Vocal improvisation therapy forms part of choir therapy and gives expression to these inner feelings when words are no longer able to be utilized. This approach relates to psychoanalytic theory.

Newham (1999) noted that “for many people, the contents of the heart are simply beyond, beneath or above words and ... that the burden of living with the trauma of unhealed pain can add further torment which remains invisible because it cannot be spoken” (Newham, 1999, p. 105). Inner trauma can add to the disabling effects of cognitive decline that are faced by people with dementia who may have held their pain inside over many years and cannot give expression to it through the normal channels of coherent speech.
Lester & Petocz (2006) conducted a study with four participants who had dementia aged between 80-97 years, using singing as a means to investigate whether it could decrease the symptoms of disorientation and agitation that are frequently experienced in the evening hours. These symptoms were referred to as the *sundowning period*. The study took place late each afternoon over four consecutive days. A mood-behavioural checklist by two observers was used during a 15 minute pre-test. This was repeated during the 30 minute singing session and a 15 minute post-test. Results showed a marked improvement in mood and sociability as well as a significant decrease in non-social behaviour.

Bannan & Montgomery-Smith (2008) reported on a pilot study where they applied group singing for people with Alzheimer’s Disease and their carers. They concluded that it is possible for people with Alzheimer’s Disease to participate in group singing and that some longer-term benefits were perceived by their carers. The authors suggested that further research is needed to more tightly control the clinical testing methods which relied on the judgement of participants regarding their experiences of the sessions.

### 4.4 Relaxation and music studies linked to depression

It is important for singers to learn to relax in order to produce the best sounds with their voices. Elderly people are no exception. Studies relating to the effects of relaxation in elderly populations are scant. Short (2007) used relaxation-focused music and imagery with elderly residents and found that it helped to address the “largely hidden health issue of depression” (Short, 2007, p. 39). Even though Short’s study was small (n=14) with no pre-post test design and baselines, her findings offered support for this current study and the comorbid issue of depression and dementia in the elderly. Her residents reported depression and sadness more frequently than other symptoms.

McBee (2003) used mindfulness meditation practice (without music) with frail elderly residents in groups and found that they experienced solace and spiritual support with reduced pain symptoms and less agitation. Both these studies support
the choir program used in this study which includes relaxation with silence at the beginning of sessions. Rakel & Herr, (2004, cited in Short, 2007) suggested that relaxation techniques were most effective when they were learnt and practised (Short, 2007, p. 40).

Brown, Gotell & Ekman (2001) conducted a study using singing as a therapeutic caregiving intervention with a group of people in the later stages of dementia. They found that singing during activities of daily living decreased agitation and violent behavioural responses in people with dementia. According to these authors, “it converts any caregiving interaction into a potential music-making situation” (Brown et al, 2001, p. 36).

Robertson-Gillam (2008) conducted a pilot study which used relaxation techniques prior to choir practice. The aim was to enhance the quality of choir singing during a pilot project which examined whether choir therapy compared with reminiscence therapy and a control group could decrease depression in elderly people living in residential care. “Choir practice always begins with a few moments of silence, followed by deep breathing exercises to loosen up throat, chest and shoulder muscles. All choir members take part and the silence that ensues is meaningfully deafening! This part of choir work helps to reinforce personhood by finding time for reflection and contemplation. It also reduces stress and enhances singing” (pp. 188-189). The current study reported in this thesis replicated this pilot project and focused specifically on people with dementia.

Sixsmith et al (2007) found that “music can enable elderly people with dementia to engage in activities that they find enjoyable, socially enhancing and personally meaningful, leading to increased personal empowerment” (Sixsmith et al, 2007, p. 127). This study showed that musical abilities appear to be intact even with severe dementia. (Crystal et al, 1989; Cuddy & Duffin, 2005, in Sixsmith et al, 2007). These authors believed that the manner in which people derive meaning from everyday living is significant for their well-being.
4.5 Choir studies

Kreutz (2004) found that choral singing enhances the immune system. Singing Mozart’s Requiem was found to boost Immunoglobulin A and cortisol which are markers of an enhanced immune system. When the same group only listened to a recording of the same Requiem, no effect was detected. This study did not involve elderly people.

Clift & Hancox (2001) studied a university student choir and found that singing promoted physical, emotional and spiritual health with improved lung capacity, higher energy, and engendered intense happiness while singing spiritually uplifting songs. Even though the study was part of two preliminary investigations without pre-post tests and baselines, the findings were significant enough to suggest further research into the impact of singing on psycho-physiological functioning.

A qualitative study by Zanini & Leao (2006) investigated the effects of choir singing for seniors as part of an educational component of the University of the Third Age. Results showed that self esteem and confidence increased along with improvements in mental health, quality of life, self expression and life satisfaction. However, this study was limited to healthy seniors rather than people with dementia in residential care.

Singing involves language and music. It is “a dynamic event that requires an interaction of a text with rhythmic and melodic motion of the tunes” (Johnson & Ulatowska, 1996, p. 155). Song lyrics are like poems set to music. This combination involves the complex processes of cognition and abstraction along with the desire for beauty and spiritual expression. According to Cohen (2006), the desire for beauty is an important aspect for increasing quality of life in seniors.

Cohen (2006) conducted a longitudinal study to investigate the relationship between the arts, health and illness in later life. Cohen maintained that arts-based programs conducted by a professional facilitator “fostered sustained involvement because of their beauty and productivity ... keeping participants involved ...
compounding positive effects” (p. 7). Cohen asserted that diversional types of activities as well as physical exercises “do not have this highly engaging and thereby sustaining quality” (p. 11). The Senior Singers Chorale in Washington D.C. began in 2001 as part of Cohen’s study. It demonstrated that choir singing improved health with reduced medication after one year in contrast to a control group. It also showed significantly less falls with decreased depression, less loneliness and increased morale (Cohen, 2006).

4.6 Music, creativity and the brain

Early research by Berman (1981, cited in Aldridge, 1996) suggested that when a patient is recovering from aphasia, the non-dominant hemisphere may hold “reserve of functions in case of regional failure” (Aldridge, 1996, p. 193). Aldridge postulated that singing may “give a glimpse of this brain plasticity” (Aldridge, 1996, p. 193).

Early writings by Critchley & Henson (1977) indicated how music can affect the brain. They highlighted the extraordinary effect of music to hold and influence our feelings, thoughts and memories. Critchley & Henson believed that “when words become inaccessible ... musical thinking may well remain as intact as ever it was” (Critchley & Henson, 1977, p. 218). In terms of music and words, Aaron Copland came to realize that music and poetry are closely linked. He discovered that beyond both poetry and music there lies “an essence that joins them – an area where the meaning behind the notes and the meaning beyond the words spring from a common source” (cited in Critchley & Henson, 1977, p. 218).

More recently, Sacks (2007) noted that some of his patients could find inner coherence through singing. He cited the case of Woody who was painfully aware of his “tragic” [Alzheimer's] disease and sometimes said that he felt “broken inside” (Sacks, 2007, p. 343). Sacks speculated that even though Woody may not remember the actual act of singing, the mood that was engendered by the singing could “last awhile” (Sacks, 2007, p. 343). Woody was “companioned by music,
called on it, around the clock” as he whistled and sang constantly, even in his sleep (Sacks, 2007, p. 343).

Sacks also mentioned the case of Dr. P for whom singing was so important that he prescribed “a life that consisted entirely of music and singing” (Sacks, 2007, p. 343).

Sacks (2007) speculated that “music is no luxury to them (people with dementia), but a necessity, and can have a power beyond anything else to restore them to themselves, and to others, at least for a while” (p. 345). Music may be even more important in the later stages of dementia when so many other ways of expressing the inner self are stripped away by the disease process. Sacks believed that “there is still a self to be called upon ... even in the face of severe and debilitating cognitive decline ... even if music, and only music can do the calling” (p. 346). For those who have lost their way in the dementing process, music could well be a necessity, even if they have never been perceived as musical.

Recent research on brain plasticity (Kolb & Whitshaw, 1998; Kramer et al, 2004) found that “challenging activities and new experiences induce the sprouting of new dendrites, thereby enhancing brain reserve” (Cohen, 2006, p. 10). Cabeza, (2002) found that the brains of older adults tended to be less lateralized than younger brains. Such bilateralized brain function appears to be a phenomenon of mid to later life where the brain is able to benefit from activities involving beauty and engrossing stimulation that integrate left-right brain involvement.

Cropley (1995) noted that creativity is not just about bringing forth creative products, such as satisfactory musical singing, but can also be a psychological process involving cognition, motivation and personality. Cropley also asserted that creativity is associated with other aspects of mental health such as “flexibility, humour and realistic self-assessment” (Cropley, 1995, p. 84). Positive feelings associated with choir singing can generate a sense of mastery and increased ego autonomy that are associated with improved mental health (Cropley, 1995; Cohen, 2006).
Burkhardt (1985 in Cropley, 1995) believed that creativity, novelty and difference are connected and that “modern life is marked by a mass psychosis”, and is obsessed with sameness and uniformity, leading to decreased mental health.

Rodin (1986, 1989) asserted that the positive health of older people is associated with experiencing activities in which they gain a sense of mastery. These positive emotions can lead to a sense of mastery which has been found to boost the immune system (Kiccolt-Glaser et al, 2002).

Uddin et al (2006) investigated the phenomenon of “self-other discrimination” as being fundamental to social interaction through researching the neural systems that underlie this ability. Because people with dementia (in the moderate to severe stages) lose the ability to recognise themselves in the mirror or recognise their family members, this research offers a deeper understanding of our neural mechanisms and, in particular, what is called the “mirror neuron system” which concerns how we learn by imitation.

Firstly, self recognition “may use a mirror neuron mechanism to establish shared representations between self and others to enable social communication and intersubjectivity” (Gallese, 2003 cited in Uddin et al, 2006, p. 68). This mechanism showed how the ability to distinguish self from others is “critical for maintaining an individual sense of unity and agency” (Uddin et al, 2006, p. 68). Because mirror neurons are normally “associated with action observation and dynamic visual stimuli”, this study gives credence to the use of vocal improvisation and imitation by visual cueing and prompting that was utilized in the current choir research as a learning device.

Uddin et al (2006) concluded that “disruption of processing in the IPL (right inferior parietal lobule of the right hemisphere) is sufficient to degrade self-face recognition performance, suggesting a causal role for this region in self-other discrimination and is the first evidence that a human brain area is necessary for the discrimination of the self-face from other familiar faces; a correlate of maintaining a distinct representation of self while engaging with others” (p.69-70).
4.7 Social learning

Research into ageing demonstrated that social engagement could reduce mortality and promote general health (Avlund, Damsgaard & Holstein, 1998; Glass et al, 1999, cited in Cohen, 2006). Choir singing promotes social engagement, mastery and a sense of creating something beautiful. It is anticipated that participation in a choir could provide an opportunity for a person to succeed at learning a new skill, in which people can achieve at their own pace without pressure (Robertson-Gillam, 2008). Davis (2005) called this approach “errorless learning” (p. 305). Errorless learning is a key factor in educating people with dementia. It is the ‘no-mistake’ approach in which individuals are given tasks in which the likelihood of making mistakes is reduced, so that time and learning efforts are not wasted by reinforcing incorrect information” (Davis, 2005, p. 305). This approach is particularly important in choir therapy where correct singing can become a source of anxiety from earlier conditioning. Mastery of a new skill can increase life satisfaction and maintain existing memory abilities (Robertson-Gillam, 2008).

Lipinska & Backman (1997) successfully used picture naming tasks with people with early dementia whereas Bird and Luszcz (1993) used categorical cues to help memory recall. Both studies found that when “the same information was presented as a cue both at encoding and at recall, remembering is better ... because this involves “the individual in developing self-cues to facilitate performance” (Davis, 2005, p. 306).

The Cochrane Collaboration investigation into the effectiveness of music therapy in aged care found that the studies had poor methodological quality so that “the study results could not be validated or pooled for further analysis” (Vink et al, 2006, p. 1).

A more recent Cochrane Review of Music Therapy for Depression by Maratos et al (2008) examined six studies, only one of which involved nursing home residents without dementia. It was used as an active control group for their study on the effectiveness of cognitive-behaviour therapy. All studies examined were small, ranging from 19 to 68 participants. The authors concluded that the small
number and low methodological quality of the studies cast doubt on the effectiveness of Music Therapy to reduce depression. They suggested that there is a need for high quality trials.

4.8 Summary of music therapy literature

The literature contains reports on studies about choir singing, general music therapy and the links of music to creativity, social learning and relaxation. However, there is a lack of studies regarding the use of music therapy for decreasing depression in people with dementia. In particular, only one study focused on the use of choir therapy for reducing depression in people with dementia (Robertson-Gillam, 2008).
Chapter 5

Reminiscence Therapy literature review

*Man is like breath: His days are as a fleeting shadow. In the morning, he flourishes and grows up like grass. In the evening, he is cut down and withers. So teach us to remember our days that we may get a heart of wisdom.*


5.1 The idea of reminiscence

Butler (1991) in 1955 first used the term *life review* as a normal aspect of the ageing process and older adult development. Butler hypothesised that it is normal for people to want to make sense of their lives by recalling past events and putting them into present perspectives. He also hypothesised that it is normal to want to resolve past conflicts, grief and losses, life changes, learning to forgive themselves and others as well as celebrating life and bringing to completion the events of a lifetime (Butler, 1963). Kubler-Ross (1997) also categorised these processes in her seminal work which dealt with death as the final stage of growth. These ideas began to slowly take seed as each ensuing decade passed and with medical advances extending life expectancies.

Reminiscence therapy is a way of telling the stories of one’s life. It brings together the threads of jaggedness that may have gone unresolved for many years. It integrates the *present* person with the *past* person and brings understandings about why events unfolded as they did over the many years of a lifetime. “Reminiscence
is regarded as part of autobiographical memory and life review is a special kind of reminiscence” (Gibson, 1989, p. 3). The past is dynamic and fluid. Our memories of it contain our feelings, sensations and impressions. We can construct a different kind of past to what others may have experienced of the same events, for instance, the differing memories of childhood events by various siblings. “Memories are dynamic and dispersed, located in different ways in different parts of the brain” (Rose, 1992, p. 316).

Kunz & Soltys (2007) believed that “because long term memory remains intact longer, the ability to share recollections also may help energize and increase self-esteem in individuals diagnosed with dementia” (Kunz & Soltys, 2007, p. 53). Reminiscence can help a person achieve the developmental tasks of older adulthood (Kunz & Soltys, 2007). Because people are living longer, it is now necessary for health professionals to become aware of the fact that human beings continue to develop, even in late-stage dementia.

5.2 Definitions of reminiscence therapy

The Merriam-Webster Dictionary’s definition states that reminiscence is “the process or practice of thinking or talking about past experiences (Merriam-Webster, 2008). Another definition of reminiscence therapy by Spector et al (2001) describes it as “vocal or silent recall of events in a person’s life, either alone, or with another person or group of people” (Spector, 2001, p. 1).

Gibson (1989) suggested that people’s memories are always partly reconstructed from the accumulations of experiences of a lifetime, the personality and its subsequent development in relation to life experiences, life circumstances and varying degrees of satisfaction with one’s life. Spinelli (1997) maintained that “the remembered past is always a selective process and reflects the current views we hold about ourselves” (p. 57).
5.3 Theoretical bases of reminiscence therapy

Early theorists hypothesised a withdrawal theory in which successful ageing involved a process of withdrawal from social life in preparation for the ultimate withdrawal of death (Cumming & Henry, 1961). There were others who focused on Erickson’s psychoanalytic stages theory where obtaining ego integrity offsets despair in old age. It was believed that ego integrity was needed in order to provide meaning and life satisfaction which then takes away the fear of death (Yen-Chun Lin, 2003).

The psychoanalytic approach to reminiscence therapy emphasizes “the importance of unconscious mental processes, with a developmental model of the mind linking early development to later life ... It aims to help in understanding that some of the adverse reactions to the losses or changes associated with old age, in terms of the developmental issues specific to old age, will in part be determined by the individual’s underlying psychological constellations” (Balfour, 2007, pp. 231-232).

Parker (1995) and Atchley (1989) postulated a continuity theory in which people continually review their lives in order to understand and interpret changes as they occur, facilitating adaptation and a sense of continuity. Yen-Chun (2003) suggested that “reminiscence can provide a mechanism by which individuals adapt to changes that occur throughout life” (Yen-Chun, 2003, p. 299). This theory has merit in that memory is closely linked to continuity of one’s life history. People with dementia have short term memory loss and in order to keep the continuity flowing, one must remember what has happened before. Remote memory often remains long after short term memory fades and this is where reminiscence therapy can help people with dementia to bring the past into the present. It can create a sense of coherence within an otherwise confusing world.

The activity theory postulates that active older people are more satisfied with their lives and their self-concept is validated through their participation in roles played in earlier life and/or through substituting such roles in a way that enables them to continue to be a vital part of society (Kunz & Soltys, 2007). Three components
that contribute to successful ageing were considered to be physical and functional health, high cognitive functioning and active involvement in society (Kunz & Soltys, 2007, p. 22).

