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## **The effects of music therapy on reducing depression among the hospitalized elderly diagnosed with dementia**

Alan J. Blosser

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THE EFFECTS OF MUSIC THERAPY ON REDUCING  
DEPRESSION AMONG THE HOSPITALIZED  
ELDERLY DIAGNOSED WITH DEMENTIA

BY

ALAN J. BLOSSER

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

IN

PSYCHOLOGY

DIAGNOSIS AND INTERVENTION

MARSHALL UNIVERSITY GRADUATE COLLEGE

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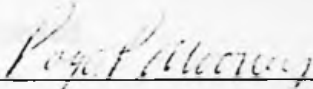
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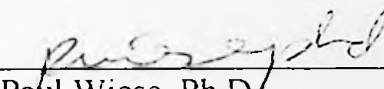
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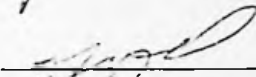
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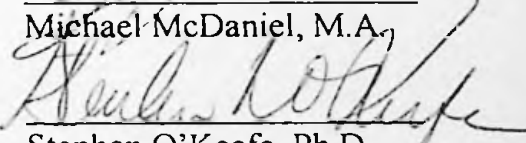
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## Abstract

Music therapy was implemented as an affordable and accessible intervention for the hospitalized elderly diagnosed with dementia to reduce depression. Thirty hospitalized, elderly individuals diagnosed with dementia were randomly assigned to experimental and control conditions. The experimental group were involved in six one-half hour music therapy sessions over a three week period. Music was selected according to group preference. No intervention was provided to the control group. The Geriatric Depression Scale (GDS) was used to measure depression. The instrument was administered orally to both groups one week prior to treatment, within two days after treatment had been completed, and two weeks after treatment had been completed. The results of the one way analysis of variance (ANOVA) did not demonstrate a significant difference between ( $F=.789, p=2.78$  ) or within groups ( $F=.393, p=3.22$  ). The potential of music therapy with depressed elders with dementia is discussed.

### Acknowledgments

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## Introduction

### The Effect of Music Therapy on Reducing Depression Among the Hospitalized Elderly Diagnosed with Dementia

Dementia is a disorder that creates numerous problems both to the individual and the caretaker. Problems may include “anxiety, agitation, yelling, combativeness, continuous pacing, withdrawal, fear, wandering aimlessly, undressing self repeatedly and urinating/defecating in inappropriate places” (Semenchuk, 1994, p.11). The extensive symptomatology associated with dementia often adversely affects the patient’s ability to interact effectively with the environment (Ragneskog, Brane, Karlsson, & Kihlgren, 1996). Dementia in the elderly, especially those in inpatient settings, is a significant problem. Semenchuk cites prevalence rates as great as 70% for the inpatient population. This would make dementia one of the most prevalent disabilities (Livingston, Manela, & Katona, 1997). Valvanne, Juva, Erkinjuntti, and Tilvis (1996), on the other hand, identified depression as “among the most important medical conditions in late life” (p.437). According to the authors, the problem of depression typically worsens as one ages. While depression in the elderly population as a whole is unquestionably a substantial problem, depression is particularly prevalent and debilitating in the elderly diagnosed with dementia (DeVry, Fritze, & Post, 1997). Given the many side effects experienced with medications in the elderly and the gradual declining effectiveness of the drugs, it is important to identify alternative treatments for depression in the elderly with dementia. This study will review the impact of depression and dementia on the elderly and evaluate the effectiveness of music therapy on the symptoms of depression.

Richardson and Hammond (1996) found that the prevalence of depressive disorders typically ranges from 10 to 15% in the elderly, however, the figure escalates to between 30 and 50% in the population in long term care facilities. Failure to detect



depression in the elderly combined with the failure to provide appropriate treatment interventions has been identified as a major problem (Livingston et al., 1997; Alexopoulos, 1996 ). The lack of treatment often leads not only to unnecessarily high service costs, due to such outcomes as excessive reliance upon medical services or premature nursing home placement, but also unnecessary suffering (Livingston et al.). While the reported prevalence of depression in patients with dementia ranges from 0 to 87% in the literature, a prevalence rate of at least 25% is commonly accepted (DeVry et al., 1997). With inpatient populations, the prevalence is often higher (Brodaty & Luscombe, 1996; Semenchuk, 1994). Major depression has been found four times more frequently diagnosed in institutionalized patients than those living at home (Valvanne et al., 1996).

Patients with both dementia and a depressive disorder are more likely than the depressed patient as a whole not to obtain appropriate treatment (Orengo, Kunik, Molinari, & Workman, 1996). According to the authors, the problem is often the result of difficulties in the differential diagnosis. Richardson and Hammond (1996) stated that masked depression or the depressive signs observed at the onset of more serious cognitive disorders such as Parkinson's or Huntington's disease complicates the assessment of depression or dementia. On the other hand, as many as 10 to 15% of depressed elderly patients are incorrectly diagnosed as suffering from dementia (DeVry et al, 1997; Semenchuk, 1994).

The assessment of depression in the elderly diagnosed with dementia is further complicated by the overly restrictive criteria for the assessment of depression in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) as well as many other standardized assessment measures. While many do not meet full criteria for a depressive disorder, the depression experienced by the person has been found nonetheless to be debilitating (McGivney, Mulvihill & Taylor, 1994; Forsell and Winblad, 1997). Snowdon (1997) stressed that "the diagnostic criteria

suitable for describing the syndromes of 40-year-old patients may not suffice for dealing with 75-year-olds" (p. 1043). Such diagnostic problems have been attributed to "a bias that exist among the present generation of elderly people as well as among physicians against identifying psychological symptoms in the elderly" (Alexopoulos, 1996, p. 14) and unreliable reporting of symptoms by those with dementia (Alexopoulos; Forsell & Winblad). The diagnosis of depression is also hindered by the significant overlap between symptoms of depression and dementia (Alexopoulos; Brodaty, & Luscombe, 1996; DeVry et al., 1997; Semenchuk, 1994; Valvanne et al., 1996). Despite the overlap of symptoms, Valvanne et al. have proposed that making the diagnosis of a depressive disorder, even when the clinician is not completely sure of the etiology, is in the best interest of the client.

The advantages to effective treatment of depression in patients with dementia are myriad, not only with regards to the patient and the family, but to society as a whole (DeVry et al., 1997). Reasonable improvement in the depressive symptoms in demented patients, when treated, can typically be expected (DeVry et al.; McGivney et al., 1994). Effective treatment of depression has been shown to both reduce suffering in the patient and the patient's caregiver (Alexopoulos, 1996; DeVry et al.). Alexopoulos proposed that overall functioning of the person can be markedly improved. Any excess disability caused by the depression can be controlled which, in turn, may avoid or prolong the need for intensive in-home care or nursing home placement. When taken into consideration that depressive symptoms often moderate the symptoms of dementia as well, the personal, economic and societal benefits obtained are greater. By treating the depression in patients with dementia, the clinician will be able to more accurately identify the impact of the dementia and develop more effective treatment plans.

In a review of the medical records of patients diagnosed with Dementia of the Alzheimer's type and depression, Reifler, Larson, Teri, and Poulsen (as cited in Ragneskog, Eriksson, Karlsson, & Gottfries, 1996) found fully 85% showed an

improvement in both affective status and in activities of daily living after having been on a long-term antidepressant treatment regimen. Semenchuk (1994), on the other hand, stressed that with the treatment of depression in the demented elderly, extra caution is needed given that drugs with anticholinergic effects (e.g., amitriptyline, trimipramine, imipramine, and nortriptyline) often worsen the dementia. The selection of an appropriate psychotropic medication (e.g., trazodone, the MAOIs and SSRIs) needs to be devoid of anticholinergic effects. The significant side effects often associated with many of the antidepressants in the elderly emphasizes the need to explore alternatives to drug therapy.

Tomaino (1994) purports that music therapy is a viable alternative to drug therapy in the treatment of depression. Music therapy promotes reminiscence of the past and thus enhances memory functioning and familial interaction. Music therapy enhances motor functioning when used with movement which prevents unnecessary deterioration and promotes relief from pain due to music's audioanalgesic effect. Music therapy enhances relaxation and alleviates depression. Music offers a non-verbal means of communication and the expression of emotions. According to the author, music therapy is "a therapeutic tool to effect positive change in physical and mental functioning" (p.25).

Although music therapy has been demonstrated as a viable intervention in treating depression in a geriatric population suffering with major or minor depressive disorders (Hanser & Thompson, 1994; Hanser, 1990), many times the most appreciable improvements have been observed in those diagnosed with dementia (Tomaino, 1995). Ragneskog, Brane et al. (1996) found statistically significant improvements in depressed mood, irritability, and fear-panic in elderly inpatients with dementia. Furthermore, the patients with dementia seem to appreciate the music and the music tended to decrease agitation (Semenchuk, 1994).

While language deterioration is often a symptom in patients with Alzheimer's disease, Aldridge and Aldridge (as cited in Ragneskog, Brane et al., 1996) found that

musical ability is largely preserved. Ragneskog, Brane et al. proposed that music reaches the brain via pathways other than those used by speech, thereby augmenting the patient's awareness of the environment. Treatment effects were demonstrated to be strongest when soothing music was utilized. The authors further suggested that music therapy may be more viable than traditional types of therapy due to the low cost and accessibility to populations that might not otherwise be able to participate in more traditional types of therapy (e.g., brief cognitive therapy).

### Purpose

The purpose of this study was to evaluate the effects of music therapy on depression in the elderly, diagnosed with dementia hospitalized in a long term care facility. The results of the study will help identify alternative treatments to drug therapy for the treatment of depression in inpatient elderly diagnosed with dementia. The hypotheses of this study were:

H<sub>0</sub>: Music therapy will not significantly reduce depression among the elderly, with a diagnosis of dementia, hospitalized in a long term care facility.

H<sub>1</sub>: Music therapy will significantly reduce depression among the elderly, with a diagnosis of dementia, hospitalized in a long term care facility.

### Method

#### Subjects

Thirty subjects were chosen at Pinecrest Hospital, a state supported long term care facility in Southern West Virginia to participate in the study. People are admitted to

the facility from all areas of the state. All subjects were diagnosed with dementia by a psychiatrist or a licensed psychologist based upon the criteria in DSM-IV. Fifteen subjects were randomly assigned to the experimental group and fifteen were randomly assigned to the control group. One subject was dropped from the control group due to death. The mean age of all participants was 73.7 years with a range of age from 58 to 96 years. Mean age for subjects in the experimental group was 72.3 years and mean age for subjects in the control group was 75.2 years. Five of the fifteen subjects in both the control and experimental group were males (33.3%).

#### Instrument:

The Geriatric Depression Scale (Yesavage et al., 1983) was used to measure the level of depression. The GDS scale is comprised of 30 forced choice questions (yes/no). The scores on this instrument range from 0 to 30. Scores from 0 to 10 fall within the normal descriptive category, scores from 11 to 20 fall in the mild depression descriptive category and scores from 21 to 30 fall within the moderate to severe depression descriptive category. Brink recommends that the test be given orally to physically frail individuals and those with cognitive deficits.

Richardson and Hammond (1996) obtained a Cronbach alpha of .92 for the GDS indicating acceptable internal consistency. Yesavage et al. (1983), found a .56 median correlation between items, a .36 for mean intercorrelation between items, .94 for Cronbach's alpha, and a .94 for split-half reliability. Correlations of .79 between the GDS and the Schwab-Gilleard Depression Scale (SGDS) and correlations of .86 between scores on the GDS and the Short-Comprehensive Assessment and Referral Evaluation - depression diagnostic scale (CAREdep) were obtained by Richardson and Hammond (1996) indicating acceptable convergent validity. Furthermore, correlations between scores on the GDS and the Short-Comprehensive Assessment and Referral Evaluation - dementia diagnostic scale (CAREdem) of .11 indicate reasonable discriminant validity. Based on statistical analyses of GDS scores with psychiatric diagnosis, presence or

absence of dementia can be inferred to have no statistically significant effect on the obtained score. The differential validity of the GDS on populations diagnosed with dementia was supported in the research by Brodaty and Luscombe (1996). The research indicated that scores on the GDS and the Mini Mental Status Exam were not significantly associated, hence, demonstrating the GDS to be viable choice for this population.

The GDS has been widely regarded as a scale of choice when measuring depression in the elderly (Richardson & Hammond, 1996). The GDS was chosen by Alexopoulos (1996) in his research in the treatment of depressed demented patients due the scale being previously "validated in elderly persons with dementia and physical illness" (p.14).

#### Procedure

Music therapy involved a 30-minute sampling of music. The sample of music was played on a cassette tape player to the experimental group via the experimenter. Music was presented in a group format. Subjects, however, who were unable to participate in a group setting received the treatment on an individual basis by the researcher. The musical selection was determined by group preference.

Participants in both the control and experimental group were administered the Geriatric Depression Scale (GDS) one week before the treatment began. Following the administration of the GDS, subjects in the experimental group (n=15) were involved in six one-half hour music therapy sessions. The treatment was scheduled biweekly for 3 weeks. No intervention was provided to the control group during this time period. Following the treatment, the GDS was administered to all the participants within two days of the sixth and final session. The GDS was re-administered to all subjects two weeks after the treatment has been completed. The GDS was administered orally.

## Results

### Analysis of Data

A true experimental design was utilized in this study. The independent variable was music therapy. There were two levels of the independent variable: music therapy and no music therapy. The dependent variable was the level of depression which was based on the scores obtained on the GDS. The analysis involved interval data. A between-subject random design was utilized. In the between subject randomized design, all comparisons between different conditions are based on comparisons between different subjects. Pretest, posttest, and delayed posttest scores were obtained on the GDS. Pretest scores were obtained prior to the implementation of the treatment intervention. Posttest scores were obtained immediately after having completed the treatment, and delayed posttest scores were obtained two weeks after completion of the treatment. An one-way analysis of variance (ANOVA) was utilized to test the significance of the difference between means. The ANOVA identifies the proportion of the variance of the dependent variable the independent variable contributes. Alpha was set at the .05 level.

The results of the ANOVA for the between group differences did not indicate significant differences. The null hypothesis was accepted. Music therapy did not significantly reduce depression among the elderly, with a diagnosis of dementia, hospitalized in a long term care facility. The means and the estimated population standard deviation are shown for both the experimental and control group in Table 1. The degrees of freedom, the sum of squares, and the mean squares are shown in Table 2. The results of the ANOVA for the within group differences indicated no significant differences. Music therapy did not have a significant effect on the level of depression within the experimental group across testings. The degrees of freedom, the sum of squares, and the mean squares are shown in Table 3.

Chi-square was utilized to test the effect of gender on the direction of change in the dependent variable.  $\chi^2 (3, N = 30)$  was .081,  $p < .05$ . Gender had no significant effect on outcome.

Item analysis of the items comprising the Geriatric Depression scale indicated positive change in 43.3% of the items, negative change in 36.7% of the items and no change in 20.0% of the items from pretest to posttest.