Killick & Allan (2001) believed that reminiscence is about remembering the past and present, leading to person-centred validation. These authors cautioned about the seriousness of doing recall activity and the need to be deeply aware of sudden and unexpected memories surfacing in the form of emotional distress rather than the actual memories themselves.

Gibson (1989) also believed in the validation of the person and suggested that we must learn to listen carefully to a person with dementia. Careful listening skills by the facilitator in reminiscence work can facilitate the appropriate response to expressed emotions. It is important to tease out significant clues as to why someone becomes distressed instead of labelling them as confused or muddled. There is always a reason why people with dementia behave the way that they do. Reminiscence offers avenues in which people can freely and safely express their inner feelings and thoughts under the expert guidance of a professional facilitator (Gibson, 1989).

5.4 The psychoanalytic approach of reminiscence therapy related to the current study

Wong (1995, cited in Puentes, 2002) identified six types of reminiscence. These were instrumental, integrative, transmissive, escapist (defensive), obsessive and narrative. Wong believed that integrative and instrumental reminiscence types were the only useful adaptive ways of doing reminiscence. He described integrative reminiscence as being linked to Butler’s (1963) life review model as preserving a sense of mastery’ through the use of early memories to rationally evaluate underlying cognitive schemas (Wong, 1995). Wong noted that a sense of mastery was important for ego integrity across the life span of an individual. A robust ego can offset symptoms of depression in the elderly.
“Recalling past successes provides strength and stability to face crises” (Kunz & Soltys, 2007, p. 53). This can be done by learning to recognize previous problem solving strategies that can strengthen current coping skills in the face of increasing cognitive and physical deterioration. Kunz & Soltys (2007) outlined how Erickson’s life stages form important guidelines for understanding the behaviours of people with dementia. For instance, if peoples’ needs were not met in the first few years of life, their fear of abandonment and death may be so strong that they may continually push others away from them and cause isolation and challenging behaviours. Issues of shame and self-doubt that originate during young childhood can plague adults in relationships throughout their lives, resulting in being victims of ‘resident dumping’ by their families. This phenomenon is common in residential care (Kunz & Soltys, 2007).

The next stage of development concerns middle childhood when approval, self-centred behaviours and a sense of purpose are important milestones. People with dementia who did not successfully integrate this stage may have difficulties in making appropriate choices for their health care and become “difficult for caregivers to deal with” (Kunz & Soltys, 2007, p. 25). The next stage is concerned with initiating, participating and completing intellectual and social activities. People with dementia who have not been able to integrate this stage can demonstrate “difficulties with roommates, have personality conflicts with staff, instigate problem situations, dislike group activities and be generally antisocial” (Kunz & Soltys, 2007, p. 26).

Failure to integrate the adolescent stage can be demonstrated with unjustified and complaining behaviours in people with dementia with the tendency to want to instigate lawsuits against authority. Low integration of the young adulthood stage results in difficulties with being direct in their communication styles and having stormy relationship issues with family members, roommates and staff. These people with dementia exhibit emotional neediness which tends to try the patience of carers and staff (Kunz & Soltys, 2007).

Those adults who have failed to integrate their middle adulthood stage may become “self absorbed in late life and be demanding of time, draining staff and
carer energy” (Kunz & Soltys, 2007, p. 28). When old age occurs, wisdom is expected to accumulate as the result of “living long enough to reach the highest level of psychosocial development” (Kunz & Soltys, 2007, p. 29). This is the stage when older adults begin to put their lives into perspective and set about resolving earlier conflicts and difficulties. As Butler (1991) suggested, the life review process is a normal part of the final stage of psycho-social development. Life review can be seen as a normal part of every stage of life development as people review their life events with others and receive feedback which helps them to integrate their experiences based on the perspectives of others as well as their own. However, life review becomes more pronounced at the later developmental stages of life as people begin to bring the threads of all their life experiences together. This can be evident in the many autobiographies published by older celebrities.

Winnicott’s (1971) psychoanalytic attachment theory postulated the existence of a safe space that is created by the mother for her infant. This theory holds relevance on how people with dementia exhibit attachment behaviours. Winnicott postulated the idea of a virtual world in which a space exists that acts as a transition between the inner and outer worlds of a person and where play and creativity can occur which may act as catalysts for personal and psychological growth. Earlier life tasks of psychosocial development (Erickson, 1963) may not have been fully completed at those times and regression to these stages is frequently evident in the attachment behaviours of people with dementia.

Winnicott (1971) believed that ego organization develops when the infant experiences threats of annihilation which can lead to recovery because of the good-enough-mother figure that is able to intuit her infant’s inner world and respond accordingly. Through this process, the infant can develop a personal existence through secure attachment to the mother figure. If maternal care does not meet these threats of annihilation, the infant can experience feelings of insecurity and lack of safety in the world, leading to underdeveloped ego organizations. Ainsworth et al (1978) developed attachment theory following Winnicott’s ideas. She called her experiments “The Strange Situation” in which
infants’ behavioural responses were observed when they were sequentially subjected to visits from their mothers or a stranger.

Miesen (1993) used Ainsworth’s attachment theory when he conducted a series of large-scale studies in which he examined the relationship between levels of cognitive functioning, attachment behaviours and parent fixation in people with dementia living in psychogeriatric nursing homes in the Netherlands. He used the Standard Visiting Procedure (SVP) which replicated Ainsworth’s *Strange Situation* study. The participants were subjected to visits from a stranger versus a family member. Miesen (1993) found that people with dementia showed organized forms of attachment behaviours which depended on the various stages of dementia (Miesen, 1993). Parent fixation was commonly found in people with severe dementia.

Miesen (1993) further showed that these people had difficulties in finding a secure base from which they could form a sense of attachment because they were no longer able to form realistic links from external to internal objects. He found that this ability was disrupted by the progressive nature of dementia. This produced the inverse result of Ainsworth’s *Strange Situation* studies (Ainsworth, 1978) in which she examined maternal attachment styles and their psychological effects on babies. Miesen’s (1993) work indicated how important it was to understand the attachment losses of people with dementia and how insecure they can feel as their disease progresses. In this way, dementia can be viewed as a *Strange Situation* that keeps getting stranger (Miesen 1993).

The psychoanalytic approach helps us to deepen our understanding of the processes of dementia because it emphasizes the inner mental processes, using Erickson’s (1963) developmental model as a guideline. Even though psychoanalytic theory has been criticized for infantilizing older people, its merit lies in its ability to reach inside the person with dementia and understand their behaviours and difficulties from their own personal perspective and life history (Balfour, 2007). Waddell (2007) suggested that there are linkages between understanding the very early states of the mind of an infant and what is considered the second state of childhood in dementia. This kind of understanding can increase
the caregiver’s capacity to unconsciously register, reflect and think; giving meaning to the infant’s or older person’s world through the caregiver’s capacity to care responsibly” (Waddell, 2007).

Uddin et al’s (2006) research on mirror neurons indicate that discriminating between self and others begins to develop as young as four months of age. This research gives further weight to psychoanalytic developmental theory in dementia care.

Balfour (2007) emphasized how important it is to understand the concept of containment when working with a person with dementia. By understanding this concept from a psychoanalytic perspective, the carer can be enabled to make appropriate adjustments to their caregiving which in turn can provide a more stable and coherent quality of life for the person with dementia.

Cheston & Bender (1999) stated the importance of innovative practice for meeting the attachment needs of older people with dementia. Ainsworth’s work emphasized the importance of the mother being emotionally sensitive to the needs of her baby as well as meeting its physical needs: to understand the baby’s mental world. This lies at the deepest level of bonding in that it depends on the parent’s or caregiver’s capacity to create in their mind the mental state of the infant (Balfour, 2007). This theory has profound implications for the care of people with dementia and in helping carers to understand their residents’ needs, whether it be a loved one or a carer in residential care. However, in Ainsworth’s model the baby grows up and becomes independent, whereas the cared-for person with dementia continues to deteriorate and eventually die. This places the carer in the unique position of facing the existential issues of grief and loss at the end of the cared-for person’s life.

5.5 Other studies on reminiscence therapy

Stinson & Kirk (2006) conducted a twice weekly study of structured reminiscence for six weeks, as an intervention to decrease depression and increase self-transcendence in 24 older women residing in an assisted living facility in Texas.
The age range was 72-96 years. Structured reminiscence referred to the psychoanalytic approach of life review which was seen as a “subset of reminiscing” (Stinson & Kirk, 2006, p. 209). It was aimed to target the review of the entire life span which was shared verbally and non-verbally in search of life meaning. Although results showed no significant decrease in depression or increase in self-transcendence, a positive trend for decreasing depression emerged, indicating the importance of screening for depression in older people. The authors’ justification for the study was that pharmacology is the primary modality for treating depression in older women and that, notwithstanding the enormous costs involved, antidepressant medication can lead to harmful side effects without alleviating the actual underlying depressive condition (Stinson & Kirk, 2006).

Chao et al (2006) conducted a reminiscence study with 12 elderly nursing home patients in Taiwan aimed at decreasing depression, increasing self-esteem and life satisfaction. The quasi-experimental design applied Yalom’s (1983) group existential theories as a pilot study to plan and design activities for reminiscence group therapy (Yalom, 1983). Two wards were selected where one ward of 12 was the experimental group and the other ward of 12 became the control group. Ages of participants ranged between 65-85 years and scored greater than 24 points on the MMSE. Results indicated that the reminiscence group scored levels of significance on self-esteem with positive trends towards significance on depression and life satisfaction. The authors concluded that reminiscence groups had the potential to enhance elders’ social interactions with each other in nursing home settings by acting as support groups for participants.

Bohlmeijer et al (2005) conducted a pilot project using creative reminiscence as an early intervention for depression. Creative reminiscence utilizes non-verbal and creative expression as a means of coping with life experiences and as self-expression. Seventy-nine elderly people with a mean age of 66 years participated where 70% were female. The majority of participants lived independently (55.7%) with average to higher educational levels). The focus of the pilot project was to determine its innovative properties and to obtain direct experience of the method of creative reminiscence, rather than evaluate its effectiveness. Results indicated reduction of depression was not as large as expected. The researchers posited that
this was possibly due to the fact that there was no time to discuss the participants’ experiences and thoughts evoked by the reminiscence because the use of creative approaches are time consuming. The authors questioned whether participants’ characteristics could influence the effect of creative reminiscence due to the fact that one third of the sample showed a large reduction of depressive symptoms.

Wang (2005) conducted a study on the effects of reminiscence on depressive symptoms and mood status of older institutionalized adults in Taiwan, using a quasi-experimental design with two groups, with pre-post tests and purposive sampling. The sample involved 48 residents over 65 years of age and living in an aged care facility. The Geriatric Depression Scale (short form Chinese version) was used for determining the presence of depression while the Apparent Emotion Rating Scale [AER] by Snyder et al, (1998), was used to measure observed emotions in intact elders as an additional indicator of depressed mood. Results indicated that the reminiscence group showed fewer depressive symptoms and better mood status than the control group. This study showed encouraging use of reminiscence for reducing depression in older people, especially those living in residential facilities.

Hill & Brettle (2006) conducted a systematic literature review of studies to provide a reliable overview of the effectiveness, appropriateness and feasibility of counselling older people. Studies tested a range of therapeutic models. The most widely researched counselling approaches were cognitive-behavioural and related therapies as well as reminiscence and life review. The main type of counselling for dementia was the reminiscence and life review therapies which “use techniques specifically and exclusively designed for use with older people, helping them achieve a sense of integration through looking back over their lives” (Hill & Brettle, 2006, p. 289). Hill & Brettle (2006) asserted that reminiscence therapy is a type of creative counselling approach that has anecdotally proved its effectiveness.

Hill & Brettle’s 2006 literature review found the effectiveness of these therapies were mixed. For instance, Baines et al, (1987), and Watt & Cappeliez (2000) found improvements, although the Cochrane Review by Woods et al, (2005)
found insufficient data to make any firm conclusions about their effectiveness as a treatment for dementia. They examined four randomized controlled trials that were deemed suitable for analysis. On the whole, cognition and mood improved after four to six weeks following treatment (Woods et al, 2005). They also found that carers who participated with their relative with dementia in a reminiscence group reported less strain and the people with dementia showed signs of improved functional quality.

Even though promising indications to the efficacy of reminiscence therapy for people with dementia seemed indicated, the Cochrane Review by Woods et al, (2005) found that the need for more rigorous and better designed trials in order to reach more robust conclusions. The review found that there was a limited number of studies with high quality as well as the variations in the types of reminiscence reported. Variations between the studies was also found (Woods et al, 2005).

5.6 Summary of reminiscence therapy literature

The psychoanalytic approach is emphasized in the literature review of reminiscence therapy because this was the main theoretical underpinning of the work that was carried out in the present study. Existentialist thought is briefly mentioned in terms of the grief and loss issues associated with the last developmental stage of life and in terms of coming to terms with present existence. The reminiscence group did not involve music and most of the literature did not report the use of music as an innovative approach to reminiscence work. This indicates a gap in the literature in terms of the effectiveness of music and the arts in reminiscence therapy. The studies that were examined showed promise for future reminiscence therapy. However, some of them showed weakness in design and highlighted the wide variety of reminiscence styles that are currently in use around the world. There is a need for more tightly controlled studies to show the efficacy of this important counselling approach for elderly people with dementia (Hill & Brettle, 2006).
Chapter 6

Methodology

6.1 Introduction

This study was aimed at increasing an understanding of whether participating in choir therapy compared with reminiscence therapy could reduce the symptoms of depression in people with dementia. The project was carried out at the Hammond Care Group’s Woy Woy aged care facility north of Sydney, Australia. The research field work took place between March and August 2007. All of the residents in this facility were medically diagnosed with dementia.

This was a randomised controlled trial with three objectives:

1) To ascertain whether choir therapy and reminiscence therapy could reduce symptoms of depression in people with medically diagnosed dementia as defined by the DSM-IV (APA, 1994) and who live in residential care.

2) To establish choir and reminiscence groups specially for this study so that the impact of these interventions could be measured on the participants.

3) To measure changes in the participants depressive symptoms through the use of the Cornell Scale for Depression in Dementia (CSDD).

4) To measure reflective and retrospective comments through pre/post interviews and observational comments by the research team following each session via video and verbal review.
6.2 Design

The study proceeded with participants divided into three groups:

Group 1: The Choir as experimental group
Group 2: Reminiscence as the comparison group
Group 3: Control group (receiving ordinary care).

Each group was given 15 sessions with two sessions per week. The sessions were given by the researcher with the assistance of two Music Therapy students who acted as research assistants.

The 15 sessions commenced in the first week of May 2007 and finished in the first week of August 2007. There was a month’s break between Sessions 5 and 6 due to severe weather conditions and an influenza outbreak which prevented the researcher and her assistants from attending the facility.

Retrospective and Reflective Comments were collected and analysed for themes relating to the numeric data. This was carried out in order to expand on the quantitative trends and better understand the research problem (Hanson et al, 2005).

6.2.1 The Settings

The choir sessions were conducted in a large room that was unfamiliar to the participants. It was the staff training room which contained an electric piano, chairs, amplifier and microphone. The musical equipment was purchased especially for the choir. Participants sat in a semi-circle facing the piano. During the sessions, choir members participated in relaxation techniques including silence at the beginning, physical exercises, vocal exercises and songs from various genres. The researcher conducted the choir or accompanied them on the piano.

The reminiscence group was divided into two groups, following recommendations from earlier research that a reminiscence group should not exceed 8-10 participants (Gibson, 1989). The sessions were conducted in residential cottages,
in small rooms containing comfortable armchairs. As all cottages are exactly the
same in design, the environment was familiar to the participants. During the
reminiscence sessions, participants were engaged in conversations on different
topics relating to their personal backgrounds, historical events and present reality,
using transitional objects, such as pine cones, sea shells, soft toys, story books
and personal reminiscence stories (Winnicott, 1971). The researcher organised the
reminiscence groups for this study with the assistance of Music Therapy students,
and oversaw the assessment process.

6.3 Ethics approval

Hammond Care obtained ethics approval from the University of Wollongong to
conduct procedures for ascertaining the degree of depressive symptoms and levels
of cognitive functioning using the following instruments:

- Cornell Scale for Depression in Dementia (CSDD) (Alexopoulos et al,
  1988) before and after the active interventions;

- Mini Mental State Examination (MMSE) (Folstein et al, 1975) to assess
  levels of cognitive functioning as a baseline demographic.

Hammond Care provided the statistical results from these instruments to the
researcher as background for her study.

Ethics approval was obtained from the University of Western Sydney to use the
three groups concurrently for assessment and evaluation using the following:

- Historical Profile of each participant as Demographics;
- Pre-interviews with participants and telephone interviews with relatives in
  order to explain the project and obtain verbal and written consent and to
  gain personal life perspectives;
- Post-interviews in order to terminate the therapeutic process and compare
  their personal life perspectives;
• Levels of Responsiveness to the active interventions by observational methods using scoring and reflective comments via video and discussions with music therapy students who acted as research assistants following each session;
• To access participants’ medical files for information on medical conditions and medications which may affect responses to the interventions.

6.4 Consent process

Sixty-three of the eighty residents in the facility were approached and their families were asked to give consent for their relative to participate. Each family was personally rung up by the researcher and the research process was thoroughly explained to them. The majority of relatives were keen for their loved ones to be asked to participate as well. Furthermore, the UWS Ethics Committee requested consent from the participants themselves. This was accomplished during the initial interviews with participants when the whole process was explained and discussions were held about how they felt being in the project; how they felt about aspects of daily living, their moods, their families and their general outlook on life. Because of the psychologically fragile nature of dementia, it was felt that audio recording of each interview would impinge on relationship building. People with dementia can become quite suspicious of recording equipment and videos when the nature of the interaction is so personal. However, this also created a confounding variable to the results. Participants were quite comfortable with being videoed as a group during each reminiscence and choir session, although some people made comments and had to be reassured.

An Information Sheet (Appendices E and F) explaining the nature of the research and what will be involved was given to the families/guardians of the 60 most depressed residents selected for the study. A Consent to Participate was obtained from each family member or guardian after they had been adequately informed of the process that was involved, taking into account all ethical considerations (see attachment G).
6.5 Data sources

Evaluations for depression and cognitive functioning were carried out using the Cornell Scale for Depression in Dementia [CSDD] before and after the active interventions. The Mini Mental State Examination [MMSE] was used as a baseline demographic only.

Other demographic information such as age, gender, marital status, educational status, religiosity and music history, were also obtained at baseline.

Details of the assessment instruments:

a) **Mini Mental State Examination** [MMSE] (Folstein *et al.*, 1975) for assessing cognitive functioning. (See Appendix A)

The Mini Mental State Examination was developed by Dr Marshall Folstein and others in the 1970’s and is widely used to screen for the presence of cognitive impairment over a number of areas: cognition skills including the mental activities of memory, thinking, attention, reasoning, decision making and dealing with concepts. It uses a series of questions and tests with a maximum score of 30 points. Scores under 26 are generally regarded as contributing to a diagnosis of Alzheimer’s Disease or related memory disorder. Scores between 23 and 26 suggest a borderline condition, while scores of 22 and below are considered abnormal with severe cognitive impairment. According to Bartlett *et al* (2007), the MMSE has demonstrated good specificity (96.8%) but somewhat lower sensitivity (71.8%) in detecting Alzheimer’s Disease and other forms of dementia (59.8%).

b) **Cornell Scale for Depression in Dementia** [CSDD] (Alexopoulos *et al.*, 1988). (See Appendix B)

The Cornell Scale for Depression in Dementia [CSDD] was specifically developed to measure depressive symptoms in people who are cognitively
impaired or confused and are unable to reliably report their symptoms. The scale uses a comprehensive interviewing approach with 19 items rated on a three-point scale, with a total score of 8 or over indicating significant depressive symptoms. It is divided into five sections. Section A measures mood related signs such as anxiety, sadness, apathy and irritability. Section B measures behavioural disturbances such as agitation, bradykinesia, multiple physical complaints, lack of interest in social events. Section C measures physical signs such as appetite loss, weight loss, and lack of energy. Section D measures cyclic functions such as diurnal variations of mood, difficulty falling asleep, multiple awakenings during sleep, early morning awakenings. Sections E measures suicidal ideation, low self esteem, pessimism, mood congruent delusions (Alexopoulos et al, 1988).

The score range is 0-57. The assessments focus on depressive symptoms and signs such as sadness, agitation, sleep difficulties and lack of energy. These symptoms had to occur during the week preceding the interview. Many of the items can be filled out after direct observation of the patient by staff or carers. The CSDD displays inter-rater reliability and internal consistency (Scogin, 2003).

c) **Levels of Responsiveness** (See Appendix C).

Levels of Responsiveness were assessed in real-time during the sessions and retrospectively by watching video recordings. Results were scored on a Likert 1-10 scale where 1 = minimal response and 10 = fully engaged response. Eight items regarding quality of life were evaluated. Comments and observations were recorded by the research team who were given training in the methodology beforehand. These assessments took place at the beginning and end of the study in May and August 2007.

- The pre and post interviews were carried out, not only to gain permission from the participants themselves but also to learn about personal life perspectives. This approach is closely linked the qualitative approach of life history as outlined by Bailey (1978), Geiger (1986) and Creswell
(1998) in which “an investigator collects data primarily through interviews and conversations with the individual” (Creswell, 1998, p. 49).

It was anticipated that the pre and post interviews would help the participants to express themselves in a relaxed and confidential environment. The process was expected to encourage trust and relationship building with the primary researcher before the study commenced and act as a termination process after the study had finished. However, this process also made it difficult to blind the control group adequately. The researcher anticipated that the Hammond Care organization would continue to offer both choir and reminiscence therapies following the study.

6.6 Choir sessions

Choir practices took place twice weekly on a Tuesday afternoon and a Friday morning. Because the room was shared with staff training, flexibility with session times was necessary.

The room was unfamiliar to the choir participants as it was separate from their residential cottages. It was sparsely furnished with a piano, chairs in a semi-circle, loudspeaker, microphone and whiteboard. Initially, the environment was challenging to the participants but, once the music began, they became more comfortable over time.

Each session lasted for forty-five minutes. Later sessions were extended sixty minutes as people became more engrossed in the whole method and became enthusiastic and motivated. This meant that they stayed seated longer and were able to concentrate for longer periods.

The choir consisted entirely of people with dementia. This meant that song material had to be modified to suit their particular disabilities. For instance, some
could no longer read or speak clearly and had short attention spans. Therefore, new song books were made for those who could read. However, most songs were taught by rote and it was found that the participants tended to remember them better this way.

Choir therapy as a process began with a period of silence followed by relaxation; then vocal improvisation (individually and as a group); singing and speech exercises; learning new song material; and singing well-known songs. The process was semi-structured in that each activity was offered in sequence every time. Each session finished with a farewell song in which the choir leader sang goodbye to each participant on an individual basis. The song material was drawn from Anglo-European cultures including spiritual, religious, jazz, classical and popular genres. As choir members became more familiar with this routine, the act of singing began to create a sense of community which helped to lift the spirits of participants who showed obvious enjoyment with the process.

6.6.1 Vocal improvisation

Vocal improvisation involves “creating a consistent and stable musical environment to facilitate spontaneity and emotional connection to self and other” (Austin, 1999, p. 144). Through this activity, choir members became more interactive and communicative with each other and more able to express their emotions. Through vocal improvisation the group was given the opportunity to explore their vocal ranges in spontaneous ways that encouraged creativity and self confidence as well as allowing them to sing their favourite song.

6.6.2 Singing exercises

Singing exercises explored the possible vocal range for the choir with the sol-fa, vowel exercises, and staccato and legato exercises. All members enjoyed this activity which is like a ‘tune-up’ before they sing. Vowel sounds were related to various animals’ sounds such as the ‘meow’ sound of a cat which created humour and a sense of enjoyment. Elderly people frequently express “dissatisfactions with current vocal qualities due to ageing; a reluctance to have their voices heard by
others or they were told when they were young that they did not have a vocal quality that could contribute to a satisfactory musical singing product” (Clair, 2000, p. 82). The singing exercises aimed to give purpose and meaning to the singing and to encourage the choir members to learn to improve their vocal quality. They all enjoyed this part of the choir program.

6.6.3 The song material

The song material was derived from the cultural and social background of the majority of the choir which comprised mainly of people from white Australian/European backgrounds who belonged to a mainly Protestant Christian culture. Llewellyn-Jones (2004) believed that this type of approach involved a whole of life population intervention because the health of individuals is profoundly affected by the culture of the community in which they live. The song choices for the choir reflected the cultural, social and religious backgrounds of the participants, including gospel, religious, classical, popular and jazz. A listing of the song material used is shown in Attachment I.

6.7 Reminiscence sessions

The reminiscence group of twenty was divided into two smaller groups to allow for more intimacy and conversation according to suggestions made by Gibson (1989).

Each reminiscence group took place on Tuesday and Friday mid-mornings and late-afternoons for fifteen sessions. A sitting room in two of the six cottages was utilized which had sliding glass doors which allowed a certain degree of privacy. People with dementia tend to wander in and out of rooms so some interruptions occurred but with the sliding doors closed, entry became more difficult.

The sitting room was arranged with comfortable chairs in a semi-circle around a small coffee table upon which a colourful cloth was placed. Transitional objects such as soft toys, small dolls with expressive faces, stuffed animals, shells, drift
wood, picture books, scrap and quiz books were arranged in appealing ways on the table cloth.

Sessions commenced by making sure that everyone was comfortably seated within proximity to each other to allow for open conversations. Each person was warmly greeted by name as they entered the room and efforts made to ensure that they were seated next to a preferred person if required.

One research assistant operated the video camera which was placed behind the group and moved around according to the flow of the session. Lighting was subdued in order to capture sharp pictures. The other research assistant sat within the group and took part in the conversation/discussions as well as helping the group leader.

6.7.1 Transitional objects

Transitional objects (Winnicott, 1971) were used as ways of helping people feel secure and safe. They were also used for inviting conversations such as the latest news events, humour, stories, poetry, shells, driftwood, soft toys, photos, dolls and drawings. They were symbolic of real life examples and provided a vehicle through which participants could express ideas, discuss existing knowledge from others and deepen inner thinking processes. Many people with dementia found the soft toys most engaging and comforting. They provided a centre piece for security, familiarity and conversation.

6.7.2 Learning new information

People with dementia have been found to be capable of learning new information which stimulates them (Davis, 2005; Robertson-Gillam, 2008). They like to share their own stories and learn from others. This helps them to feel like they are still in the world.

The group leader took on the role of a non-intrusive facilitator with advanced listening skills who could guide the flow of conversations. Tales from long ago,
with some expressing deep injury, trauma or sad memories were given expression
and exploration within the group. The leader was well trained to deal with grief
and loss issues, facilitating these as well as stories of achievements, successes and
other life experiences. Relationships were built with familiarity being developed
amongst the reminiscence group members.

6.7.3 Description of a typical reminiscence session

The group leader began each session by introducing herself and her assistants by
name. She then welcomed and introduced each individual to the group, making
positive comments about their efforts to attend and asking how they felt on the
day.

The group leader then outlined what the group could generally expect from the
session and introduced the objects on the table, picking up some of them and
demonstrating what they could do. For instance, a duck was demonstrated as to
how it could dance and quack to a rock and roll melody, or a large sea shell was
put to the ear so that the sea could be heard along with poems about the sea. This
often led on to discussions about what the seaside meant to various members or to
some fun with quaint and interesting soft toys such as the quacking duck or
laughing ball. Some members tried out some of the objects for themselves and
passed them around to others in the groups. One object was a small wooden top
which caused a lot of interest as the group leader made various attempts to give it
perfect spins. This did not happen every time and some group members offered to
try as well. Memories were stirred about having spinning tops as children and the
fact that this particular top was too small.

Very often, the first topics of conversation involved the weather conditions and
the state of health of participants. This gave group members a chance to talk about
themselves and how they felt that day.

Each session was fairly unstructured and tailored to the needs of the participants at
the time. If the conversation lagged, the group leader would introduce a current
affair topic, e.g., a large oil liner, the Pasha Bulka was washed up on Nobby’s
Beach on the Central Coast during a storm in June, 2007. This type of current news stimulated stories from participants’ past and often about the war.

Otherwise, the group leader would introduce a short story or read a poem with elements for discussion about life, the Australian countryside and other interesting topics. Soft animals were always passed around, such as a turtle or lizard and the group leader would read about their habits out of a large book, showing illustrated pictures.

The reminiscence sessions consisted of participants from six of the cottages, many of whom had not met each other. As each week went by, the group members were able to remember their last encounters as well as the group leader and her assistants. They were able to make meaningful contacts with others with from other cottage that they normally would not have met.

Each session ended with the group leader thanking everyone for their contribution and for attending and they were then assisted back to their own residences. Many commented on their pleasurable experiences during each session.
Chapter 7
Results

7.1 Introduction

The sample size for the analysis was n=41. Nineteen participants were excluded from the study as they did not attend the minimum of eleven out of fifteen sessions. This high attrition rate was expected due to the fragile nature of the population being studied. There were various reasons for this, such as illnesses, deaths, inclinations and staff cooperation.

Figure 7.1 on page 60 shows the flow of the research from the beginning.

7.2 Data analysis

The data were analysed using SPSSv1.5 and alpha set at 0.05 except where Bonferroni corrections were to be applied.

The statistical results were analysed in three ways:

- Data was analysed for Time Effect as though there were no groups to ascertain whether there was a significant change in scores over time (i.e., from pre to post interventions).

- Data was then analysed for Group Effect as though there were no time points; to ascertain whether there was a significant difference between the groups in
the scores. This data was not significant and therefore was not the focus of the data analysis.

- The *Time by Group Interaction* analysis looked at how each of the groups changed over time in comparisons to the Control Group. For instance, if one group decreased dramatically (in depression scores) over time (as the Choir Group did) and the other group remained stable (as in the Control Group), there would be and was a significant interaction between group and time; i.e., they differed in how they changed over time. The analysis was mainly concerned with changes over time and whether the groups differed in how they changed over time (*which they did*). This indicated that the active interventions had a significant impact on levels of depression in both choir and reminiscence, but with more impact in the choir group.

### 7.3 Demographics

Comparisons of the three groups on demographic characteristics were analysed using a one-way analysis of variance (ANOVA) for age and MMSE. Chi-square analyses were applied for the categorical data such as gender, marital status, level of education, religiosity and music history (see Table 7.1 on page 61).
Figure 7.1: Participant flow

Residents eligible for inclusion because of depressive symptoms  
\( n = 63 \)

Residents excluded  
\( n = 3 \)
- Relatives refused to give consent for resident participation

Randomised  
\( n = 60 \)

Allocation
- Choir  
  \( n = 20 \)
- Reminiscence  
  \( n = 20 \)
- Non Treatment  
  \( n = 20 \)

Drop outs
- Choir  
  \( n = 7 \)
  - Insufficient attendance due to illness or inclination
  - Participants had to attend at least 11 of the 15 sessions
- Reminiscence  
  \( n = 9 \)
  - Insufficient attendance due to illness or inclination
  - Participants had to attend at least 11 of the 15 sessions
- Non Treatment  
  \( n = 3 \)
  - Illness and death

Analysis
- Choir  
  \( n = 13 \)
- Reminiscence  
  \( n = 11 \)
- Non Treatment  
  \( n = 17 \)
Table 7.1: Demographics

<table>
<thead>
<tr>
<th></th>
<th>Choir n = 13</th>
<th>Reminiscence n = 11</th>
<th>Control n = 17</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age, mean (SD)</strong></td>
<td>82.2 (5.9)</td>
<td>81.9 (6.4)</td>
<td>82.9 (5.9)</td>
<td>F(2,38) = 0.11, p = 0.896</td>
</tr>
<tr>
<td><strong>Age, range</strong></td>
<td>74 - 96</td>
<td>73 - 89</td>
<td>74 – 93</td>
<td></td>
</tr>
<tr>
<td><strong>Gender, % female</strong></td>
<td>84.6 (11)</td>
<td>63.6 (7)</td>
<td>58.8 (10)</td>
<td>X$^2$ = 2.41, df = 2, p = 0.299</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>widowed</td>
<td>76.9 (10)</td>
<td>63.6 (7)</td>
<td>70.6 (12)</td>
<td>X$^2$ = 2.14, df = 6, p = 0.906</td>
</tr>
<tr>
<td>married</td>
<td>15.4 (2)</td>
<td>9.1 (1)</td>
<td>5.9 (1)</td>
<td></td>
</tr>
<tr>
<td>divorced</td>
<td>7.7 (1)</td>
<td>0.0 (0)</td>
<td>5.9 (1)</td>
<td></td>
</tr>
<tr>
<td>never married</td>
<td>0.0 (0)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Education, % (n)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>46.2 (6)</td>
<td>81.8 (9)</td>
<td>70.6 (12)</td>
<td>X$^2$ = 0.3.66, df = 2, p = 0.160</td>
</tr>
<tr>
<td>Secondary</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>5.9 (1)</td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td>7.7 (1)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td></td>
</tr>
<tr>
<td>Tertiary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Religious, % yes</strong></td>
<td>38.5 (5)</td>
<td>45.5 (5)</td>
<td>52.9 (9)</td>
<td>X$^2$ = 0.63, df = 2, p = 0.731</td>
</tr>
<tr>
<td><strong>Music history, % yes</strong></td>
<td>61.5 (8)</td>
<td>27.3 (3)</td>
<td>11.8 (2)</td>
<td>X$^2$ = 0.8.57, df = 2, p = 0.014</td>
</tr>
<tr>
<td><strong>MMSE</strong></td>
<td>12.4 (8.1)</td>
<td>12.5 (8.0)</td>
<td>15.8 (8.3)</td>
<td>F(2,38) = 0.83, p = 0.445</td>
</tr>
</tbody>
</table>

The groups did not differ significantly on average pre intervention MMSE scores (F(2,38) = 0.83, p = 0.445). This indicated that the randomization process was successful. Overall, the MMSE scores showed moderate to severe levels of cognitive functioning across all groups with a mean score of 13.6 out of 30.
7.4 Participant medications

At baseline, the principal behavioural medications that the participants were taking were recorded and shown in Table 7.2. The cell sizes were too small for valid statistical analysis of the medication data. However, it appeared that the distribution of medication use between groups was even, and, therefore, that the randomisation was successful.