Table 1  
Geriatric Depression Scale

Item	Pretest	Posttest
1	1.00	1.00
2	1.00	1.00
3	1.00	1.00
4	1.00	1.00
5	1.00	1.00
6	1.00	1.00
7	1.00	1.00
8	1.00	1.00
9	1.00	1.00
10	1.00	1.00
11	1.00	1.00
12	1.00	1.00
13	1.00	1.00
14	1.00	1.00
15	1.00	1.00
16	1.00	1.00
17	1.00	1.00
18	1.00	1.00
19	1.00	1.00
20	1.00	1.00
21	1.00	1.00
22	1.00	1.00
23	1.00	1.00
24	1.00	1.00
25	1.00	1.00
26	1.00	1.00
27	1.00	1.00
28	1.00	1.00
29	1.00	1.00
30	1.00	1.00

Table 2  
Geriatric Depression Scale

Item	Pretest	Posttest	Change
1	1.00	1.00	0.00
2	1.00	1.00	0.00
3	1.00	1.00	0.00
4	1.00	1.00	0.00
5	1.00	1.00	0.00
6	1.00	1.00	0.00
7	1.00	1.00	0.00
8	1.00	1.00	0.00
9	1.00	1.00	0.00
10	1.00	1.00	0.00
11	1.00	1.00	0.00
12	1.00	1.00	0.00
13	1.00	1.00	0.00
14	1.00	1.00	0.00
15	1.00	1.00	0.00
16	1.00	1.00	0.00
17	1.00	1.00	0.00
18	1.00	1.00	0.00
19	1.00	1.00	0.00
20	1.00	1.00	0.00
21	1.00	1.00	0.00
22	1.00	1.00	0.00
23	1.00	1.00	0.00
24	1.00	1.00	0.00
25	1.00	1.00	0.00
26	1.00	1.00	0.00
27	1.00	1.00	0.00
28	1.00	1.00	0.00
29	1.00	1.00	0.00
30	1.00	1.00	0.00



Table 1

Means and Estimated Population Standard Deviation

Treatment	Mean	Estimated Population Standard Deviation
Experimental Group		
1	14.267	6.100
2	13.467	6.739
3	12.267	5.775
Control Group		
1	14.467	7.070
2	12.000	8.577
3	9.429	7.673

Table 2

Analysis of Variance Between Subjects

Source of Variation	df	Sum of Squares	Mean Squares	F*
Between (Treatment)	3	124.210	41.403	.789
Within (Error)	55	2898.095	52.693	
Total	58	3022.305		

\* $p < .05$ .

Table 3

Analysis of Variance Within Subjects

Source of Variation	df	Sum of Squares	Mean Squares	F**
Between Columns	2	30.400	15.200	.393
Residual	42	1623.600	38.657	
Total	44	1654.000		

\*\*  $p < .05$ .

## Discussion

The results of the study indicated that there were no significant differences in the levels of depression between those who participated in music therapy and those who did not participate in music therapy. The null hypothesis was accepted. The results also indicated that there were no significant differences between pretest, posttest, and delayed posttest scores on the Geriatric Depression Scale among those who participated in the music therapy. While much research has found music therapy to be effective in alleviating depressive symptoms (Smeijsters, Wijzenbeek, & Nieuwenhuijzen, 1995; Tomaino, 1994; Hanser & Thompson, 1994; Hanser, 1990; Ragneskog, Brane, et al., 1996), a number of limitations in this study may have contributed to the lack of statistical significance.

Many subjects reported that numerous questions contained in the Geriatric Depression Scale made them sad. Questions often reminded the person of his or her physical and cognitive disabilities and the likelihood of continued need for long term nursing home care. The lack of familial support that often occurs on admission to a nursing care facility may have further contributed to the person's sadness. There was negative change from pretest to posttest on items that focused on worthlessness, concern over the future, depression, energy level, and quality of life. When asked to participate in the second and third administrations of this instrument, many required coaxing due to the negative feelings that the questions had previously evoked. This apprehension, regardless of the involvement in music therapy, may have contributed to endorsing items indicative of depression.

Hanser (1990) discussed the role music can have in providing subjects with a positive stimuli in their changing their cognitions, mood, and behavior: "when passively listening to music, [the music therapy participants] may experience relaxation and vivid images, quickly changing their moods" (p.283). He noted such changes provide

pleasure to the subjects and likely alleviate, albeit temporarily, their depressive thoughts. While Hanser has validated his assertions through research, frequently nursing care settings may provide stimuli which can compete with the positive stimuli provided by music therapy. Such negative stimuli in turn may evoke negative changes in the subject's cognitions, moods, and behaviors. With one subject a stimuli as seemingly insignificant as a Christmas tree precipitated negative thoughts. The subject recalled prior to being admitted to the nursing care facility how the holiday used to be spent surrounded by family members. The subject then discussed her detest of being away from the family and the feelings of emptiness and loneliness which were currently being experienced. More frequent music therapy sessions and music therapy sessions of longer duration may serve as a stronger competing positive stimuli for the numerous aforementioned stimuli which can evoke negative responses.

Research advocates increasing the duration and frequency of the music therapy sessions. Hanser (1990) assigned subjects daily homework assignments involving prerecorded musical selections in addition to the sessions provided by the music therapist. Hanser and Thompson (1994) provided home-based music therapy for one hour per week for an eight week duration. The results indicated support for more frequent music therapy sessions and sessions of longer duration.

The validity of the GDS with this specific population may have also been a limitation. While the differential validity of the GDS on populations diagnosed with dementia was supported in research by Brodaty and Luscombe (1996), McGivney et al. (1994) cite studies (Burke, Houston, Boust & Roccaforte, 1989; Kafonek, Ettinger, Roca, et al., 1989; Feher, Larrabee & Crook, 1992) which suggest that the GDS may not be valid for use with individuals with dementia. McGivney et al. suggest the GDS has adequate utility only if it is administered to subjects who achieve a MMSE score of  $\geq 15$ . By using a cutoff score of 15 on the MMSE exam, sensitivity was raised from 63% to 84%. A greater number of depressed individuals were correctly identified. Specificity,

which is unfortunately often a trade off for increased sensitivity, was raised as well. The number of individuals who were incorrectly identified as being depressed was increased. The MMSE was not administered to the subjects in this study and thus the level of each person's cognitive functioning was not ascertained. As such, the sensitivity of the GDS was likely diminished. Persons who were truly depressed may have not been identified. The pairing of the GDS with a measure of cognitive functioning should be considered in future research. Given the inherent unreliability of self-reports of symptomatology in demented patients (Brodaty & Luscombe, 1996; Alexopoulos, 1996; Forsell & Winblad, 1997), a behaviorally anchored rating scale as opposed to the GDS may need to be considered. The GDS scores were obtained at the conclusion of the study rather than immediately following a music therapy session. Had this instrument been given immediately after a music therapy session prior to exposure of competing negative stimuli, treatment differences may have been revealed.

Though no improvement in the depression of the subjects in this study was demonstrated by the GDS, there was positive change from pretest to posttest in items focusing on hopelessness, happiness, avoidance of social gatherings, life being empty, boredom, and ease with decision making. Many of the subjects reported enjoying the music therapy sessions and typically expressed interest in when the next session would be. While listening to the musical selections, the subjects often recalled positive life events and happy memories which coincides with Hanser's (1990) theory of music serving as a positive stimuli. Positive communications between the subjects and frequent smiles and laughs were noted. The gratifying interactions likely decreased apprehensions of social activities. Encouraging the subjects to collectively choose the musical selections may have increased their confidence in decision making. Items showing no change dealt with hope about the future, and difficulty with concentration and thinking. These factors in the nursing home setting are not highly amenable to change given the chronicity of the disorders which often precipitate admission to the facility.

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## REVIEW OF THE LITERATURE

Summary of literature that reviews research previously done in the field of music and health. The field has grown rapidly in the past few years, with a focus on the use of music in the treatment of mental health, dementia, and physical disabilities. The literature is divided into three main categories: mental health, dementia, and physical disabilities. Each category contains several articles that discuss the benefits of music and provide evidence for its effectiveness.