Table 7.2: Participant medications

<table>
<thead>
<tr>
<th></th>
<th>Total n=41</th>
<th>Choir n=13</th>
<th>Reminiscence n=11</th>
<th>Control n=17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any medication, % (n)</td>
<td>34.1 (14)</td>
<td>38.5 (5)</td>
<td>45.5 (5)</td>
<td>23.5 (4)</td>
</tr>
<tr>
<td>Antidepressant, % (n)</td>
<td>4.9 (2)</td>
<td>0.0 (0)</td>
<td>9.1 (1)</td>
<td>5.9 (1)</td>
</tr>
<tr>
<td>Antipsychotic, % (n)</td>
<td>29.3 (12)</td>
<td>38.5 (5)</td>
<td>36.4 (4)</td>
<td>17.6 (3)</td>
</tr>
</tbody>
</table>

Only two participants in the study were taking prescribed anti-depressants which were Quetiapine and Mirtazapine. Eleven participants were taking prescribed anti-psychotic medications, which were Riperidone and Chlorpromazine. This means that 27 out of the 41 participants in the sample were not prescribed these types of medications.

When viewing each group separately it was observed that only one participant in the control group was prescribed an anti-depressant and three were prescribed anti-psychotics. Eight participants in the choir group were prescribed either anti-depressant or anti-psychotic medication. In the reminiscence group, four were prescribed anti-psychotic medications and one was prescribed anti-depressant medication. This suggested that the choir and reminiscence therapies’ lowered depression scores were not dependent on whether the participants were taking prescribed medications or not.
7.5 Cornell depression measurements

The results of the Cornell depression measurements are shown below in Table 7.3

<table>
<thead>
<tr>
<th>ID</th>
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<tbody>
<tr>
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<td></td>
<td></td>
</tr>
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<td>4</td>
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</tr>
</tbody>
</table>
Further analysis of the raw scores for the CSDD was undertaken as follows and shown in Table 7.4. A repeated measures ANOVA was conducted to examine the effect of time (i.e., from pre to post intervention) and group (Choir, Reminiscence and Control) on Cornell scores, and to see if there was an interaction between time and group. This was repeated with the group effect examining either Choir against the Control Group or Reminiscence against the Control Group.

**Table 7.4:** Cornell Scale for Depression in Dementia scores by treatment group and time, mean (SD)

<table>
<thead>
<tr>
<th></th>
<th>Choir n = 13</th>
<th>Reminiscence n = 11</th>
<th>Control Group n = 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre intervention</td>
<td>10.5 (8.9)</td>
<td>9.6 (5.9)</td>
<td>8.9 (5.4)</td>
</tr>
<tr>
<td>Post intervention</td>
<td>3.7 (4.2)</td>
<td>3.9 (2.3)</td>
<td>5.7 (4.7)</td>
</tr>
</tbody>
</table>

Music history, while differing significantly between the treatment groups, was not related to either pre or post intervention Cornell scores, and so was not included in the repeated measures ANOVA.

There was a *significant overall effect of time on Cornell scores* (F(1,38) = 52.71, p < 0.001; power = 1.00; see Figure 7.2), but no significant overall effect of group (F(2,38) = 0.04, p = 0.962), and no significant interaction between time and group (F(2,38) = 2.46, p = 0.099).

**Figure 7.2:** Cornell Scale for Depression in Dementia scores
In other words, there was an overall decline in Cornell scores with time. However, this drop did not differ significantly between the three groups, although this analysis was approaching significance (p = 0.099). Interestingly, the Control Group’s post depression scores also declined.

The analysis was repeated, this time comparing each active intervention group against the Control Group. For the comparison of the Choir group against the Control group, there was a significant overall time effect (F(1,28) = 42.20, p < 0.001, power = 100%). In other words, the sample, when restricted to only the Choir and Control Groups showed a significant decline in depression over time. However, there was not a significant overall group effect (F(1,28) = 0.01, p = 0.920). In other words, the Choir as a group did not show a significant difference in depression when compared with the Control Group.

There was a significant ‘time by group’ interaction (F(1,28) = 5.41, p = 0.027, power = 61%). That is, over time the Choir Group experienced a greater decrease in depression scores than did the Control Group.

For the comparison of the Reminiscence group against the Control group, there was a significant overall time effect (F(1,26) = 35.11, p < 0.001, power = 100%). This result was similar to the Choir Group indicating that effects of reminiscence built up over time and decreased depression.

Similar to the previous comparisons (Choir versus Control), a significant overall group effect was not evident when comparing the Reminiscence and Control Groups (F(1,26) = 0.10, p = 0.749). In other words, when time was not considered, the Reminiscence and the Control Groups did not differ significantly on Cornell scores.

There was not a significant ‘time by group’ interaction (F(1,26) = 2.72, p = 0.111). In other words, both groups experienced a similar decrease in depression scores over the time it took to conduct the 15 sessions.
7.6 Levels of responsiveness

The levels of responsiveness were assessed for the active interventions within each of the 15 sessions. In order to maximise the repeated measures comparisons, missing data were imputed from the total group average of valid ratings for that session. The eight sub-scales were each examined separately using repeated measures ANOVA with a Bonferroni correction (0.05/8) applied to correct for multiple comparisons (alpha set at 0.006).

Comparisons between subjects with and without a music history were performed using Student’s t tests for data from each of the 15 sessions for each of the eight sub-scales. These revealed no significant patterns of association between the sub-scales and music history, and, so, it was not considered as a covariate.

The results of the repeated measures ANOVA are presented in Table 7.5 on page 66. There was a significant overall effect of time for all sub-scales except Social Interaction, which had a trend towards a significant time effect. In other words, the responses built up over time. The overall effect of the group was not significant for Communication, Motivation, Self-esteem, Social interactions and Helpfulness towards others.

There were trends towards significant overall group effects for Expression of feelings (F(1,22) = 7.29, p = 0.013, power 73%), Positive mood changes (F(1,22) = 7.90, p = 0.010, power 77%) and Engagement in the session (F(1,22) = 6.94, p = 0.015, power 71%).

There were significant time by group interactions for Communication, Expression of feelings and Positive mood changes (see Figures 7.3, 7.4 and 7.5); with trends towards significance for Motivation, Self esteem, Helpfulness towards others, and Engagement in the session. Only the Social interactions sub-scale had a non-insignificant “time by group” interaction.
Table 7.5  Levels of Responsiveness

<table>
<thead>
<tr>
<th></th>
<th>Time effect</th>
<th></th>
<th>Time by Group interaction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F statistic (df =</td>
<td>p value*</td>
<td></td>
<td>p value*</td>
</tr>
<tr>
<td></td>
<td>14,9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>31.93</td>
<td>&lt; 0.001</td>
<td>100</td>
<td>7.11</td>
</tr>
<tr>
<td>Motivation</td>
<td>29.89</td>
<td>&lt; 0.001</td>
<td>100</td>
<td>3.79</td>
</tr>
<tr>
<td>Self esteem/Self confidence</td>
<td>6.05</td>
<td>0.005</td>
<td>97</td>
<td>3.26</td>
</tr>
<tr>
<td>Expression of feelings</td>
<td>9.51</td>
<td>0.001</td>
<td>99</td>
<td>12.24</td>
</tr>
<tr>
<td>Positive mood changes</td>
<td>19.69</td>
<td>&lt; 0.001</td>
<td>100</td>
<td>17.88</td>
</tr>
<tr>
<td>Social interactions</td>
<td>3.74</td>
<td>0.026</td>
<td>84</td>
<td>1.31</td>
</tr>
<tr>
<td>Helpfulness towards others</td>
<td>8.91</td>
<td>0.001</td>
<td>100</td>
<td>3.79</td>
</tr>
<tr>
<td>Engagement in the session</td>
<td>17.70</td>
<td>&lt; 0.001</td>
<td>100</td>
<td>4.35</td>
</tr>
</tbody>
</table>

* Bonferroni corrected alpha = 0.006

7.7 Further trends

The repeated measures ANOVA data was examined and the group differences and the significant overall time effect noted. Overall, the choir group revealed a more significant trend towards improved communication skills, expression of feelings and positive mood (see graphs in Figures 7.3, 7.4, 7.5). These points are worthy of further exploration in future studies.

These quality of life aspects follow a similar pattern to the decreases in depression, with the Choir Group demonstrating a more positive outcome. The
graphs show higher curves in responses for the choir when compared with the reminiscence group.

**Figure 7.3** Average communication sub-scale scores by group and time

![Graph showing communication scores over sessions for choir and reminiscence groups.]

**Figure 7.4:** Average expression of feelings sub-scale scores by group and time

![Graph showing expression of feelings scores over sessions for choir and reminiscence groups.]

Figure 7.5: Average positive mood changes sub-scale scores by group and time
Chapter 8
Qualitative Analysis of Sessions

8.1 Introduction

Qualitative data was examined in this study in order to better understand the research problem by comparing the trend of emerging themes in the retrospective and reflective comments to the numeric trends of the quantitative data (Mertens, 2003;; Punch, 1998; Hanson et al, 2005).

8.2 Themes from sessions using retrospective and reflective comments

All baseline interviews were carried out before the randomization process was done. During these interviews, the participants had the entire details of the project explained to them and were asked to give their verbal and/or written consent. Those who were able to sign their forms did so while those who could not sign gave verbal consent. All families of the participants gave signed and verbal consents for their relatives to take part in the study.

The comments by the participants during their pre and post interviews were recorded and analysed for emerging themes to compare with the significance of the quantitative results.

8.2.1 The choir group themes

Ainsworth’s Strange Situation was highly apparent in the behaviours of many of the choir members during the first four sessions of choir. When a person with
dementia is exposed to a condition of threat, they tend to manifest symptoms of attachment behaviour. Bowlby, (1979) suggested that because attachment behaviours can no longer be directed towards an older person, the behaviour becomes directed towards either a professional or related carer. Ainsworth (1978) identified three prominent patterns of infant attachment behaviours: secure, insecure-avoidant and insecure-anxious-ambivalent. A person with dementia can regress to any one of these behaviour patterns when they feel ill, experience loss or find themselves in unfamiliar surroundings. A need arises for the person with dementia to attach to a someone who they regard as wiser and stronger than themselves (Browne & Shlosberg, 2006). This was the role that the researcher took with both groups. She strove to intuit the inner world of the participants in order to validate their personhood.

**Session one** was chaotic and strange as people exhibited extreme anxiousness, wandering, pacing, wringing of hands and wanting to go home. However, with warm reassurances from the choir leader who quickly learnt each person’s name and addressed them individually, they began to settle. Once the music began, some of the anxieties were mitigated. Relationship building with the choir leader was in progress during this first session.

**Session two’s** main theme remained the *Strange Situation*, and attachment behaviour was still apparent. However, the choir leader was able to remember everyone’s name and each person was greeted with a handshake and a welcome for attending. This helped to allay anxieties and fear about being in a *Strange Situation*. Once the choir program commenced, more musical behaviours began to emerge with a strong focus on attaching to the choir leader in order to feel secure and safe.

**Session three** showed social interactions developing between the participants, the choir leader and her assistants. There were still some attachment behaviours with one gentleman, Mr. R, who continued to wander for at least 25% of the time. There was more communication between choir members and expressive body language especially among the almost non-verbal people.
**Session four** indicated that the *Strange Situation* was less acute and attachment behaviours were significantly reduced with reassurances and prompts. Attachment to the choir leader was becoming more evident. The group showed quick adaptation to the choir routine and some exhibited eagerness to sing solos during the vocal improvisation section.

**Session five’s** main theme involved the validation of personhood, their ethnicity (Mrs V. was very proud of being Welsh) and their talents which were beginning to emerge. Demonstrations of pitch, melody and musical expression were evident. There was evidence of more group coherence, more musicality and an eagerness to learn new songs.

**Session six** was the first one after a month’s break due to an outbreak of influenza and severe weather with flooding and storms. It was therefore surprising and validating to find that no learning had been lost. The choir members all remembered the routine and displayed happy and secure behaviours. They were all pleased to return to choir and displayed more communication between themselves as a cohesive group. Religious and ethnic backgrounds of the group were validated in the choice of songs. Mrs A. sang *Jesus loves me* with great fervour while others joined in. Memories of Sunday School days were discussed and feelings of safety and security were expressed in association with this song.

**Session seven** showed that choir therapy had become a secure and happy place in which participants enjoyed themselves. There was more group cohesiveness with secure attachments to the choir leader. Mrs H. continued to direct her attentions to helping Mrs B. who displayed anxious and needy behaviours. She expressed depressive symptoms herself but was able to smile when the singing commenced. Mrs. L showed attachment to her friend from her cottage, asking her not to “go to sleep on me”. Post interviews revealed that this lady had more severe dementia than she displayed during choir sessions.

**Session eight’s** main theme was improved communication with each other, the choir leader and her assistants. There was strong evidence of group cohesiveness. Relationship building continued with less attachment behaviours evident. The
almost non-verbal participants eagerly lip read lyrics for new songs and displayed increasing spontaneous musical behaviours. Mrs V. sang the chorus of *All Through the Night* in Welsh proudly and Mrs G displayed deep emotional expression when singing *Summertime* with the choir leader.

**Session nine** showed that choir members were familiar and secure in the choir room, the activities and themselves as a cohesive group. Mrs B’s negative affect showed improvement with more attention and awareness to the activities. She began to show secure attachment behaviours to the choir leader, accompanying her in front of the choir with the exercises (for which everyone clapped). Mrs. G (who always sang *Summertime* with the choir leader) commented that she’d been there before. Mrs. H (who always helped Mrs B) was becoming more focused on singing and choir activities than helping Mrs B. Mrs M has been a trained singer and enjoyed singing a long acappella solo with much appreciation expressed from other choir members.

**Session ten** showed that the group were confident enough to learn new song material, sing rounds and be able to remember other songs that they had learnt in previous sessions.

**Session eleven** showed a deeper group cohesiveness with high motivation, humour, playfulness, laughter and an eagerness to learn and master all new songs. Increased alertness and attention between all of the group was evident. Everyone listened carefully to the story behind Amazing Grace which the choir leader told them before singing it. This resulted in many comments with discussions about the evils of slavery. Accordingly, the following rendition of *Amazing Grace* was musically beautiful with intense emotional expression. Mrs H cried in response to the closing song, *God be with You*, which obviously evoked some emotional memories for her. She was reassured and left in a happy mood. Mrs M spontaneously sang *I belong to Glasgow* and Mr R sang some words of *Blue Moon*. He followed the choir leader around when he became restless and enjoyed dancing with her to *Alexander’s Ragtime Band*. 
Session twelve showed more spontaneous and open communication. All members were validated for their personhood and ethnic backgrounds. Some reminiscing occurred in which past life roles were discussed, evoked by the song material. Mrs V said “I love coming to choir”. She had been a previous singer.

Session thirteen indicated that memories for new and old songs were improving, particularly Mrs G who was able to sing more phrases of Summertime than before. There were far less agitated behaviours observed and Mr R who had been a jazz musician was able to sit for thirty minutes before showing signs of restlessness. Much of his wandering behaviour turned into beautiful and graceful dancing.

Session fourteen showed more confidence, self assurance and higher self esteem. There was less confusion and fewer displays of insecurity.

Session fifteen showed high motivation amongst all choir members with spontaneous expression of feelings evoked by the songs and music, more helpfulness towards others, more social awareness and more group cohesiveness.