### Appendix A Literature Review

The literature review consists of a list of references and a summary of the findings. The references are listed in alphabetical order and include the author's name, the year of publication, and the title of the work. The summary of findings is organized into three sections, one for each category of literature: mental health, dementia, and physical disabilities. Each section provides a brief overview of the research and highlights the key findings.

#### References

The references section contains a list of 15 articles. The first three articles are from the journal 'Journal of Music Therapy' and focus on the use of music in the treatment of mental health. The next three articles are from 'The Journal of Music and Health' and discuss the benefits of music for people with dementia. The final nine articles are from various other journals and focus on the use of music in the treatment of physical disabilities.



## REVIEW OF THE LITERATURE

Dementia is a disorder that creates numerous problems both to the individual and the caretaker. Problems may include "anxiety, agitation, yelling, combativeness, continuous pacing, withdrawal, fear, wandering aimlessly, undressing self repeatedly and urinating/defecating in inappropriate places" (Semenchuk, 1994, p.11). The extensive symptomatology associated with dementia often adversely affects the patient's ability to interact effectively with the environment (Ragneskog, Brane, Karlsson, & Kihlgren, 1996). Dementia in the elderly, especially those in inpatient settings, is a significant problem. Semenchuk cites prevalence rates as great as 70% for the inpatient population. This would make dementia one of the most prevalent disabilities (Livingston, Manela, & Katona, 1997). Valvanne, Juva, Erkinjuntti, and Tilvis (1996), on the other hand, identified depression as "among the most important medical conditions in late life" (p.437). According to the authors, the problem of depression typically worsens as one ages. While depression in the elderly population as a whole is unquestionably a substantial problem, depression is particularly prevalent and debilitating in the elderly diagnosed with dementia (DeVry, Fritze, & Post, 1997). Given the many side effects experienced with medications in the elderly and the gradual declining effectiveness of the drugs, it is important to identify alternative treatments for depression in the elderly with dementia. This paper will review the impact of depression on the elderly with dementia, the interrelation of the two disorders, the dilemmas associated with traditional treatments, and alternative treatment options.

## Dementia in the Elderly

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) characterizes dementia as the development of multiple cognitive deficits manifested by both memory impairment (impaired ability to learn new information or to recall previously learned information) and one, or more, cognitive disturbances. Such disturbances include aphasia (language disturbance), apraxia

(impaired ability to carry out motor activities despite intact motor functioning), agnosia (failure to recognize or identify objects despite intact sensory function), and disturbance in executive functioning (i.e., planing, organizing, sequencing, abstracting).

Furthermore, the symptoms must be of sufficient severity to cause significant impairment in social or occupational functioning and represent a decline from a previous level of functioning. The etiologies of dementia include Alzheimer's Disease, Chronic Obstructive Pulmonary Disorder, Parkinson's Disease, Huntington's Disease, Pick's Disease, Creutzfeldt-Jakob Disease, HIV Disease, prolonged substance abuse, and other general medical conditions. Semenchuk (1994) described the onset of dementia as being insidious. Often the individual is unaware of memory deficits. Social tact is diminished. Cognitive functions are diminished and speech becomes less intelligible with the passage of time.

Semenchuk (1994) identified the Global Deteriorating Scale (GDS) as a means for classifying dementia. Based on the GDS, dementia progresses through seven phases: 1.) no decline (normal), 2.) very mild decline (mild forgetfulness), 3.) mild decline (early confusion), 4.) moderate decline (late confusion), 5.) moderately severe decline (early dementia), 6.) severe decline (middle dementia), and 7.) very severe decline (late dementia). Aggressive behaviors, decreased social inhibitions, and emotional lability may result due the impairment of cognitive, perceptual, and ego-sensory processes during the latter stages of dementia. The extensive symptomatology often adversely affects the patient's ability to interact socially and function in the environment (Ragneskog, Brane, et al., 1996; Maas & Buckwalter, 1991). Dementia not only poses problems to the individual but is acknowledged as posing problems to the caretaker and family as well.

Unfortunately, dementia in the elderly, especially those in inpatient settings, is a significant problem. Reported prevalence rates are as great as 70% (Semenchuk, 1994). When compared with depression, anxiety disorders, and physical disabilities, dementia is

the most expensive psychiatric disorder in terms of formal services even with age and activity limitation taken into account. According to Livingston et al. (1997), although dementia sufferers comprised only 5.6% of psychiatric disordered population, the health care costs consumed 15.6% of the total resources

### Depression in the Elderly

Unfortunately, like dementia, depression in the elderly is posed to be a prevalent and debilitating problem. The DSM-IV (1994) characterizes a major depressive episode as the presence of five (or more) of the following symptoms occurring during the same 2-week period which represents a change from previous functioning:

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report or observation made by others.
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day nearly every day.
3. Significant weight loss when not dieting or weight gain, or decrease or increase in appetite nearly every day.
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day.
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt nearly every day.
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day.
9. Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

At least one of the symptoms must be either depressed mood or loss of interest or pleasure. Furthermore, when the depressed mood is present for most of the day, for the majority of the days for two years, as indicated by either subjective report or the observation by others, then a diagnosis of dysthymia may need to be ruled out.

According to Semenchuk (1997) specific depressive symptoms are more prevalent in the elderly population. The symptoms include depressed mood, feelings of worthlessness, feelings of guilt, apathy, weight loss/malnutrition, insomnia, excessive lethargy, psychomotor agitation or retardation, fatigue or energy loss, difficulty with thinking, somatic symptoms (e.g., pain in the head, neck, back or abdomen), decreased activity, and suicidal ideations.

Gilchrist, Rozenbils, Martin and Connolly and Blazer (as cited in Richardson & Hammond, 1996) found that in the elderly, the most common affective problems are depressive disorders. Richardson and Hammond reported that the prevalence of depressive problems typically ranges from 10 to 15% in the elderly, however, the figure escalates to between 30 and 50% in the population in long term care facilities. The findings of McGivney, Mulvihill, and Taylor (1994) support the findings of Richardson and Hammond. Depression was found to occur in 13% of the elderly living in the community, 20-35% of the ill elderly, and 13-30% of the elderly in nursing homes. Valvanne et al. (1996) found one of seven institutionalized elderly to have major depression. Major depression was found to be four times more frequently diagnosed in institutionalized patients than those living at home. The authors also found a significant correlation between depression and age. Depression ranged from 1% to 4% in a group aged 70 to 80 years old, the prevalence of depression was found to be 13% in the oldest group (age 85 plus). Sadly, depression has also been found to be related to many unfortunate conditions. Valvanne et al. found depression in the elderly to be highly correlated with poor vision, urinary incontinence, musculoskeletal disorders, coronary heart disease, and cerebrovascular diseases. Depression in the elderly was also found to be correlated with morbidity.

#### Depression in the Elderly with Dementia

While research has shown depression in the elderly population as a whole to be a significant problem, depression is particularly prevalent and debilitating in the elderly

diagnosed with dementia. Typically, severe depression occurs early at the onset of dementia. While the reported prevalence of depression in patients with dementia ranges from 0 to 87% in literature, a prevalence rate of at least 25% is commonly accepted (Orengo, Kunik, Molinari & Workman, 1996; DeVry et al., 1997). With inpatient populations, the prevalence is often higher (Brodaty & Luscombe, 1996; Valvanne et al., 1996; Semenchuk, 1994). In research by Ancil, Embury, MacEwan, and Kennedy (1988), 41% of geriatric inpatient sample with dementia were found to be symptomatically depressed. Valvanne et al. demonstrated depression to be strongly associated with dementia as well. The authors state that the symptoms of depression are known in the scientific community to moderate the symptoms of dementia. DeVry et al. describe depression in the elderly with dementia as a "major additional burden" (p.22).

Depression in the elderly with dementia quite likely has an organic basis. DeVry et al. (1997) believe depression in Alzheimer's Disease is likely attributable to the noradrenergic and serotonergic deficits which result from neuronal degeneration in various brainstem nuclei. DeVry, et al. state a loss of neurons in the locus ceruleus in patients with Alzheimer's disease is well established, however the authors report an even lower neuron count in those comprising this populations who are depressed as well. The authors also describe the possible role of somatostatin levels with diminished mood states. Low level have been found in the cerebrospinal fluid and brains in those with Alzheimer's disease and in those with depression.

#### Assessment of Depression in the Elderly

Failure to detect depression in the elderly combined with the subsequent failure to provide appropriate treatment interventions has been identified as major problems (Livingston et al., 1997; Alexopoulos, 1996). Forsell and Winblad (1997) found that while 20 of 26 depressed inpatients were being prescribed a psychotropic medication (typically a hypnotic), none of the subjects were prescribed an antidepressant medication. This lack of necessary treatment often leads not only to unnecessarily high service costs,

due to such outcomes as excessive reliance upon medical services and premature nursing home placement, but also to unnecessary suffering (Livingston et al.; Ancil et al., 1988). While Livingston et al. found dementia to be the most expensive disorder per sufferer, depression placed a close second. Ironically, despite the population typically presenting themselves for health care services, the authors found that as many as 90% were not receiving appropriate psychopharmacologic interventions.

#### Difficulty with Assessment of Depression in the Elderly with Dementia

Unfortunately, patients with both dementia and a depressive disorder are more likely than depressed patients as a whole to not obtain appropriate treatment (Orengo et al., 1996). According to the authors, the problem is often the result of difficulties in the differential diagnosis. As many as 10 to 15% of depressed elderly patients are incorrectly diagnosed as suffering from dementia (DeVry et al., 1997; Semenchuk, 1994).

Richardson and Hammond (1997), on the other hand, stated that masked depression or the depressive signs observed at the onset of a more serious cognitive disorder such as Parkinson's or Huntington's disease, is another factor that complicates the assessment of depression or dementia. DeVry et al. conclude much of the difficulty to be the result of overlapping symptomatology of these two disorders. Loss of interest, decreased energy and increased difficulty with thinking and concentrating, while often symptoms of depression, can also be related to the cognitive impairment seen with dementia.

Valvanne, et al. (1997) report that the symptoms of depression can often overlap with physical illnesses as well. According to Ancil et al. (1988), the term dementia is a catch-all phrase for any type of behavior problems. The researchers frequently found minimal attempts were made to determine if the etiology of the behavioral disturbances could be the result of depression, delirium, or other factors. Brodaty and Luscombe (1996), on the other hand, pose the over diagnosis of depression and subsequent needless prescription of antidepressant medications is a problem. The assertion, however, is not acknowledged as a problem by the majority of scientific researchers in this area.

The assessment of depression in the elderly diagnosed with dementia is further complicated by the overly restrictive criteria for the assessment of depression in various versions of the DSM as well as many other standardized measurement instruments. The use of structured interviews not validated on this population sample has been posed to be a problem (McGivney et al., 1994; Forsell & Winblad, 1997). In one study, the DSM-III yielded a depression prevalence rate of 16.9% in a population of depressed, dementia sufferers compared with prevalence rates of 24.2% and 26.5% found, respectively, by the Research and Diagnostic Criteria and the Cornell Depression Scale (McGivney et al.). In another study by Brodaty and Luscombe (1996) of depressed patients diagnosed with dementia receiving outpatient services, 20.9% to 37.8% (depending on the measurement instrument utilized) were demonstrated to be suffering from subclinical depression, or depression that did not meet the full diagnostic criteria. While many do not meet full criteria for a depressive disorder, the depression experienced by the person has been found nonetheless to be debilitating. Snowdon (1997) further stresses that "the diagnostic criteria suitable for describing the syndromes of 40-year-old patients may not suffice for dealing with 75-year-olds..." (p. 1044). These widely varying definitions and criteria for depression have been proposed to be responsible for the broadly varying prevalence rates of depression (Valvanne et al., 1996; Snowdon).

Unfortunately, the implications of inaccurate assessment for the depressed elderly with dementia are significant. Research by Slater and Katz (1995) indicated that a minor depression in the general medical care setting can result in impairments typically caused by major depression or dysthymia. Allocation of appropriate funding often does not occur for subclinical depression despite its incapacitating effects. This further validates the need for modifications in diagnostic criteria and the need for more precise assessment. Given the prevalence of subclinical depression in this population, caution is needed even when using accepted instruments for measuring depression in this population. The Geriatric Depression Scale (GDS) focuses on the emotional factors of

depression by eliminating somatic questions which are “ubiquitous with the elderly and thus confound the diagnosis of depression in nursing home and older patients” (McGivney et al., 1994, p. 490). The measure and others like it, such as the Hamilton Rating Scale of Depression, can fail to identify those who require treatment of the depressive symptomatology. In summary, with regards to the diagnosis of depression and dementia in elderly populations, careful scrutiny by the diagnostician is vital for valid assessment and, subsequently, effective treatment interventions to be implemented.

Perhaps the most alarming problem is the frequent occurrence of depression not being explored in patients with dementia. This leads to a lack of diagnosis and hence appropriate treatment (DeVry et al., 1997; Forsell & Winblad, 1997). In research by Ancil et al. (1988), while 41% of a geriatric inpatient sample with dementia were found to be symptomatically depressed during the study, only 13% had been identified as suffering from depression upon admission. Depression was under-diagnosed. These researchers found that even when depression was identified, frequently treatment was not being provided. In several cases where treatment was provided for depression, medications with anticholinergic profiles, which further exacerbate the symptoms of dementia, were inappropriately chosen. The frequent oversight of diagnosing depression in this population is likely attributable to “a bias that exist among the present generation of elderly people as well as among physicians against identifying psychological symptoms in the elderly” (Alexopoulos, 1996, p. 14) as well as unreliable reporting of symptoms by those with dementia and the overlap of symptoms of depression and dementia (Alexopoulos; Forsell & Winblad).

#### Differential Diagnostic Challenges

Research by Orengo et al. (1996) further validate and add to Alexopoulos' (1996) as well as Forsell and Winblad's (1997) findings. Their research found that a “depressive disorder in the elderly is often missed because the signs and symptoms of depression in the elderly may be different from and less florid than those in the young, and because



depressive symptoms may be viewed by the older person, the family, and the physicians as a normal part of aging" (p. 15). Semenchuk (1994) attributes the difficulty with diagnosing depression in the elderly to the often atypical nature depression in this population. In the elderly especially, Forsell and Winblad (1997) propose that emotional disturbances are often minimized. The symptoms of depression are instead often expressed somatically (e.g. sleep disturbances). Reports of pain without an organic etiology is prevalent in the depressed elderly with dementia. The authors found in a sample of depressed nonagenarians, the somatic manifestations of their depression were often treated with medications (as indicated by the high rate of hypnotic drugs prescribed to this group). There was often no specific treatment given to deal with the depression. Other studies pose yet another problem. Research by McGivney et al. (1994) demonstrated that depression can be masked by concomitant somatic conditions that are distracting to the diagnostician.

Given the viable treatment options for depression in the elderly, DeVry et al. (1997) propose depression should not be thought of as a normal consequence of organic degeneration of the brain. However, even when aware of the former issues, depressive symptoms are often difficult to differentiate from the aging process (Hammond & Richardson, 1996). When language and memory impairment is an issue, as is often the case with elderly patients diagnosed with dementia, information necessary for validly assessing depressive disorders is often difficult if not impossible to obtain (Brodaty & Luscombe, 1996; Forsell & Winblad, 1997). The diagnosis of depression is also hindered by the significant overlap between symptoms of depression and dementia (Alexopoulos, 1996; DeVry et al.; Brodaty, & Luscombe; Valvanne et al., 1996; Semenchuk, 1994). Despite such overlap, Valvanne et al. have proposed that making the diagnosis of a depressive disorder, even when not completely sure of the etiology, is in the best interest of the client.