The themes of all these choir group sessions are summarised in Table 8.1 on the next page.
<table>
<thead>
<tr>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
<th>Session 4</th>
<th>Session 5</th>
<th>Session 6</th>
<th>Session 7</th>
<th>Session 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main theme.</td>
<td>Parly mitigated by the music, reassurance and relationship building.</td>
<td>More musical behaviours apparent. More communication with choir leader and assistants.</td>
<td>Still some symptoms of Strange Situation. More communication, i.e., comments and body language.</td>
<td>Group showed quick adaptation to choir routine. Same eager to sing solos.</td>
<td>More coherance in the group. More musicality. Learning new songs.</td>
<td>Group more cohesive. Choir Leader represents security and reassurance,</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session 9</th>
<th>Session 10</th>
<th>Session 11</th>
<th>Session 12</th>
<th>Session 13</th>
<th>Session 14</th>
<th>Session 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good relationships with Choir Leader and assistants. Group cohesion.</td>
<td>Remembering what was previously learnt.</td>
<td>High motivation, humour, playfulness, laughter, eagerness to learn and master all songs.</td>
<td>Past roles discussed. Group cohesion growing deeper each week.</td>
<td>More concentration and focus. Less agitated behaviours. Group very cohesive.</td>
<td>More confidence, self assurance and self esteem. Less confusion, fewer displays of insecurity.</td>
<td>Spontaneous expression of feelings (evoked by songs and music), more helpfulness towards others, and more social awareness. Group very cohesive.</td>
</tr>
</tbody>
</table>
8.2.2 The reminiscence group themes

Similar themes found in the choir group were also evident in the reminiscence groups. Novelty and conversational issues were paramount. Winnicott’s (1971) ideas of transitional objects as means of finding comfort and reassurance when manifesting attachment behaviours were successful. In the choir, the music and singing formed the medium of enjoyment and comfort, while in the reminiscence group, soft toys, shells, driftwood, small dolls, toy animals, stories, picture and quiz books were all offered and utilized for similar purposes. Many group members with severe dementia found comfort in cuddling teddies, sheep, rabbits and handling small dolls with expressive faces. Reminiscence therapy was aimed at strengthening ego integrity and enabling people to review their life experiences in order to attain a sense of fulfilment and satisfaction.

It appeared that Winnicott’s (1971) idea of a virtual world or safe space was created for the reminiscence participants where play and creativity occurred, opening up opportunities for personal and psychological growth. For example, listening to the sounds of a large seashell which was passed to each individual in the group encouraged further conversation and interest in other objects such as pine cones and stuffed animals. These transitional objects extended the interest of the group and created a learning environment.

As Miesen (1993) found in his research, parent fixation was evident in many of the participants, particularly in the women who often mentioned how much they missed their mothers. Men mainly mentioned missing their wives.

**Session One:** The main theme was a *Strange Situation* in which people came to join a group that was strange to them, even though the environment was quite familiar, unlike the choir situation in which the setting was totally unfamiliar. Attachment behaviours developed almost immediately but were partly mitigated by the use of transitional objects which provided reassurance and comfort to very severely cognitively impaired group members. Reassurances and relationship building were focused on. Witty comments were made about the transitional
objects and some cultural barriers were evident, i.e., one gentleman came from Malaysia.

**Session Two:** The *Strange Situation* was still apparent but further mitigated by the transitional objects and relationship building by the group leader who was able to remember everyone’s name and indicated that she knew who they were. This produced a sense of familiarity and security within the group. Most members tended to engage with the group leader.

**Session Three:** The *Strange Situation* began to ease with both groups as they attached more to the group leader. Transitional objects became very important. Some members’ eyes lit up when they saw the objects on the coffee table in the middle of the semi-circle of chairs. Some chose to cuddle certain soft toys (which they consistently picked out each week) for the duration of the session and this helped to release anxieties. Stories and poems were sources of interest and evoked discussions about their themes. The four small dolls all had different facial expressions such as happy, cheeky, sad and angry. These dolls were a focus for some members who discussed these emotions and made up stories about them. Mrs K made up some stories about one doll that looked upset and crying.

**Session Four:** The main theme seemed to be a relationship that was centred around one gentleman and a female participant: both acting in a similar way to the behaviours seen in a teenage romance. This gentleman behaved flirtatiously towards the female participant in each session until about session twelve, when he began to focus more on his boyhood days, his work and his family. This type of behaviour with its relation to sexuality is a difficult issue to deal with for carers in hostel care. It brings up issues of morality, religious ideals and the blurring of boundaries. Some staff expressed judgemental attitudes towards this type of behaviour and other group members expressed their disapproval.

Helpfulness was more evident in this session as well as boredom and apathy expressed by some group members. Mr B was angry at being brought to the group and he ceased coming after session four. Transitional objects continued to form a secure base for the group as conversational devices.
**Session Five:** Novelty of group activities was evident showing increases in helpfulness and interest towards others. The relationship issues (mentioned above), continued to annoy some participants and created a sense of discomfort. Boredom and apathy were also expressed by Mr K. Soft toys were chosen by some members and cuddled throughout the session.

**Session Six:** Spontaneous singing by some group members in response to a small musical box helped to break some tensions. Transitional objects continued to be important along with attachment to the group leader. Expressions of feelings about the war were discussed, along with stories about killing the enemy and how objective the experience was for the soldiers at the time. Motivation and social interactions increased in this session.

**Session Seven:** The use of transitional objects and group leadership were important sources for security and safety. During the group activity, ideas and feelings were expressed by Mrs J in particular, who also displayed a sense of humour in her conversation. She commented that “I don’t speak Mandarin; I just eat them”, in response to Mr G who talked about his Malaysian background and his native tongue being Mandarin.

The idea of different realities were discussed when Mrs. J spoke about seeing her husband with her eyes closed while Mrs K became upset when she tried to comfort the distressed boy doll who wasn’t responding. She was comforted when the group leader noticed her behaviour and offered her a doll with a happy face instead. This alleviated her distress and supported Winnicott’s (1971) idea that the teacher figure can intuit and meet her participants’ inner needs and respond accordingly. Bryant and Foster (2002) suggested that dolls have the ability to rekindle positive emotions associated with the parent-child bond.

**Session Eight:** English as a second language was a problem for Mrs K which complicated her dementia. She was Polish. One research assistant was able to interpret for her and this seemed to allay her anxiety. Attachment to the group leader showed a sense of security amongst the members and there was more spontaneous expression of feelings. Mr A., who belonged to the late afternoon
reminiscence group, was experiencing sundowning behaviours and found that some of the transitional objects created a safe and secure base for him. These objects continued to hold importance for all participants in both groups.

**Session Nine:** Health problems complicated the flow of this session with some members feeling sick and in pain. However, with others, motivation and helpfulness increased. Cultural differences showed some inhibition of expressing emotions and other participants went to sleep for certain times during the session, due to overheating of the room. The heater was not able to be turned down which effected the flow of this session.

**Session Ten:** The transitional objects revealed behaviours that were typical of mid-childhood, such as imagination, sharing toys and possessiveness of particular objects. For instance, Mrs K preferred the sheep while Mrs B wanted to cuddle the teddy. Mr R and Mrs K held hands throughout the session which continued to disturb some of the other group members as they felt that this was not appropriate behaviour (as mentioned in previous sessions). Stories and poems were used as stimulants for discussion. Repetitive speech was evident in some of the participants. Mr K’s physical disabilities prevented him from openly communicating within the group.

**Session Eleven:** Facial expressions from the dolls were a focus for discussion and formed part of a secure base in which to explore an understanding of events that were happening. Cultural yearnings for the homeland were expressed by some people from Europe and Asia. Others with hearing loss had to be prompted. Boredom, depression and abandonment issues were expressed by Mr K. The group leader was recognized as the secure base for conversations and flow of the group activity.

**Session Twelve:** Transitional objects remained a focus for security as well as the group leader. Helpfulness towards others was increasing as self confidence grew. Verbal opinions were more evident although feelings of boredom with life, grief, loss and disability issues affected the awareness process for Mr K.
Session Thirteen: More positive moods were evident in the participants. One daughter mentioned to one research assistant that her mother, Mrs K, had become more positive and communicative. Family life and boyhood experiences were discussed within the group, along with the existential issues of life and death. Mr K expressed how his disability prevented him from taking part in social interactions, but he did say how coming to reminiscence was “something to do and better than doing nothing”.

Session Fourteen: Humour and wit dominated this session. Objects such as sheep and dolls were important. Stories were told which evoked emotional reactions and discussions. The relationship between Mr R and Mrs K remained an issue for some members in one of the reminiscence groups. Feelings of lack of purpose, boredom and the inability to express one’s self due to disability were still present with Mr K. However, he was able to continue to express these feelings which seemed validate his personhood. Some group members fell asleep for at least 25% of the time. This did not happen at all in the choir group.

Session Fifteen: Stories and paintings formed the main theme of this session which evoked much discussion and conversation about early Australia. Dolls with sad and happy faces were also focused on and emotions expressed as a result. Language and dementia problems were present in some participants. Hearing loss for a few group members was also seen as a limitation for following the flow of the conversations and discussions. Prompting and cueing were necessary in order to enable these participants to understand the conversations and activities.

The themes of all these reminiscence group sessions are summarised in Table 8.2.
<table>
<thead>
<tr>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
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<th>Session 7</th>
<th>Session 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strange Situation.</td>
<td>Strange situation still apparent mitigated by transitional objects and secure relationship with group leader</td>
<td>Strange situation ensuing as group relates more to group leader (researcher)</td>
<td>Sexuality issues with one man &amp; woman</td>
<td>Helpfulness of group activities</td>
<td>Helpfulness issues</td>
<td>Novelty of group activities</td>
<td>Novelty of group activities</td>
</tr>
<tr>
<td>Main theme</td>
<td>Partly mitigated by transitional objects i.e. Sea shells, stories, soft toys, stuffed animals, reassurance and relationship building</td>
<td>Transitional objects very important as secure objects to release anxieties. Stories and poems source of interest. Different emotions on doll faces from happy/sad</td>
<td>Transitional objects important for secure base for the group as conversational devices.</td>
<td>Helpfulness very apparent. Boredom and apathy issues for some.</td>
<td>Helpfulness and group leader</td>
<td>Spontaneous singing to express transitional objects by some members.</td>
<td>Spontaneous singing to express transitional objects by some members.</td>
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<td>Transitional objects &amp; group leader important for secure base for group.</td>
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<td>Transitional objects &amp; group leader important for secure base for group.</td>
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<td>Transitional objects &amp; group leader important for secure base for group.</td>
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<td>Recognition of group leader.</td>
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<td></td>
<td>Expression of ideas &amp; feelings.</td>
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<td></td>
<td>Use of humour.</td>
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<td></td>
<td>Discussion of different realities.</td>
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<td></td>
<td>Troubled with doll faces’ expression.</td>
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<td></td>
<td></td>
<td>ESL and dementia difficulties, Religiosity.</td>
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<tr>
<td>Session 9</td>
<td>Session 10</td>
<td>Session 11</td>
<td>Session 12</td>
<td>Session 13</td>
<td>Session 14</td>
<td>Session 15</td>
<td></td>
</tr>
<tr>
<td>Some health problems.</td>
<td>Childhood stage apparent 3-6</td>
<td>Facial expressions important for secure base to understand events.</td>
<td>Transitional objects and group leader important for security.</td>
<td>More positive moods</td>
<td>Humour &amp; wit</td>
<td>Stories &amp; paintings conversational objects.</td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>Transitional objects form secure base. Sexuality issues related to adolescent stage Cultural yearning Stories/poems Repetitive speech Physical disabilities</td>
<td>Hearing loss Group leader recognized as secure ‘mother’ base. Boredom, Depression. Abandonment</td>
<td>Transitional objects and group leader important for security. Helpfulness Verbal expressions of opinions. Boredom Group leader as significant. Disability issues</td>
<td>One daughter noticed positive changes in mother. Importance of family life, boyhood experiences Existential issues of life/death Disability preventing social interaction</td>
<td>Objects used as sheep &amp; dolls</td>
<td>Dolls with sad faces (one lady tried to cheer up but failed). Was given happy doll instead. ESL &amp; dementia issues</td>
<td></td>
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<tr>
<td>Disability affecting dementia</td>
<td>Lack of emotions due to cultural differences</td>
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18
8.3 General summary

In summary, the main factors that emerged from both the choir and reminiscence therapies were centred around the idea of Ainsworth’s *Strange Situation*, creating a sense of safety and security, group cohesiveness, learning of new material, stimulation and creativity. Mastery of new skills in the choir was a major achievement that was successfully accomplished with significant reductions in the *Strange Situation*. Memory and awareness also showed significant improvements over time. Spontaneity, helpfulness, social awareness, increased motivation and social interactions as well as expression of feelings with increased positive moods also occurred successfully as results of the interventions. All these aspects of human development were contributing factors towards strengthening ego integrity and to significantly decreasing depression. These emerging themes in the qualitative data added depth to the understanding of the analysis of the quantitative data.
Chapter 9
Discussion

9.1 Introduction

The aim of this research was to examine whether participation in a choir compared with a reminiscence group could reduce the symptoms of depression in people with dementia. Of concern was the high number of participants with depressive symptoms which can only highlight the hidden nature of the presence of depression in people with dementia who live in residential care. According to authors such as Burrows (2004) and Sunderland & Draper (2001), depression is not only more likely to be prevalent in dementia, it can precede it and even be a cause of its onset. Furthermore, it can be an elusive and difficult condition to diagnose in a person with dementia, leading to further complications of dementing illnesses (Sunderland & Draper, 2001).

When all forty-one participants were measured on the CSDD at baseline, symptoms of depression were evident. Following the active interventions of choir and reminiscence therapies, the CSDD was applied once more and showed statistically significant decreases in depression scores in the choir and reminiscence groups as well as decreases in the control group. The choir scores had the most significant drop in depression over time in the study, indicating that choir therapy was the most effective intervention for mitigating depression in people with dementia, followed by reminiscence therapy.
There are many reasons for researching the link between depression and dementing illnesses in later life. One of these reasons concerns a general consensus that elderly people suffer from the loss of personal meaning associated with life in residential care. This is compounded by the effects of dementia which gradually strip away the identity of the person by reducing the memories of themselves as active and socially engaged people.

The interventions that were investigated in this project aimed at mitigating symptoms of depression in people with dementia by giving back a sense of meaning and identity. This was achieved by engaging the residents in an ‘activity’ that has a strong creative psychosocial dimension, i.e., choir singing, and one that rebuilds identity through reminiscence.

According to the results, the symptoms of depression at baseline were similar in all three groups, with the lowest scores in the control group, i.e., this group was less depressed. Scores of eight or over were considered to be suggestive of depressive symptoms (Alexopoulos et al, 1988; Pond & Brodaty, 2004). All three groups contained individuals with scores above eight at baseline, indicating that each group displayed some degree of depressive symptoms. The choir group showed the highest scores for depression on the CSDD at baseline, i.e., 10.5 and the reminiscence group showed average scores of 9.6. The Control group showed the least depressed score of 8.9.

Because the research was carried out in the residential facility, it was difficult to properly blind the control group against both the choir and reminiscence groups. Therefore, qualitative data was examined for emerging themes and compared to the numeric analysis for a deeper understanding of the results.

Even though the control group were unable to observe the activity of choir singing, they were aware of different movements within their cottage when some of their fellow residents were picked up to attend choir in another part of the facility or attend reminiscence. Some of the control group did observe the change in routine in two out of six cottages for reminiscence as this activity was carried out in their cottages. This may have been a confounding variable on the results.
Furthermore, as this was a single-blind trial, there was a risk that the participants could have been influenced by the interactions with the researcher and the research assistants. This factor added further credence to the inclusion of qualitative themes for comparison of the numeric results.

It was also interesting to note that depression scores, as measured on the CSDD, decreased significantly following the interventions even though most participants were not taking medication for depression or agitative behaviours at the time (Choir decreased from 10.5 to 3.7; Reminiscence decreased from 9.6 to 3.9; and, Control decreased from 8.9 to 5.7). There may be an inference from this that psychosocial interventions for depression in people with dementia are not only safe but also highly effective. More replications of this study may further support these findings with increased sample sizes.

9.2 Medications

Interestingly, only two participants out of the sample of forty-one were prescribed anti-depressants at the time of the study and only eleven participants were prescribed anti-psychotic medications. This was in the face of the fact that all three groups showed depressive symptoms on the CSDD, supporting Sunderland & Draper’s (2001) assertions that the presence of depression may be under-recognised and under-treated in people with dementia living in residential care.

Even though the choir group had the highest score on the CSDD at baseline (indicating that they were the most depressed), no one had been clinically treated for depression, although five participants were prescribed medications for symptoms of dementia such as agitation, hallucinations and distress. This phenomenon supported Sunderland & Draper’s (2001) assertion that depression is difficult to diagnose in elderly people with dementia as the two conditions of depression and dementia can easily overlap with depression not being fully recognised. This result also supported Short’s (2007) assertion that depression may be more prevalent in people with dementia who live in residential care.
9.3 The Mini Mental scores (MMSE)

The choir had the lowest scores for cognitive impairment as measured by the MMSE i.e., 12.4/30. The Reminiscence group also had low MMSE scores of 12.5/30 whereas the Control Group were slightly higher at 15.8/30. Any scores below 24/30 were indicative of dementia (Folstein et al., 1975). However, the MMSE scores in the current study indicated that all participants had moderate to severe dementia and also showed depressive symptoms as measured on the CSDD. This supported Burrows (2004) assertion that people with dementia are more likely to suffer from depression than those without dementia.