The inherent unreliability of self-reports of symptomatology in demented patients and the tendency for elderly patients to ascribe psychological symptomatology to physical disorders further contributes to the problem of undiagnosed depression in the population (Brodaty & Luscombe, 1996; Alexopoulos, 1996; Forsell & Winblad, 1997). Research has demonstrated a temporal nature of depression in elderly patients suffering from dementia. Brodaty and Luscombe found that depression was infrequently observed in subjects over an entire 12 month period. The authors also demonstrated that subjects with significant cognitive impairment (i.e., a score of less than 22 on the MMSE) have a tendency to minimize or deny depression, which further hinders proper assessment of depressive disorders in this population.

Semenchuk (1994) offers two important clues in differentiating the two syndromes. Those with dementia are often unaware of their impairment while those without dementia are often acutely aware. Unlike depression, dementia does not typically develop suddenly.

#### Importance of Treating Depression in Elderly and Elderly with Dementia

The advantages to effective treatment of depression in those with dementia are myriad, not only with regards to the person, but to society as a whole. When treated, reasonable improvement in the depressive symptoms in patients with dementia can usually be expected (DeVry et al., 1997; McGivney et al., 1994). Furthermore, effective treatment of depression has been shown to both reduce suffering in the patient and the patient's caregiver (Alexopoulos, 1996; DeVry et al.). Overall functioning of the person can be markedly improved. When taken into consideration that depressive symptoms often moderate the symptoms of dementia as well, the personal, economic and societal benefits obtained are even greater. Any excessive disability caused by the depression can be controlled which, in turn, may avoid or prolong the need for intensive in-home care or nursing home placement. When left untreated, depression in the elderly and the elderly with dementia has many far reaching detriments economically and to our society as a

whole (DeVry et al.). Given that the elderly population is rapidly expanding, these individuals will require more frequent treatment for mental and behavioral disorders which further validates the importance of effective treatments (Forsell & Winblad, 1997). Additionally, by treating the depression in patients with dementia, the clinician will be able to more accurately identify the impact of the dementia and develop more effective treatment plans (Alexopoulos).

### Treatment of Depression

#### Pharmacologic Treatment Interventions

While there are many types of antidepressants from which physicians may choose, each has its own unique properties and, hence, limitations when dealing with the depressed elderly suffering from a concomitant diagnosis of dementia. The use of psychoactive drugs is a common occurrence in long term care facilities. The use in geriatric populations, according to Semenchuk (1994), is as high as 74%. Forsell and Winblad (1997) also found a high rate of psychotropic treatment of the very elderly (nonagenarians), however, the authors found that the rate of appropriate treatment was low.

Alexopoulos (1996) found antidepressants to have differing levels of effectiveness in the treatment of depression in populations diagnosed with dementia. Nortriptyline (a tricyclic antidepressant) was shown to have significant effects on depressive symptoms in the depressed elderly who were cognitively impaired due to Parkinson's Disease. Maprotiline (a heterocyclic antidepressant with anticholinergic and sedating effects) and imipramine (a tricyclic antidepressant), however, did not have a statistically significant treatment effect when compared to the placebo group. Given the anticholinergic properties of tricyclic antidepressants, the drugs may worsen cognitive functioning in those with dementia (DeVry et al., 1997; Ragneskog, Eriksson, Karlsson, & Gottfries, 1996; Semenchuk, 1994).

### Simultaneous Pharmacologic Treatment of Dementia and Depression

Research on the simultaneous treatment of the symptoms of depression and dementia with a single drug has proven to be promising. In a review of medical records of patients diagnosed with Dementia of the Alzheimer's type and depression, Reifler, Larson, Teri, and Poulsen (as cited in Ragneskog, Eriksson, et al., 1996) found 85% showed an improvement in affective status, family satisfaction, and in activities of daily living after having been on a long-term antidepressant treatment regimen. Alexopoulos (1996) found that when compared to the placebo group, citalopram (a serotonin selective reuptake inhibitor) demonstrated not only improved emotional functioning in patients with dementia, but also cognitive functioning was improved. The use of despramine and imipramine (tricyclic antidepressants) demonstrated improvement in subjects diagnosed with Parkinson's disease not only with regards to depression but also with regard to neurologic parameters such as tremors, rigidity, and fatigue. Nimodipine, which increases somatostatin levels (a known biochemical deficit in those with Alzheimer's), demonstrated significant antidepressant qualities and enhanced cognitive functioning. Nimodipine has no anticholinergic side effects (DeVry et al., 1997). Orengo et al. (1996) assessed both various uses and the tolerability of fluoxetine (an SSRI antidepressant) in a group of geropsychiatric inpatients (mean age 71.8 years). With regards to the subgroup of patients experiencing both a depressive disorder and dementia, fluoxetine significantly reduced both the depressive and general psychiatric symptoms. The improvement in scores on the Mini-Mental Status Exam did not, however, reach statistical significance. While treatment with fluoxetine was demonstrated to be effective, the authors made mention that the short duration of the study (approximately 1 month on average) could have been responsible for the low occurrence of observable side effects, thus, caution is likely needed. The research by Trappler and Cohen (1996) further validated the potential of the SSRI's. Not only are the drugs shown to have less side effects than comparable

tricyclic antidepressants, but also the SSRI's have been found effective in the treatment of various subtypes of depression including depression accompanied by dementia.

#### Concerns with Psychopharmacologic Treatments of Depression

Semenchuk (1994) views the elderly population as a whole to be at high risk for experiencing adverse side effects to medications. With regards to depression, Hanser and Thompson (as cited in Strauss & Solomon, 1983) stated that pharmacotherapy, while effective for the treatment of depression, often has side effects that are especially distressing in the elderly. This is especially true for those who have concomitant disorders such as dementia. The issues are often overlooked by the prescribing physician, according to Ancil et al. (1988), given that most who prescribe the medicines are not psychiatrists and often have a limited background in geriatrics. Furthermore, inadequate assessment prior to prescribing as well as improper monitoring of side effects were found to be problematic issues. Frequently, behavioral problems in elderly psychiatric patients are "simply abolished with tranquilizers" (p.587).

Despite the variety of standard antidepressive treatments, "none is free from significant side effects" (DeVry et al., 1997, p.22). Alexopoulos (1996), Ancil et al. (1988), and DeVry et al. all stress the difficulty with psychopharmacologic treatment with the elderly. Dose and plasma levels can often be especially critical and unpredictable. Some patients respond to blood levels in the lower therapeutic range, however, plasma levels within the therapeutic range occur when a very low dose is given. According to the authors the issue of treating depression in the demented elderly with medication can be obscure. While Alexopoulos stresses that validation studies are needed, he suggests that with regards to nortriptyline, the therapeutic window is only appropriate in determining the correct dosage in depressed geriatric populations without cognitive impairment but not in depressed geriatric populations with cognitive impairment.

While Orengo et al. (1996) are generally optimistic about the use of SSRI antidepressants such as fluoxetine in elderly populations, the authors do, however, cite research where infrequent but potentially serious side effects were seen in elderly patients including severe nausea, anorexia, weight loss, atrial fibrillation, brachycardia, inappropriate secretion of antidiuretic hormone (SIADH), increased agitation, and anxiety. With citalopram, Ragneskog, Eriksson, et al. (1996) found no significant deterioration in cognitive functioning, however, 53% of the participants reported side effects. Eleven percent experienced severe side effects which included restlessness, asthenia, aggressiveness, hallucinations, dizziness, rigidity, sleep disturbances, chest pain, dry mouth, and epileptic seizures.