Even though the MMSE scores were so low, there was an overall improvement in depressive symptoms across all three groups following the study. One reason for this may be that the active interventions had novelty value as well as creative value. Cropley, (1995) asserted that “creativity is concerned with novelty and difference” (p. 84). It may have been likely that the control group’s scores reduced because of the novelty of having interesting conversations with the researcher in the pre and post interviews and building rapport with her. Furthermore, it may have been stimulating for them to observe the reminiscence groups taking place in their residences.

9.4 Pre and post interviews

The researcher interviewed all participants at baseline and post interventions and became quite well known to members of the control group. The researcher aimed to ensure that each participant was given the opportunity to consider the ramifications of the project and give verbal permission to participate, even though their relatives had already done so on their behalf in writing. This process was in line with the requirements of the UWS Ethics Committee which requested that each participant be given the opportunity of consent. However, as rapport and relationship building commenced during these interviews, it could be conjectured that the pre-intervention interviews could have had some bias, engendering greater empathy and thereby influencing some change in scores during the pre and post phases of the study.
A similar trend was noted in the pilot project which also involved pre-post interviews.

Each interview involved discussions about personal life perspectives. These types of discussions are not usual topics of conversation with most elderly people who have dementia and are living in residential care. Most carers are too busy with daily tasks. Relatives just want to know that their loved one was well looked after. Furthermore, there is a general consensus that people with dementia are unaware of themselves and their lives. Accordingly, this type of discussion within the baseline and post interviews may have been stimulating and novel for control group participants and may have influenced the decrease in depression scores because these discussions validated their inner world and personhood.

9.5 Qualitative data from Baseline interviews

Some topics that were discussed during the interviews concerned how participants felt about living in residential care; what was important to them and whether they could help themselves; feel they had control over their lives; the importance of their families; grief and loss issues; and, feelings of self worth, meaning and purpose. Most participants expressed some degree of satisfaction about their living accommodation. One man spoke about his feelings of emptiness because his daughter lived in England and he was in Australia, and, even though they talked by phone, it wasn’t the same.

Another man, a previously accomplished jazz musician, spoke about how he could express his feelings through music. The researcher was unaware of his musical history at the time of the interview as the randomization process replaced names with numbers. His presence in the choir was by chance only. In future studies, the influence of formal music training versus casual music history could be explored as influencing factors and confounding variables.

Many people expressed dissatisfaction with their voice quality and feelings of insecurity with learning how to sing. These feelings could have been from past negative experiences with music. Another point for conjecture could be that a
professional musician who had formally studied music would be more familiar with the process of choir singing and would be more likely to respond in a positive way to the activity.

Many women spoke about how being useful towards others was important to them and how it was important to complete any task that was set before them. During pre treatment interviews, many choir and reminiscence participants spontaneously mentioned how important singing was to them while others talked about their earlier sporting, work and academic accomplishments. Many people mentioned their war experiences. One lady said: “Life’s okay. It’s what you make of it”. Others felt that reproducing new generations gave them life satisfaction and a feeling about the continuity of life through them. Many potential choir members expressed feelings of depression, regrets, sadness and loneliness associated with being old. Others were just happy to be alive and to be useful on a daily basis.

For many people, the most important aspect of their lives was their families and some of those without families expressed a deep sense of emptiness, unless they had a significant friend who visited regularly. Quite a few people with severe dementia expressed how much they missed their parents, particularly their mothers. This theme came up frequently during reminiscence sessions and sometimes in choir, particularly among the women. The theme of missing long-deceased parents correlated with Cicirelli’s (1991) idea of symbolic attachment behaviour in the elderly, even though their parents were no longer living. Bonds between participants and their parents seemed important to many in terms of their psychological well-being and sense of self.

9.6 Post interviews

People were much more comfortable during the post interviews, although many expressed disappointment that the sessions were coming to a temporary end. At the time of the interviews, the researcher was under the impression that the sessions would continue with another therapist after the study had finished. So the termination procedures were about saying goodbye to the researcher and her assistants with the expectation that the sessions would continue at a later time.
9.6.1 The choir group

The choir group was very chatty about their feelings, many of them still mentioning how much they missed their parents. Quite a few choir members had deteriorated in their dementia from baseline but were still fully functioning in choir therapy until the last day. This supported studies which showed that musical abilities can be spared in the face of increasing cognitive impairment due to dementia (Miller et al, 2000; Crystal et al, 1989; Cuddy & Duffin, 2005; Sixsmith et al, 2007; Cohen, 2006).

Communication and social interactions were much improved from the baseline interviews. Some choir members were keen to continue developing their voice quality and singing together. They said it gave them more meaning and purpose in their lives. One lady said that “choir made me feel like I was still in the world”. They were disappointed to hear that the choir would go into recess but expressed anticipation about it continuing at a later date.

9.6.2 The reminiscence group

The Reminiscence Group was less chatty than the choir post-study. They talked more about existential grief and loss such as losing their roles in their families; being more aware of losing control over their lives; missing deceased parents; more awareness of feeling stressed and confused; and, feeling homesick and abandoned by spouse and family. Perhaps the reminiscence conversations brought up memories from the past that increased awareness of their present situation which in turn impacted on coming to terms with their present reality. Maybe, over more time, this group would have shown more improvements in coming to terms with their losses and having a better understanding of the positive aspects of their present situation. This was evident in the pilot study that continued over a eighteen month period (Robertson-Gillam, 2008) and demonstrated that reminiscence members became more cohesive, expressive, communicative and positively aware. They learnt to deal with their losses in positive ways over time with an experienced facilitator. It seems that time is an important factor for the efficacy of this work. Nevertheless, the reminiscence group did show significant
decreases in depression scores with more awareness, ego integrity and a sense of belonging to a group.

9.7 The levels of responsiveness

Overall, Levels of Responses between choir and reminiscence groups showed that Choir responses steadily increased over time while reminiscence responses remained at average levels. Familiarity with the environment could have contributed to the initially higher response scores in the reminiscence group as well as the novelty effect of meeting and chatting in a group with others from different cottages.

The choir responses may have been due to the upbeat, happy and stimulating atmosphere that was created by group singing as well as the challenges of learning new skills (Cohen, 2006). The following retrospective and reflective comments delve deeper into these findings.

9.8 Retrospective and reflective comments following each session.

The Choir Group when compared with the Control Group showed the most significant decrease in depression over time. The retrospective and reflective comments which were recorded after each session correlated with these findings, showing that agitation, wandering, signs of insecurity and confusion decreased markedly over time.

9.8.1 The choir group

The main theme arising from the qualitative data in the choir were the insecurities and associated behaviours from being in a Strange Situation (Ainsworth, 1978). These decreased markedly from the fifth session onwards. Attachment to the choir leader increased and a secure and safe base was established for choir singing (Winnicott, 1971). Other themes included more group and individual coherence, improved communication, increased learning, spontaneous expression of feelings, humour and increased social awareness. These themes supported Aldridge’s
(2005) ideas about how we all have a performed identity in which “we can offer contexts of expression and understanding where gesture, movement and vocalization make communicative sense and ... that perception of self is dependent on coherence in time” (Aldridge, 2005, pp. 46-47). Singing in a choir can create a sense of coherence within the form of the music (which is time oriented) and which can translate into re-building a personal “performed identity” (Aldridge, 2005, p. 46).

The choir program provided enjoyable, challenging and novel activities which seemed to awaken possibilities for spiritual and psychological growth. Cropley (1995) referred to the principle of use it or lose it in which those who do not continue to learn early in life, may be the people who slip into the downhill path ... embracing the old adage “those who rest -- rust ” (Cropley, 1995, p. 77). As results indicated, the choir group certainly showed more positive improvements in depressive symptoms on the CSDD. It may be that the novelty of singing in a choir gave them more meaning and purpose, thereby awakening their innate urge to be creative and learn new skills.

Davis (2005, p. 304) suggested that “individuals with dementia......are capable of new learning”. Baddely and Wilson (1994) postulated that people with dementia cannot learn from prior mistakes because their explicit memory is impaired. However, they can learn in present time. Errorless learning, as postulated by Davis (2005) was employed by the researcher during the choir program so that tasks were offered in such a way that “the likelihood of making mistakes was reduced” (p. 305). This enhanced the experience of singing for participants and reinforced the idea that mastering a new skill was possible. Mrs S even commented after the second session that she believed she could learn to sing better because the choir leader was clear and encouraging. Mrs S had been a singer before she had had a stroke and subsequently developed dementia.

It appeared that the choir leader represented the idea of Winnicott’s (1971) good-enough-mother in which she took on the role of teacher/facilitator who provided a significant and secure base; a ‘holding environment’ from which the choir could experience spiritual and psychological growth.
Austin (1999) spoke about vocal work creating “a consistent and stable musical environment in which to facilitate spontaneity and emotional connection to self and other” (Austin, 1999, p. 144). This phenomenon was evident during the vocal improvisation part of the choir program when each individual person was encouraged to sing ‘their song’ with the choir leader. Some people with severe dementia and verbal communication problems were able to emotionally connect through imitation and extemporization of musical phrases with the choir leader. Each person was validated for their contribution and effort, and they all looked forward to this part of the program each week.

The choir leader took on the role of the encouraging teacher who believed in the innate potential of each individual in the group. This increased self esteem and confidence so that choir members began to strive towards improving their voice quality and creating a beautiful musical product which could become good enough to perform for others. This did occur when the pilot project finished (Robertson-Gillam, 2008). Members of that choir experienced enhanced meaning and purpose by giving performances over a two year period. “They felt that they were no longer isolated and forgotten but were continuing to participate meaningfully in their society” (Robertson-Gillam, 2008, p. 190).

According to Aldridge (2005), “language deterioration is a serious problem and might cause secondary consequences of dementia” (p. 63). Many people in the choir had difficulties with speech and communication which improved markedly over time in the study. This could have been a key factor in the significant decrease of depression scores on the CSDD over time.

Retrospective observational comments indicated that most choir members initially found themselves in a Strange Situation (Ainsworth, 1978) with the choir meeting in the staff training room. At the beginning this produced anxiety, confusion, wandering and insecurities. However, as Table 8.1 indicated, the Strange Situation decreased markedly by the fifth session as the choir members became more attached to the choir leader who provided a stable and secure base in which to sing (Winnicott, 1971).
The musical aspects of choir work (i.e., pitch accuracy, melodic memory and vocal quality) improved over time. Most elderly people generally express concerns over their reduced voice quality and lowered ability to communicate meaningfully (Clair, 1996). This was apparent when the choir leader approached each person at the beginning of every session so that they could “sing their song” with her and engage in vocal improvisation.

One lady, Mrs G who sang ‘Summertime’ from Gershwin’s Porgy & Bess became very involved with hushing the baby, giving lots of emotional eye contact and body language. Initially, she was only able to sing the first few lines of the lyrics and then would forget the rest but hum the melody. By the end of the study, Mrs G was able to sing the lyrics of the whole song accurately. There was a very special moment when she and the choir leader were deeply locked into the emotion of hushing the baby. This phenomenon was supported by Peretz et al (2004) who found that “verbal production, be it sung or spoken, is mediated by the same (impaired) language output system and that this speech route is distinct from the (spared) melodic route” (Peretz et al, 2004, p. 2).

Other choir members with limited speech responded musically by clapping their hands, stamping their feet or moving their bodies. Others imitated phrases and were able to extemporize on them with prompting from the choir leader over time. Some choir members sang songs from early childhood, such as one lady who always sang ‘Jesus loves me’. This validated her religious faith and the faith of others in the choir who sang along with her. As a group, all the choir were able to hum and vocalize together, developing a beautiful soundscape of voices.

One gentleman, Mr R, had been a well-known and highly talented jazz musician who developed severe dementia and was constantly on the move, wandering around and asking the choir leader to take him for a walk. She engaged him in dancing to some jazz songs and this became his secure base. After the first three sessions, he was able to remain seated for up to thirty minutes because he knew that the choir leader would ask him to dance at a certain stage during the choir session. He would wait patiently and join in other songs with clapping and
stamping feet until the choir leader extended her hand in invitation to dance. He would ask, “Is it time”? During the dancing, he began to talk with her and his speech improved. Afterwards, he often came to the piano and played some jazz scales or asked to play the guitar. Staff reported that he remained quiet and settled for the rest of each of the days that he attended choir. His wife also reported that he was more attentive and communicative towards her.

Choir therapy can also trigger memories of past events from the song material. One lady who was blind and whose husband was very ill, often spoke of her memories associated with the song ‘Over the Rainbow’ from the musical, The Wizard of Oz. She remembered the yellow brick road and talked about how the song reminded her of how she met her husband. She had already begun anticipatory grieving for his impending death which occurred a few weeks later. She often commented on other songs as well, bringing into focus the meaning behind the words and the memories that they evoked for her and which were shared by others in the group.

Most sessions finished with either a spiritual called ‘God be with you’ or the Israeli farewell song ‘Shalom Shaverim’. The former song was frequently used to farewell soldiers in the Second World War and it had many meaningful memories for the majority of choir members. Some tears were even shed during this time. ‘Shalom Shaverim’, in a minor scale and repetitive rhythm and melody, was useful as a means of making deep and meaningful musical connections with each individual. The choir leader went to each person, held their hand and sang about their participation in choir for that session within the melody of the song, accompanied by music therapy students.

One lady, Mrs B was only able to speak one to two word sentences. She used to become very excited about the fast rhythmic songs and would happily clap her hands and try to verbally communicate her feelings. She was able to clearly sing most lyrics from songs that she knew long ago and began to be more communicative between songs as she attempted to engage the choir leader in conversation. This phenomenon was supported by Sixsmith & Gibson’s (2007)
study which showed that musical abilities can be spared even with people who have severe dementia.

9.8.2 The reminiscence group

Reminiscence scores decreased significantly over time when compared with the Control Group. This group was not as depressed as the Choir Group but the baseline score of 9.6 was well within the range for suggesting depressive symptoms (Alexopoulos et al, 1988). The reminiscence group met in two of the cottages which were all designed exactly the same. Therefore, the environment was familiar and the sitting room was comfortable and cozy. However, because the sample was taken from all six cottages, some were brought from elsewhere. This could have created a Strange Situation for those with severe dementia. This was evident in some participants who went to go to their rooms, only to find that they were not there. This produced a measure of confusion. The retrospective comments from each session reflected this phenomenon when the novelty effect wore off part way through the study. However, others were enthusiastic and eagerly involved. Other adverse influences could have been cultural differences with some participants and a heater that could not be turned off, leaving the room very warm for many sessions, even for winter. This caused discomfort and sleepiness in participants from week to week. However, the novel and stimulating nature of the reminiscence group was enough to reduce the depression scores.

9.9 Psychoanalytic and existential theories in relation to reminiscence

Bowlby (1979) described his attachment theory as “a way of conceptualizing the propensity of human beings to make strong affectional bonds to particular others and of explaining the many forms of emotional distress and personality disturbance, including anxiety, anger, depression and emotional detachment to which unwilling separation and loss give rise” (p. 127).
Winnicott (1971) was interested in the idea of the space between the inner and outer worlds as a virtual world which is ideal for play and creativity. His ideas fitted well with reminiscence and choir therapies.

Spinelli (1997) referred to “slips in time” in the behaviour of “Jim” who began to inhabit two quite distinct time zones between present time and 50 years ago. Spinelli maintained that “the remembered past is always a selective process and reflects the current views we hold about ourselves” (p. 57). He suggested that the “past-as-currently-lived-and-future-directed” is a concept that has impact on how we can better understand people with dementia and how they live their lives from moment-to-moment. This idea has merit as to how people can be misunderstood when they regress back in time and carers or relatives try to help them to re-orient back into present reality. It can be better to go back there with the person with dementia and validate those early memories which may then bring them back to present time.

This happened in the reminiscence group with Mrs J who kept coming to reminiscence and sitting with her eyes closed. The group facilitator often directed questions to her. Some of the group said: “there’s no point in talking to her. She’s asleep all the time”. So, the group leader asked her if she was asleep. She answered that she wasn’t. She was then asked why did she sit there all the time with her eyes closed? She answered that she could see and talk to her (deceased) husband better. When this was explained to the group, they all understood and validated her behaviour. She also said that she could see other things as well which were probably hallucinations. However, because these ‘slips in time’ were validated, Mrs J began to open her eyes and become more aware of the group activities and events. By the end of the study, she was not sitting with her eyes closed at all. She was fully engaged in the reminiscence group sessions.

Winnicott (1971) also developed a theory about transitional objects that could be used for inviting conversations. In the reminiscence group, topics such as the latest news events, humour, stories, poetry, shells, driftwood, soft toys and animals, photos, dolls, drawing etc were used as transitional objects. They were symbolic of real life examples and provided a vehicle through which participants
could express ideas, discuss existing knowledge from others, and deepen their inner thinking processes. They were also used for comfort and as a recognition that people with dementia still possess an inner world (Browne & Shlosberg, 2006). This created a novelty effect that was different from their normal routine, as supported by Cropley’s (1995) findings.

People with dementia are as vulnerable to separation anxieties as young children, particularly when their world no longer makes sense to them. Bowlby (1979) also believed that the attached figure is seen as being “stronger and/or wiser” (Bowlby, 1979, p. 134). In reminiscence therapy, like choir therapy, the group facilitator took on the role of teacher/facilitator which engendered feelings of safety and security for both groups.

Ainsworth’s (1978) work identified three prominent types of attachment behaviour in infants which can manifest in later life when an individual is suffering from ill health, loss or the conditions of ageing (Browne & Shlosberg, 2006). Ainsworth’s study found that the key to secure attachment was parental sensitivity and responsiveness to the inner emotional life of the infant. In relation to the elderly, Browne & Schlosberg (2006) suggested that care-giving behaviour acts as a complementary function to attachment behaviours. When an elderly person with dementia feels under threat, i.e., they feel lost, confused and do not know where they are, “the need to seek closeness and proximity to attachment figures will often re-emerge and an increase in attachment behaviour is natural (Bowlby, 1979, cited in Browne & Schlosberg, 2006, p. 135). Attachment behaviours are very evident in people with dementia and more so when a Strange Situation such as a novel or new experience arises as in choir or reminiscence therapy sessions. The reminiscence group can reveal these types of attachment behaviours more quickly than a choir group due to its smaller size and intimate nature.

As in the choir, the group leader took on the role of the teacher figure who was strive to intuit the emotions and feelings of each group member, allowing for Winnicott’s (1971) ‘virtual space’ in which creativity and play was encouraged.
As time went by, participants became more confident and engaged in humour and the spontaneous use of *transitional objects*.

The reminiscence group engaged in conversation with each other and took part in group discussions. They were asked their opinions about topics and were able to express themselves freely. This appeared to help their self confidence and produced a more relaxed group. Mr A talked each week about his experiences as a young child growing up in Sydney during the Depression and working as a paper boy on the trams. He discovered that Mr G had been a tram conductor while Mr R had been a tram driver back in Taiwan. Mrs J remembered travelling on the Sydney trams and these memories and connections were eagerly shared amongst the group with many lively opinions being expressed.

Mr B, who had Parkinsons Disease, was impaired in his ability to communicate, although he showed a great deal of interest in the happenings. He said that it was “*something to do*” and that he was mostly bored. He told the researcher that if he could only hold a book, he would be able to read it and this would give him something meaningful to do.

Frankl (1984) wrote about how important a sense of meaning and purpose was to human beings. Frankl (1984,) suggested that one way of finding meaning was by suffering and that ‘we are answerable to life instead of asking why we exist’ no matter what state we find ourselves in (p. 176). Mr B felt his life was useless and meaningless. Reminiscence seemed to give him some meaning for a short time as well as a vehicle through which he could express these feelings.

In summary, both choir and reminiscence therapies are psychosocial interventions which were shown to have significant impact on decreasing depression in people with dementia.
Chapter 10
Conclusion & Recommendations

One of the main rationales for offering choir therapy in the present study was to engage people with dementia at a level that would stimulate their cognitive, emotional and spiritual awareness. The study demonstrated that participating in a choir can provide opportunities for learning a new skill in which people with dementia can achieve at their own pace without pressure. According to Davis (2005), it is generally assumed that elderly people have no further need to learn new skills or information due to their age and stage in life. However both the pilot (Robertson-Gillam, 2008) and present study, indicated that elderly people are still eager to learn new skills. Human beings are always looking for novelty in order to keep their lives purposeful and meaningful until they die (Cropley, 1995).

Current brain research around neuronal plasticity supports the idea of learning new skills in old age. The significant findings of the study included the capacity of the choir group to engage in mindfulness relaxation as well as a capacity for enjoyment and eagerness to learn, utilizing the cueing of specific actions with lyrics as memory aids. These findings support current research into the plasticity of the brain and the strength of the human spirit.

The use of vocal improvisation, imitation and creative singing helped to engender increased self confidence and individuality within the choir group. There is some new work in the neurosciences (illustrated with functional imaging) to indicate that this phenomenon may be the result of “mirror neurons” (Uddin et al, 2006). It was interesting to note that in the present choir study, participants, once engaged, were able to recognise others’ faces as familiar even though they had not met
these choir members before. Based on Uddin et al’s research, it could be speculated that singing may create more brain reserve in the right hemisphere.

Choir offers engagement in life at a deep human level. Singing in a group can tap into the spiritual dimension and deeply affect the emotional core of a person. Many of the songs used in the present study were from the Christian tradition common to most participants as well as other popular songs about life from the past and the present, supporting Spinelli’s (1997) idea of ‘slips in time’. It is possible that learning these songs was an important source of happiness and enjoyment as well as offering a challenge for mastering a new skill. This would support the findings of Cliff & Hancox (2001) where they found that singing spiritually uplifting songs engendered intense happiness and motivation.

Previous musical history, such as being a singer or musician, can influence the enjoyment and participation of choir singing. More participants in the choir had a previous musical history than the other two groups, even though randomization was carried out. This could have stimulated earlier creative skills and memories, producing left-right brain integration as Cohen’s (2006) study indicated. Such phenomena suggest that choir singing may be able to maintain and even improve brain function as well as markedly improve health and well-being.

Relaxation and breath awareness exercises used in this study introduced an innovative spiritual approach. Despite the fact that McBee (2003) found that elderly people who were taught mindfulness techniques reported reduced pain and agitation, normally this type of activity would exclude people with dementia. In the present study, the choir group was quickly able to grasp the idea of silence. They were also quick to embrace exercises with breathing and singing. Agitation and pacing in some participants were significantly reduced after the third session and interest was sustained throughout the remaining sessions, even though there was a month’s break between sessions five and six. Reports from carers indicated that residents anticipated these exercises, suggesting improvements in memory and motivation.
It is generally assumed that the voices of elderly people do not make satisfactory musical products (Clair, 2000). Many of the choir participants expressed these sentiments. This general belief was challenged by Cropley (1995) when he suggested that being creative is not just about products but also about the psychological processes of cognition, motivation and the desire for novelty and flexibility, especially in the older age group. As time went by, the choir participants demonstrated these qualities.

In the present study, participants were expected to learn musical dynamics in order to perform at a satisfactory level. It is important to point out that many of the choir members were already good singers. This probably influenced their level of enjoyment and eagerness to learn. However, previous musical history in participants can also be a confounding variable. Even though their lack of self esteem due to a weak voice was evident from the beginning of the project, this improved markedly over time. Furthermore, the choir participants’ voices did improve and this was noticed by the participants themselves. Their motivation increased as a result.

Research indicated that people who enter residential aged care are encouraged to embrace the “patient-as-victim” role, which can lead to learned helplessness and mental illness (Sperry, 1992, p. 398). Choir therapy can add a spiritual dimension to the lives of people with dementia in which more purpose and meaning can be found, thereby reducing the patient-as-victim role.

Bird & Luszcz (1993, cited in Davis, 2005, p. 306) used categorical cues to help memory recall. This also occurred in the choir when the researcher offered verbal cues and specific actions associated with the song lyrics in order to encourage recall. All choir members became familiar with the researcher very quickly and were able to remember her outside the choir activity. It is highly likely that they learnt to associate their choir experiences as memory cues along with emotional attachment, thereby enhancing the development of a positive relationship with the researcher.
Even though the MMSE scores showed that the most severe cognitive impairment was present in the choir group, the Cornell scores showed a significant decrease in depressive symptoms after the intervention. A similar trend was found in the emerging themes of the qualitative data. For many in the choir, cognitive impairment was severe and this activity provided a vehicle through which emotional expression was possible. This suggested that, regardless of the level of cognitive impairment, depression can be significantly alleviated by singing in a choir. Indeed, being part of a group that is actively engaged in a spiritually attuned activity reduces a sense of isolation, loneliness and lack of purpose, which Cohen (2006) asserted were so important for positive mental health.

Research into the efficacy of choir work in aged care and how it may decrease depression and enhance emotional and spiritual health has been extremely limited. The few studies available have been focused on seniors rather than the disabled elderly. Further research is needed to improve our understanding of dementia and the psychosocial, emotional and spiritual needs of elderly people living in care.

“Putting one’s life in order” (Gibson, 1989) relates to dealing with unresolved business that can end in late life despair (Erickson, 1963). It is concerned with achieving acceptable levels of ego integrity. Anthony (1987) found that creativity is related to ego autonomy and this correlates with mental health. Creative activities involving choir singing and reminiscing are validating and ego strengthening, leading to decreased depression and improved mental health in people with dementia who are living in residential aged care.

Dementia is rapidly becoming the largest disability burden in the Western world and is increasing in alarming proportions at a global level. Furthermore, there are more than 50% of elderly people living in residential care who suffer from depression. Depression is a largely hidden health issue in aged care (Burrows, 2004; Sunderland & Draper, 2001; Short, 2007). Elderly people belong to a fragile and vulnerable population which is less likely to respond as effectively to traditional treatments for depression such as pharmaceuticals and electro-convulsive therapy as in younger populations.
The main limitations in doing choir and reminiscence therapies in aged care facilities is the time and effort required by the therapist as well as staff cooperation that has to take place in order to make it successful. Most institutions are not able to cater for this type of team approach and therapists who on take this work are vulnerable to early burn-out. The researcher argues that good team work is possible with resultant happier staff and residents. However, changes in organizational structures would need to occur in order for this approach to be completely effective.

Twelve months after the randomised controlled trial was completed, it was reported that some residents were still asking when the choir would resume. It was disappointing from the researcher’s perspective that the choir was discontinued after the study. However, the pilot choir continued for a further eighteen months post-study and improvements in all areas of residents’ lives were evident. The original aged care choir in another facility which was formed in 2003 is still continuing at the time of this study with positive effects on the choir members.

In summary, this study demonstrated that choir therapy when compared to reminiscence therapy has a higher potential for mitigating symptoms of depression in people with dementia. Both choir and reminiscence interventions have been shown to be effective and safe as well as demonstrating that regardless of the levels of cognitive impairment, depression can be significantly alleviated. The results indicated that people with dementia can continue to achieve individual growth and development which are significant factors in reducing depression in this clinical population. Regardless of the level of cognitive impairment, depression can be significantly alleviated through these types of psychosocial interventions. These findings also contribute towards challenging the social attitudes held by society toward those with dementia and give a more positive, empowered focus to coping with dementia in later life and reducing discriminatory attitudes towards the disease.

It was important to note that Hammond Care has endeavoured to continue with the employment of a Music Therapist at their main facility following the results of both the pilot and controlled trial research.
It is recommended that further research into choir therapy to mitigate symptoms of depression in people with dementia may give further support to the current findings, particularly if choir singing as a psychosocial intervention can be studied in people who have been recently diagnosed with the disease.

Continuing research into the activity of singing for dealing with the symptoms of dementia could shed further light on our understanding of the disease and its association with depression.
References


Access Economics (2006b) Dementia in the Asia Pacific Regions: The Epidemic is Here. Canberra, Alzheimer’s Australia.


Appendices

A  Mini Mental State Examination
B  Cornell Scale for Depression in Dementia
C  Response Evaluation
D  Resident Profile
E  Information Sheet (University of Western Sydney)
F  Information Sheet (University of Wollongong)
G  Consent to Participate
I  List of song material used in the Study
## Appendix A
### Mini Mental State Examination

<table>
<thead>
<tr>
<th>Question</th>
<th>Maximum Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>One point for each correct answer, maximum of five.</td>
</tr>
<tr>
<td>What is the (year) (season) (date) (day) (month)?</td>
<td>One point for each correct answer, maximum of five.</td>
</tr>
<tr>
<td>Where are we? (State) (County) (Town) (Hospital) (Floor)</td>
<td></td>
</tr>
<tr>
<td>Registration:</td>
<td>One point each correct answer, maximum of three.</td>
</tr>
<tr>
<td>Name three objects: One second to say each. Then ask the patient all three after you have said them</td>
<td></td>
</tr>
<tr>
<td>Attention and Calculation:</td>
<td>One point for each correct answer, maximum of five.</td>
</tr>
<tr>
<td>Serial 7's: Subtracts 7 from 100 and keep doing it backward until five answers. Alternatively, spell &quot;world&quot; backward or name all the twelve months backward</td>
<td></td>
</tr>
<tr>
<td>Recalls:</td>
<td>One point for each correct answer, maximum three.</td>
</tr>
<tr>
<td>Ask for the three objects repeated above</td>
<td></td>
</tr>
<tr>
<td>Language:</td>
<td>One point for each correct answer, maximum two</td>
</tr>
<tr>
<td>Name a pencil, and watch</td>
<td>One point</td>
</tr>
<tr>
<td>Repeat the followings: No if's, and's or but's.</td>
<td>One point each, maximum of three</td>
</tr>
<tr>
<td>Follow a 3-stage command: Take a paper in your right hand, fold it in half, and put it on the floor</td>
<td></td>
</tr>
<tr>
<td><strong>Read and Obey the following:</strong></td>
<td></td>
</tr>
<tr>
<td>Close your eyes</td>
<td>One point</td>
</tr>
<tr>
<td>Write a sentence</td>
<td>One point</td>
</tr>
<tr>
<td>Copy the following design</td>
<td>One point if copied all ten surfaces and ten angles.</td>
</tr>
<tr>
<td><img src="image" alt="Design" /></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix B
### Cornell Scale for Depression in Dementia

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Sex</th>
<th>Date</th>
</tr>
</thead>
</table>

- **Inpatient**  [ ]  **Aged care home resident**  [ ]  **Outpatient**  [ ]

**SCORING SYSTEM**

- **A** = unable to evaluate  
- **0** = absent  
- **1** = mild or intermittent  
- **2** = severe

Ratings should be based on symptoms and signs occurring during the week prior to interview. No score should be given if symptoms result from physical disability or illness.

### A. Mood related signs
1. Anxiety: anxious expression, ruminations, worrying  
   - **A**  
   - **0**  
   - **1**  
   - **2**
2. Sadness: sad expression, sad voice, tearfulness  
   - **A**  
   - **0**  
   - **1**  
   - **2**
3. Lack of reactivity to pleasantries  
   - **A**  
   - **0**  
   - **1**  
   - **2**
4. Irritability: easily annoyed, short tempered  
   - **A**  
   - **0**  
   - **1**  
   - **2**

### B. Behavioural disturbance
5. Agitation: restlessness, hand wringing, hair pulling  
   - **A**  
   - **0**  
   - **1**  
   - **2**
6. Retardation: slow movement, slow speech, slow reactions  
   - **A**  
   - **0**  
   - **1**  
   - **2**
7. Multiple physical complaints (score 0 if GI symptoms only)  
   - **A**  
   - **0**  
   - **1**  
   - **2**
8. Loss of interest: less involved in usual activities  
   - **Score only if change acute, i.e. in less than 1 month**

### C. Physical signs
9. Appetite loss: eating less than usual  
   - **A**  
   - **0**  
   - **1**  
   - **2**
10. Weight loss (score 2 if greater than 5 lb in 1 month)  
    - **A**  
    - **0**  
    - **1**  
    - **2**
11. Lack of energy: fatigues easily, unable to sustain activities  
    - **Score only if occurred acute, i.e. in less than 1 month**

### D. Cyclic functions
12. Diurnal variation of mood: symptoms worse in the morning  
    - **A**  
    - **0**  
    - **1**  
    - **2**
13. Difficulty falling asleep: later than usual for this individual  
    - **A**  
    - **0**  
    - **1**  
    - **2**
14. Multiple awakenings during sleep  
    - **A**  
    - **0**  
    - **1**  
    - **2**
15. Early morning awakening: earlier than usual for this individual  
    - **A**  
    - **0**  
    - **1**  
    - **2**

### E. Ideational disturbance
16. Suicide: feels life is not worth living, has suicidal wishes or makes suicide attempt  
    - **A**  
    - **0**  
    - **1**  
    - **2**
17. Poor self esteem: self blame, self deprecation, feelings of failure  
    - **A**  
    - **0**  
    - **1**  
    - **2**
18. Pessimism: anticipation of the worst  
    - **A**  
    - **0**  
    - **1**  
    - **2**
19. Mood congruent delusions: delusions of poverty, illness or loss  
    - **A**  
    - **0**  
    - **1**  
    - **2**
# Appendix C

Choir/Reminiscence/ Music Therapy

Levels of Responsiveness

## Choir/Reminiscence QoL Evaluation

<table>
<thead>
<tr>
<th>Items</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocal/verbal communication</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Motivation</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Self-esteem and self-confidence</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Expression of feelings</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Positive mood changes</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Social interaction</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Spontaneous helpfulness</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>Engagement in session</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
</tbody>
</table>

**Note.** Score is the percentage time exhibit item category throughout entire session – for example a score of "1" means up to 10% of entire session exhibit item category, a score of "9" means up to 90% of time and so on.
# Appendix D

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<table>
<thead>
<tr>
<th>Resident profile</th>
<th>Date of completion</th>
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<tbody>
<tr>
<td></td>
<td>/     / 2007</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resident’s name</th>
<th>Resident’s Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>¨ Choir</td>
</tr>
<tr>
<td></td>
<td>¨ Reminiscence</td>
</tr>
<tr>
<td></td>
<td>¨ Non-treatment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resident’s current age</th>
<th>Resident’s gender</th>
<th>Resident’s marital status</th>
</tr>
</thead>
<tbody>
<tr>
<td>years</td>
<td>¨ Male</td>
<td>¨ Married</td>
</tr>
<tr>
<td></td>
<td>¨ Female</td>
<td>¨ Never married</td>
</tr>
<tr>
<td></td>
<td></td>
<td>¨ Widowed or divorced</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resident’s education level</th>
<th>Resident’s former occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>¨ Primary</td>
<td></td>
</tr>
<tr>
<td>¨ Secondary</td>
<td></td>
</tr>
<tr>
<td>¨ Technical</td>
<td></td>
</tr>
<tr>
<td>¨ University</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resident’s current family situation</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Is the resident religious or spiritually minded in any way?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>¨ Yes Comment:</td>
<td>No</td>
</tr>
<tr>
<td>¨ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does the resident suffer from any severe irritable or challenging behaviours?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>¨ Yes Comment:</td>
<td>No</td>
</tr>
<tr>
<td>¨ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resident’s familiarity with music</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Was the resident highly skilled in music and/or a professional musician?</th>
<th>¨ Yes ¨ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the resident actively play an instrument or sing?</td>
<td>¨ Yes ¨ No</td>
</tr>
<tr>
<td>Was the resident ever a member of a choir?</td>
<td>¨ Yes ¨ No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What type of music did/does the resident like?</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Have you heard about Music Therapy?</th>
</tr>
</thead>
</table>

If so, what do you know about it? Please explain.

| ¨ Yes ¨ No |
|------------|----------|

Appendix E
Page 1 of 2

Research Information Sheet

Research Title: “Choir therapy as an effective treatment for depression in elderly people with dementia.”