Semenchuk (1994) and Ancil et al. (1988) stress that with the treatment of depression in the demented elderly, extra caution is needed given that drugs with anticholinergic effects (e.g., amitriptyline, trimipramine, imipramine, and nortriptyline) often worsen the dementia. The selection of an appropriate psychotropic medication (e.g., trazodone, the MAOIs, and SSRIs) needs to be devoid of anticholinergic effects. According to Ragneskog, Eriksson, et al. (1996), SSRI's will often improve the quality of life of depressed patients with dementia for a significant time, however, the use will only postpone their inevitable emotional decline.

Further confounding the problem, according to Tamblyn et al. (1994), questionable prescribing of psychotropic drugs is more prevalent than rational prescribing in the elderly. Forsell and Winblad (1997) found that while 26% of an elderly sample were experiencing major depression, only 2% were being prescribed antidepressants. The authors stress the need for more knowledge among practitioners regarding the recognition of depression in the elderly and the demented elderly. Furthermore, Alexopoulos (1996) cautions given the effects of placebos, care should be utilized in assuming the effectiveness of a medication when a swift remission in the depressive symptoms is observed. Given the frequent misuse of medications, the many

side effects experienced with medications in the elderly, the gradual declining effectiveness of the drugs, and the effect of placebos, the importance of alternatives to drug therapy in the treatment of depression in the elderly with dementia is critical.

#### Alternative Interventions

Moffatt, Mohr, and Ames (1995) used board games, anxiety reduction techniques, psychoeducational sessions, and cognitive behavioral strategies (e.g. the identification of faulty cognitions) in the treatment of depression and anxiety in the elderly. Group empathy as well as identification of feelings was stressed. Individuals suffering from a cognitive impairment were excluded, however, from the program. Treatment interventions such as supportive psychotherapy, cognitive and behavioral strategies, group psychotherapy, and reminiscing therapy, that are typically useful in the treatment of depression, are often inappropriate choices for those with dementia given the cognitive deficits associated with the disorder.

#### Music Therapy as an Intervention

Music therapy is an alternative intervention for treating depression in the elderly suffering with dementia. Music therapy, as defined by Tomaino (1994), is "the use of music as a therapeutic tool to effect positive change in physical and mental functioning" (p.25). The author describes music therapy being as a viable intervention for promoting reminiscence of the past and enhancing memory functioning. Music Therapy has been shown to play a role in increasing familial interaction, providing the patient with a non-verbal means of communication and expression of emotions, and a means of alleviating depression. Music therapy can help initiate a relaxation response. When used with movement, music therapy can enhance motor functioning thereby preventing unnecessary physical deterioration. Music therapy has also been found to provide relief from pain due to music's audioanalgesic effect. Semenchuk (1994) has found patients with dementia seem to appreciate the music and the music tends to decrease agitation.

Smeijsters, Wijzenbeek, and Nieuwenhuijzen (1995) found Receptive Music Therapy (RMT) useful in the work with depressed patients. The therapy assumes that the music can evoke a specific personal value, a cognitive construct, be it positive or negative, that is of significant importance in one's life. The first step in the therapy is to have the individuals list personal values as he or she listens to music. With assistance from the therapist, the values are addressed. According to the authors, the constructs of chaos, authority, death, and religion are of prime importance. The overall goal of RMT is to "increase the awareness, the insight, and integration of these values in the life of these patients" (p.168). Smeijsters et al. (1995) found that certain musical excerpts evoked specific sets of values. The values of violence, relaxation, tenderness, beauty, freedom peace, illness, harmony, life, and energy were examined. Smeijsters et al. found that "patients who improved (with regards to depressive symptomatology) tended to select Energy and Life as values" (p.185). Intuitively according to Smeijsters et al., the evocation of these values would have the greatest likelihood in the alleviation of depressive symptomatology.

#### Music Therapy as a Treatment of Depression in the Inpatient Elderly with Dementia

While Music Therapy has been demonstrated as a viable intervention with treating depression in the geriatric population suffering with major or minor depressive disorders (Hanser & Thompson, 1994; Hanser, 1990), many times the most appreciable improvements have been observed in those diagnosed with dementia (Tomaino, 1994). While language deterioration is often a symptom in patients with Alzheimer's disease, Aldrige and Aldridge (1992) found that musical ability is largely preserved. Ragneskog, Brane, et al. (1996) propose that music reaches the brain via pathways other than those used by speech, thereby augmenting the patients' awareness of the environment. Berman (1981) has found that in individuals with dementia, the non-dominant hemisphere of the



brain can act as a reserve. One pathway to perception may compensate when another pathway is functioning poorly. Furthermore, Berman states that music as a function is distributed over both hemispheres of the brain which explains why the function is retained when language (a function predominantly of the right hemisphere) is frequently diminished in this population. Ragneskog, Brane, et al. (1996) said that the global strategy of the brain processing music is well founded in the clinical literature.

Music therapy is often chosen as an intervention due to the need for a treatment that is both low in cost and accessible to a population that might not otherwise be able to participate, either by finances or living situation, in more traditional types of therapy (e.g., brief cognitive therapy). The techniques are especially useful for elderly who have had recent life crises, lack social support, lack coping skills to deal with life stressors, or who may not be able to tolerate typically used medications (Semenchuk, 1994).

Hanser and Thompson (1994) cite numerous researchers (Prickett, 1988; Smith, 1990; Vanderark, Newman, & Bell, 1983) who have demonstrated music therapy as having additional benefits in the geriatric population such as improvement in quality of life, interaction with one's environment, facilitation with the expression of feeling, orientation and responsiveness, positive associations and increased socialization. Ragneskog, Brane, et al. (1996) found that music also typically has a positive effect on individuals with dementia. The researchers found that music improved food intake while dining, the frequency and duration of verbal and motor performance, activity level, agitation, and affective status. Physiological factors such as heart rate were demonstrated to be effected by music as well. Hanser (1990) found that music therapy offered a stimulus for deep body relaxation, a stimulus for positive imagery and mood, a stimulus for clear thinking, incompatible with worrying, and a pleasant, potentially reinforcing event.

Tomaino (1994) also proposes music therapy is highly effective with individuals with dementia. The author said that people frequently experience music in their lives. Often times the music is associated with life celebrations. Most individuals can listen to music at almost any time with little effort or skill. With music as a facilitator, most can participate in social activities they may otherwise not be able to do. Furthermore, Tomaino views music as a non-threatening catalyst for familial interaction.

Hanser and Thompson (1994) compared the conditions of music therapy offered through home visits with a therapist, music therapy offered through home visits with minimal therapist contact (music therapy implementation was performed via telephone contact with a therapist), and a control condition where participants were placed on a waiting list. The Geriatric Depression Scale (GDS) and the Brief Symptom Inventory (BSI) were used as outcome measures. Depressive symptomatology decreased in those who participated in a music therapy intervention with both therapist guidance and with minimal therapist guidance compared to participants in the control condition. Seventy percent of music therapy participants demonstrated reliable change in depressive symptomatology from pretest to posttest. Furthermore, the researchers found that many of the participants were continuing to enjoy music therapy 9-months after the music training was provided. Music therapy with only minimal therapist contact (via the telephone) proved to be nearly as effective as music therapy with therapist contact nine-months later. Given the substantial cost benefits, the treatment could be especially viable in geriatric populations given that financial limitations are often a troublesome factor.

Ragneskog, Brane et al. (1996) found music to have significant improvement in depressed mood in elderly inpatients with dementia. Treatment effects were strongest when soothing music was utilized. Additional benefits were decreased irritability, symptoms of fear and panic, and increased food intake. Irritability, fear, and decreased appetite can be symptoms of depression. Hanser and Thompson (1994) also found that

music therapy made few physical or cognitive demands of the participants; "Music may be experienced and appreciated by even the most severely physically or cognitively impaired, unless hearing is grossly affected" (p.265). The purpose of this study was to determine the effectiveness of music therapy in decreasing depression elderly inpatients with dementia.

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Listing of Music Selections

Appendix B  
Listing of Music Selections

Listing of Musical Selections

Country

The Best of Patsy Cline

Dolly Parton

The Best of John Denver

Period

Big Band Hits of the 40's

The Best of the 50's

The Best of the 60's

The Best of the 70's

Bing Crosby

Polka, Polka, Polka

Soft

Bette Midler

Enya

Folk

Harry Belafonte

Placido Domingo

The Carpenters



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Appendix C

Method

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## Method

Musical preferences of the subjects were obtained prior to the initiation of the music therapy sessions. Musical selections consisted of country, period, soft, and folk music. A complete listing of musical selections are found in Appendix C. The groups ranged in size from two to seven members. The music sessions were held in five different areas so as to accommodate musical preferences, scheduling limitations, and the personal preferences of the subjects. The music therapy sessions were held in four of the subject's living quarters. Thirty minute sessions were scheduled between 9:00 a.m. and 11:00 a.m. There were two subjects in each of these four sessions. In the event one or both of the clients were absent from a session, the therapy was rescheduled during the afternoon hours of that same day. Music therapy was also held in a television room at 11:00 a.m.. Seven subjects attended this session. In the event that a subject was not able to participate in this scheduled time, an individual session was scheduled at the client's convenience in their living quarters.

Each session was initiated by greeting each of the subjects and engaging the subjects in casual conversation so as to decrease any uneasiness and increase rapport. The subjects then, as a group, chose from the several selections which they had previously identified as liking. Discussion of the selection, memories and feelings evoked by the selection, communication with other group members, and any other positive attempts of participation were reinforced verbally, by social reinforcement (e.g., a gentle squeeze of the arm, a pat on the back), and by positive facial expressions. At the end of the session, subjects were thanked for participating in the session, queried if there was a particular musical selection they would like to listen to in a subsequent session, and, if needed, assisted with returning to their living quarters.

All subjects were encouraged to reminisce about events they associated with the music and talk about thoughts and feelings which were evoked by the musical selection. Those who felt uncomfortable in actively participating in the sessions were instructed to

actively participate only to the extent that they felt comfortable. In several instances where sad memories were evoked by the musical selections (e.g., a subject being reminded of a deceased spouse, a subject recalling how her life was before experiencing her stroke, etc.), the subject was consoled and encouraged to discuss their feelings about these events apart from the group after the session had terminated. The option of a different musical selection was also provided.

THESE STATEMENTS ARE TO BE RATED AS FOLLOWS: NEVER, RARELY, SOMETIMES, OFTEN, ALWAYS

1. Are you usually satisfied with your life?
2. Have you stopped doing things you used to do because you are interested?
3. Do you feel that your life is empty?
4. Do you often get angry?
5. Are you hopeful about the future?
6. Are you interested in things you used to do because you are not interested?
7. Are you as good as you used to be?
8. Are you afraid that something will happen to you in the future?
9. Do you feel that you are not doing as well as you should?
10. Do you feel that you are not doing as well as you should?
11. Do you feel that you are not doing as well as you should?
12. Do you feel that you are not doing as well as you should?
13. Do you feel that you are not doing as well as you should?
14. Do you feel that you are not doing as well as you should?
15. Do you feel that you are not doing as well as you should?
16. Do you feel that you are not doing as well as you should?
17. Do you feel that you are not doing as well as you should?
18. Do you feel that you are not doing as well as you should?
19. Do you feel that you are not doing as well as you should?
20. Do you feel that you are not doing as well as you should?

Appendix D

Geriatric Depression Scale

Instructions: Please read each statement carefully and mark the appropriate response on the scale. The scale is a self-report measure of depression in older adults. It consists of 15 items, each rated on a 4-point scale from 1 (Never) to 4 (Always). The total score is the sum of the 15 items, with a possible range from 15 to 60. A score of 15-20 is considered normal, 21-30 is considered mild depression, 31-40 is considered moderate depression, and 41-60 is considered severe depression.

Scoring: Each item is scored from 1 to 4. The total score is the sum of the 15 items. The possible range is 15 to 60. A score of 15-20 is considered normal, 21-30 is considered mild depression, 31-40 is considered moderate depression, and 41-60 is considered severe depression.

## GERIATRIC DEPRESSION SCALE

for other translations and updated research, consult our website:

<http://www-leland.stanford.edu/~yesavage/gds.html>

1. Are you basically satisfied with your life? N
2. Have you dropped many of your activities and interests? Y
3. Do you feel that your life is empty? Y
4. Do you often get bored? Y
5. Are you hopeful about the future? N
6. Are you bothered by thoughts that you just cannot get out of your head? Y
7. Are you in good spirits most of the time? N
8. Are you afraid that something bad is going to happen to you? Y
9. Do you feel happy most of the time? N
10. Do you often feel helpless? Y
11. Do you often get restless and fidgety? Y
12. Do you prefer to stay home, rather than go out and do new things? Y
13. Do you frequently worry about the future? Y
14. Do you feel that you have more problems with memory than most? Y
15. Do you think it is wonderful to be alive now? N
16. Do you often feel downhearted and blue? Y
17. Do you feel pretty worthless the way you are now? Y
18. Do you worry a lot about the past? Y
19. Do you find life very exciting? N
20. Is it hard for you to get started on new projects? Y
21. Do you feel full of energy? N
22. Do you feel that your situation is hopeless? Y
23. Do you think that most people are better off than you are? Y
24. Do you frequently get upset over little things? Y
25. Do you frequently feel like crying? Y
26. Do you have trouble concentrating? Y
27. Do you enjoy getting up in the morning? N
28. Do you prefer to avoid social gatherings? Y
29. Is it easy for you to make decisions? N
30. Is your mind as clear as it used to be? N

Administration: These items may be administered in written format, but oral presentation is preferred for medical patients. If written format is used, the answer sheet must have printed YES/NO after each question, and the subject is instructed to circle the better response. If administered orally, the examiner may have to repeat the question in order to get a response that is more clearly a yes or no.

Scoring: Count 1 point for each depressive answer. The normal range is 0-10; mild depression ranges from 11-20; and 21-30 indicates moderate to severe depression.

July 2, 1994

[Faint illegible text]

Dear Mr. [Illegible]:

[Faint illegible text, beginning of a letter]

Appendix E

Permission Letter

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# Clinical Gerontologist

July 2, 1998

... the journal of aging and mental health

EDITOR:  
T.L. Brink, PhD  
1103 Church Street  
Redlands, CA 92374

Dear Mr. Blosser:

Enclosed is a copy of the GDS, complete with instructions for administration/scoring, and even an annotated bibliography. (Sorry, I do not have more reprints of the articles cited in that bibliography). I hereby grant permission to use in your research, to duplicate and disseminate. The scale now has its own website, <http://www-leland.stanford.edu/~yesavage/GDS.html>

In doing research with the G.D.S., I have three suggestions:

- 1) Do not alter the guidelines for scoring/administration.
- 2) If you will be trying to show a treatment effect, start out with a clinically depressed sample.
- 3) If your sample size is small, use non-parametric statistics (e.g., Fisher Exact, Mann-Whitney, Sign Test, Friedman, Kolmogorov-Smirnov).

*T.L. Brink*

P.S. I would also encourage you to consider publishing your results as an article or clinical comment in the journal I edit. We have already published a few things on music therapy with the aged:

1982 I (2) 76-77; 1984 III (2) 40-41; 1986 VI (2) 20,129-154;  
1989 IX (2) 81-83; 1995 XVI (1) 41-57; 1996 XVI (3) 82;  
1996 XVII (1) 64-69