A project of the School of Communication Arts,
University of Western Sydney.

Researcher: Kirstin Robertson-Gillam, M.Couns, BA(Psych), RN, RMT.

Masters Honours Candidate, University of Western Sydney

This Information Sheet has been prepared to help you to understand the objectives, methods and potential outcomes of this research. It is an essential and integral part of the recruitment and selection process as outlined below.

BACKGROUND TO THE RESEARCH

The research seeks to determine the connection between depression and its alleviation through choir singing and life review reminiscence for people with dementia.

Earlier studies using these therapies have indicated the potential for the incidence of depression to decrease and the quality of life to increase for our elderly citizens living in aged care facilities.

The current researcher has formed two aged care choirs in the last four years. The choir methodology that she has developed is unique and innovative. She has found that this method of choir singing appears to reduce depression and improve quality of life for people living in aged care facilities. She recently completed a Pilot Project for Hammond Care at the Hammond Care Village, Hammondville NSW. Results showed a positive trend towards a decrease in depression and an increase in quality of life. It is now intended to repeat this study under full research conditions as a controlled trial with a dementia specific population at the Hammond Care dementia specific hostel complex, Woy Woy, NSW.

SELECTION OF PARTICIPANTS

All residents of the Woy Woy complex will be assessed for their levels of depression through observational methods by the Dementia Services Development Centre of Hammond Care. There are approximately 80 residents at this facility. It is intended that 60 people with the highest level of depression will be asked to participate in the research. Your relative has been selected as one of these 60 potential participants. With this Information Sheet are two Consent forms: one to give consent for your relative to take part in this study along with publishing of the results in peer-reviewed journals and at professional conferences; the other form asks for your consent to take audio/visual recordings of the research sessions. Your permission is being asked to publish these
Appendix E
Page 2 of 2

audio/visual recordings of the research sessions with the results of the study at professional conferences and possibly in peer-reviewed journals. All care will be taken to ensure the rights and confidentiality of your relative.

WHAT DOES THE RESEARCH INVOLVE?

All 60 participants will be randomly allocated to three groups: 1) Choir group, 2) Life Review Reminiscence Group, and, 3) a Non-treatment group. For the purposes of this research, the Non-treatment group will receive normal care during the research but will have the opportunity to join either the choir or reminiscence group when the research is completed.

The research will involve the participants in two weekly 45-minute choir or reminiscence sessions over 10 weeks.

Your relative will be interviewed to ascertain their own perceptions of meaning and purpose in their lives at the beginning and end of the study. This will give us some very valuable information about how elderly people with dementia feel as they live their lives. It is hoped that this may help us to find more creative ways of helping them lead improved purposeful and meaning-filled lives.

Each session will be video recorded and evaluated using a response sheet based on reflections from the session and the observed responses of the residents.

The risks during the study will be minimal. It is well-known that elderly people enjoy singing. However, no identifiable research has been done in this area to be able to ascertain whether choir singing would decrease depression in people with dementia. Therefore, this study is the first of its kind and has the potential to be a leader in the field of psycho-social interventions in aged care/dementia care.

The life review reminiscence approach is well known as being effective for reducing depression and helping elderly people to bring the threads of their lives together in a positive and cohesive way. For most people, choir and reminiscence groups are enjoyable and stimulating. Should a participant become distressed over memories and emotions, measures will be taken to help them overcome their distress. They will be referred to a facility staff member for counselling if appropriate. The researcher is also qualified in this area.

Your relative will have freedom of choice at all times and may leave their allocated group at any time in consultation with yourself, the facility staff or the researcher.

FURTHER INFORMATION

The chief researcher, Kirstin Robertson-Gillam, can be contacted at the Hammondville Aged Care Facility, Judd Avenue, Hammondville NSW 2170.
Appendix F
Page 1 of 2

Research Information Sheet

Research Title: “Improving quality of life and reducing depression in people with dementia by engaging their creativity and spirituality through involvement in a choir: a controlled trial.”

A project of the University of Wollongong.

Researchers:
- Richard Fleming, Visiting Principal Fellow, Faculty of Health & Behavioural Sciences, University of Wollongong.
- Kirstin Robertson-Gillam, M.Couns, BA(Psych), RN, RMT.
  Masters Honours Candidate, University of Western Sydney

Dear ...:

The Hammond Care Group is extending its range of therapeutic activities for residents and wishes to evaluate the effectiveness of the new programmes. Mr/Mrs ... has been identified as a person who may benefit from the new activities. The project is entitled “Improving quality of life and reducing depression in people with dementia by engaging their creativity and spirituality through involvement in a choir.” I am writing to seek your approval and assistance to conduct the research and to involve Mr/Mrs ... as a participant.

PURPOSE OF THE RESEARCH

The purpose of the research is to evaluate the effects on depression and quality of life of involvement in a choir or a reminiscence group. Quite a lot of research has already been carried out into the effectiveness of reminiscence groups and the results are very encouraging. However there has not been much research into the usefulness of involvement in a choir although experience tells us that it is a very enjoyable activity that seems to tap into the spiritual and creative side of people. We would like to see if it has as much benefit as reminiscence and to use the information to help us develop effective programmes.

INVESTIGATOR

The principal investigator for the project is:

Richard Fleming, Director, Dementia Services Development Centre
Judd Avenue, Hammondville NSW 2170
Phone 02 9825 5080
Email rfleming@dementia.com.au
Appendix F
Page 2 of 2

METHOD AND DEMANDS ON PARTICIPANTS

If you agree to the inclusion of Mr/Mrs ... he/she will be observed by a staff member familiar to them who will then fill in an assessment of depression and quality of life under the guidance of an experienced researcher. He/she will then be allocated to either the reminiscence group, choir or to the waiting list. Ten weeks of reminiscence or choir (twice a week) will then be provided and the assessments will then be repeated. The people on the waiting list will then be able to choose to attend either the choir or reminiscence group and those already in the choir or reminiscence group will be able to move to the other group if they wish.

RISKS, INCONVENIENCES AND DISCOMFORTS

I can foresee no unusual risks in the project. The assessments that will be conducted are observational and completely non-intrusive. Mr/Mrs ... participation in the study is voluntary and he/she may withdraw from the study at any time. If there is any sign of distress that may be linked to the study, the assessors will stop and any data that has been provided to that point will be withdrawn.

FUNDING AND POSSIBLE BENEFITS OF THE RESEARCH

This study is funded by a research grant from the Wicking Trust. This research is expected to contribute to a better understanding of how we can meet the emotional, spiritual and creative needs of residents in aged care homes. Findings from the study will be published in a report to the Wicking Trust and possibly published in professional journals. Confidentiality is assured, and Mr/Mrs ... will not be identified in any part of the research.

Thank you for your interest in this study.

Richard Fleming
Director
Dementia Services Development Centre
Hammond Care Group
Appendix G

Consent to participate in research

Research Title: “Choir therapy as an effective treatment for depression in elderly people with dementia.”

Researcher: Kirstin Robertson-Gillam, M.Counselling, BA(Psych), RN, RMT. Masters Honours Candidate, University of Western Sydney.

I have read the research Information Sheet and have had the opportunity to ask questions of the researcher. I understand that my/relative’s participation in this research is voluntary and that I/they may withdraw at any time from the study without affecting my/their treatment in any way.

I understand that the risks are minimal. Furthermore, I understand that information gathered will be used in the evaluation of the choir and reminiscence activities, and the results will be published. I understand that individuals will not be named in any report of the study. I also give consent for the researcher to access my (or my relative’s) medical records.

By signing below, I am consenting to me (or my relative) being:

- Interviewed about perceptions of life having meaning and purpose.
- Invited to attend either a choir or reminiscence group or being placed in a non-treatment group (which will receive ordinary care during the study) and that I/they will be invited to join choir or reminiscence activities after the study is completed.
- Videotaped, audio-recorded and photographed during choir and reminiscence sessions for research purposes and that these recordings may be used in world-wide professional conference presentations and publications relating to this research. Images of my/their face may be seen without being named.

If I have any concerns or complaints regarding the way the research is conducted, I know that I can contact the Human Ethics Officer, Office of Research Services, University of Western Sydney, Locked Bag 1797, Penrith South DC 1797, phone 02 4736 0883.

<table>
<thead>
<tr>
<th>Consent to participate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participant’s name</strong> (Block letters)</td>
<td><strong>Participant’s signature</strong></td>
</tr>
<tr>
<td><strong>Guardian/Next-of-kin’s name</strong> (Block letters)</td>
<td><strong>Guardian/Next-of-kin’s signature</strong></td>
</tr>
<tr>
<td><em>You give permission to participate in the research by signing this consent.</em></td>
<td>Date / / 2007</td>
</tr>
</tbody>
</table>
Appendix H: Cornell depression measurements

The results of the Cornell depression measurements are shown in Table below

<table>
<thead>
<tr>
<th>ID</th>
<th>CORNELL</th>
<th>Pre</th>
<th>Post</th>
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<tbody>
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Appendix I
List of Song Material used during the Study

A: SACRED

All participants in the choir were from Christian backgrounds, whether religious or not.

1. Onward Christian Soldiers

2. All Through The Night
Welsh folk song: Ar Hyd y Nos. Traditional. This carries memories of safety and security as it relates to a lullaby. One choir member was from Wales and was given the opportunity to sing the song in Welsh.

3. Alleluia
West African folk song. Traditional. This round is simple as it has only one word “alleluia” and this helps people with dementia to focus on mastering the melody without struggling with the words at the same time.

4. Joshua Fought the Battle of Jericho
Afro-American spiritual. Traditional. This Afro-American spiritual is empowering and very rhythmic. It relates to the story of Joshua in the Bible which many elderly from a Christian background can relate to.

5. Shine on Me
Afro-American gospel. Traditional. This is a repetitive Afro-American spiritual which is built on the triad of the C major chord. Its simplicity gives elderly people the opportunity to begin to learn how to sing in parts.

6. Shalom Shaverim
Israeli folk song. Traditional. This farewell song is repetitive and set in a minor key. Its quality is introspective and creates a sense of completeness and satisfaction with the choir activity as it comes to an end.

7. Sing Hosanna
Afro-American gospel. Traditional. This gospel song is based on the positive emotions of love, peace and joy which are emphasised with clapping in the chorus and has a steady 4/4 rhythm and beat.

8. Amazing Grace
British hymn. Words: John Newton, 1779. Music: Celtic Traditional. It’s Celtic and folkloric features evoke deep meanings for most of the choir. Introducing the song with the story behind the verses helped to further its effect on choir members.
9. God be with you
British. Words: Jeremiah Rankin, 1880. Music: William Tomer, 1880. A farewell song which engendered memories of World War II when soldiers were farewelled to war.

10. Jesus loves me

B: POPULAR/CLASSICAL

These songs were chosen for their familiarity, their rhythm, simplicity of melody and their background stories. They are geared at the level of the older person's background and history.

1. Ain't she sweet
American. Words and music: Milton Ager and Jack Yellen, 1927. This old song reminds many old people of social times from back in the past; of love and the forming of relationships.

2. As time goes by
American. Words and music: Herman Hupfeld, 1931. In the Broadway musical: Everybody's Welcome. This song emphasizes the passage of time and memories of love long lost but still retained in the long term memories which the music, melody and words bring to life.

3. Blue Moon
American. Words and music: Richard Rogers and Lorenz Hart, 1934. This blues jazz song brings back memories from when it was a top hit. It involves the swinging emotions of young love and how love can overcome many life challenges.

4. Down at the Old Bull and Bush
British Music Hall. Words and music arranged by Florrie Ford, 1903. Based on the American ballad: Down Where the Wurzburger Flows by Harry Von Tilzer. This old drinking song engenders feelings of togetherness and fun.

5. I belong to Glasgow
Scottish. Words and music: Will Fyffe, 1921. Music Hall drinking song originating in Glasgow. This popular Scottish song invoked memories of their early years.
6. **I’m forever blowing bubbles**  
The memories of the old clay pipe that was once used to blow bubbles is revived in this song. Many old people remember the fun of blowing bubbles and it invokes many long term memories.

7. **It’s a long way to Tipperary**  
British Music Hall. Words and music: Jack Judge and Harry Williams, 1912.  
This old Irish song talks of a land far away from which many of Australian ancestors came from. Many discussions were evoked from singing this song. It’s steady 4/4 rhythm gives stability and grounding which helps to build awareness, enjoyment and attention.

8. **Look for the Silver Lining**  
American. Words: Buddy DeSylva. Music: Jerome Kern, 1920. This old song evokes memories from WW2 as well as stimulating positive thoughts about cherishing the present moment.

9. **Now is the Hour**  
New Zealand folk song: *Po Atara*. Arranged by Gracie Fields, 1948. This song brings back memories of saying goodbye to the soldiers but also gives the opportunity to harmonize, soliloquize and reflect.

10. **Over the Rainbow**  

11. **Show me the way to go home**  
British folk song. Arranged by James Campbell and Reginald Cornelly, 1925. This song speaks of having too much to drink and its ramifications for wives and families during the depression of the 1930’s. It also reinforces the importance of belonging and feeling secure.

12. **Smoke gets in your eyes**  
American. Words: Otto Harbach. Music: Jerome Kern. From the operetta: *Roberta*, 1933. This song evokes feelings of sadness about unresolved issues from the past and how they are often covered up. It’s haunting melody takes singers into another realm of reality where love has died and regrets can be addressed.

13. **Summertime**  
American. Words and music: George and Ira Gershwin. From the musical *Porgy & Bess*, 1935. This jazz song evokes nurturing needs, especially for women in the phrase “hush little baby, don’t you cry”. It is well known and loved within the elderly population.
14. The White Cliffs of Dover
British ballad. Words: Nat Burton. Music: Walter Kent, 1941. This song promotes hope for a new tomorrow when the world will be safe and right once more. For British people who know what the white cliffs of Dover look like, images may be evoked and give pleasure and hope.

15. You are my sunshine
American ballad. Words and music: Jimmie Davis and Charles Mitchell, 1940. This rousing song in 4/4 rhythm is an affirmation of one person’s love for another and how this love is related to the sunshine that radiates out from the human heart.

16. Waltzing Matilda
Australian ballad. Words: Andrew Barton (Banjo) Patterson, 1895. Music arranged from a Celtic tune by Christine Macpherson. This song is very rhythmic in 4/4 time and speaks of early Australia when the new country literally grew from the sheeps’ backs. It talks about billabongs and swaggies who poach sheep for their survival: a throw-back from convict days. There is an element of national pride in being Australian when singing this song. Often, with cueing and prompting, various choir members could recall more than one verse, even if it was only a few lines.

17. Alexander’s Ragtime Band
American. Words and music: Irving Berlin, 1911. This song evokes memories of party time. It’s 4/4 rhythm is grounding and invigorating. This song engages people with dementia and evokes bodily responses such as clapping, stamping feet and dancing.

18. Daisy, Daisy
American ballad. Words and music: Harry Dacre, 1892. Originally titled: Daisy Bell. This song was a hit during the early part of the 20th century. Its ¾ waltz-time rhythm evoked feelings of wanting to dance; of women issues; and, of childhood.