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MUSIC ON THEIR MINDS: A QUALITATIVE STUDY OF THE EFFECTS
OF USING FAMILIAR MUSIC TO STIMULATE PRESERVED
MEMORY FUNCTION IN PERSONS WITH DEMENTIA

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Submitted in partial fulfillment
of the requirements for the degree of
Doctor of Arts in the
School of Education
New York University
1998
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Concetta M. Tomaino

1/28/98
ACKNOWLEDGMENTS

There are many people who provided me with help and encouragement to carry out and complete this research endeavor. I wish to thank Roger Repohl for helping transcribe the audio tapes and for his invaluable comments and perceptions about the participants. To my colleagues David Ramsey, who read the various drafts, and Benedikte Schieby, who reintroduced me to Mary Priestley, I extend my deep appreciation for your professional insights and valued opinions. I wish to thank my fellow doctoral student, Stanley Paul. Together we read and commented on each other's dissertation giving each other the much needed support to bring our research to fruition.

I wish to thank Barbara Hesser for her inspiration, wisdom, and insights that enabled me to complete this doctoral process. She saw my potential when I first became a music therapist and always challenged me to go farther than I ever possibly thought. I wish to thank Dr. Oliver Sacks for his support, mentorship and friendship throughout the years. He has been my greatest inspiration. I owe especial debt to Ken Aigen, for his knowledge and understanding of qualitative research, and for guiding me through the various drafts of this paper.

Most especially, I wish to thank my family without whom I could never have completed this enormous project. I wish to thank my husband, Walter Barrett, for reading and editing the many drafts. Many times he acted as Mister
Mom and entertained the children while I wrote. He was always there whenever I needed moral support. I wish to thank my two daughters who were my greatest accomplishments during these past five years. In particular, I wish to thank Rebecca, my four-year-old daughter, for telling mom every night to hurry up and finish my homework, and Bernadette, my 2-year-old daughter, for trying to understand why mommy was so busy. I am grateful that neither of them managed to delete any pages of this document. Most importantly, I wish to thank my Mom, Benedetta Tomaino, for always encouraging me to pursue my dreams.
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CHAPTER I

INTRODUCTION

The old person loses memory, which as a rule is the first faculty to be lost. Yet the old person has something poetic about him; in the popular mind he is prophetic, inspired. But recollection is indeed his best power, his consolation, which consoles him with its poetic farsightedness.

- Kierkegaard (1845/1988)

Source of Study

Mr. Cohen taught me about the remarkable power of music. He had been admitted to the skilled nursing facility after having suffered several strokes. He presented himself as silent; his face showed little expression. The initial diagnoses included weakness in his right side and dementia secondary to stroke. Mr. Cohen did not respond to my invitations to participate in the music therapy group so he remained by his table during the sessions. Although I focused on the patients in the music therapy group, I also observed the other patients in the dining room for any responses to the music I played. Mr. Cohen occasionally glanced at me as I played many old songs on the accordion. It was when I played a particular Yiddish song that I noticed Mr. Cohen's glance in my direction. I
brought him closer to the group and played the song again; his eyes teared. With each successive session Mr. Cohen became more attentive and rocked his head slightly to the rhythm of the music. I began to work with him, presenting traditional Yiddish songs and watching for any response. At first he watched and rocked slowly, then he cried silently. Next he made humming sounds and eventually, after several weeks, he sang a word from the song—his first word in over two years. The song was “Tum Balalaika.” I spoke to Mrs. Cohen about her husband’s increasing verbal responses. When I told her the name of the song he sang, she remarked that it was the song he sang to their children every night while putting them to bed. This song of personal importance to Mr. Cohen was the key to his recovery. Eventually more words followed during the singing, and then speech, meaningful speech, occurred without music.

For 18 years I have been a music therapist working with persons diagnosed as having dementia. It is always remarkable to watch a person completely removed from the "present" due to the degeneration of Alzheimer's disease, a disease affecting nerve cells and neurotransmitters in the brain, come to life when a familiar song is played. The person's response may vary from a change in posture to animated movement: from a sound to verbal response. But usually there is a response, an interaction.

Dementia is a deterioration in intellectual functioning. There is almost always a loss of problem-solving ability as well as a loss of the ability for abstract thinking. The progressive dementias are most often diagnosed in the elderly
under the headings of multi-infarct dementia and senile dementia of the
Alzheimer's type. Multi-infarct dementia, which is less common than senile
dementia, is caused by loss of brain substance following minor or major strokes
(Williams, 1987). Alzheimer's disease (AD) is the most common form of
dementia (Davies, 1988).

Although much has been written on the use of music therapy with patients
Prickett, 1988; Wheeler, 1988), there is limited clinical data on the use of music
of particular importance to an individual with dementia. I have observed, from
my own clinical work, that songs of personal significance to a person with
dementia can stimulate their responses. This has been indicated in the work of
Gerdner and Swanson (1993) who observed that one of the subjects in their study
of the effects of individualized music on confused and agitated elderly patients.
decreased in agitation behaviors when music was played for her. They suggested
that the knowledge of the general category of musical interest may not be
sufficient but rather knowledge of the specific type of music should be established
prior to treatment.

This is indeed what I have observed over the years. Music is not
"universal" with this population. Yes, certain melodies will soothe and others
stimulate but to truly reach someone with dementia, on a personal level, his or her
musical preferences must be taken into account. Interests in specific types of
music develop over one's lifetime. Some people can appreciate a range of
musical styles, whereas others limit their musical interest to a specific type. Favorite songs or pieces of music tend to receive more attention over one’s lifetime and become ingrained in our memory. Although attempts to investigate some aspect of these phenomena have been made (Wylie, 1990; Prickett & Moore, 1991), the effects of using songs of personal importance to persons with dementia within music therapy are not addressed in the literature.

Music therapists have known, thanks to the research of Alicia Clair (then Gibbons, 1977), that persons between the ages of 65-95 prefer songs which were popular when they were between 20 and 30 years old. Given this information about song preference, it would make sense that personally meaningful songs can be found that will “reach” those who can no longer communicate these interests to us as therapists. These studies (Gibbons, 1977; Prickett and Moore, 1991; Wylie, 1990) indicated that songs of strong personal importance can affect responses in persons with dementia and demonstrated the need for further investigation in this area.

There is also a positive indication that familiar music can stimulate memory and improve reminiscence abilities in those with poor cognitive function (Sambandham & Schirm, 1995; Tomaino, 1996). However, there is still a need for further research in this area. Persons diagnosed with dementia are described as usually having problems in recalling older information as well as remembering newer information. Many have lost the ability to recognize familiar faces and objects. Despite memory deficits, these people do respond to familiar smells and
sounds; and the most dramatic responses are to familiar music. Swartz, Walton, Crummer, Hantz, and Frisinia (1992) suggested that persons with Alzheimer’s disease are capable of attending to and discriminating differences in fundamental music elements. In an earlier study Swartz, Hantz, Crummer, Walton, & Frisinia (1989) suggested that there is an independent neurological process for music processing as compared with language processing. One could argue that other forms of sensory stimulation, such as familiar photos and certain aromas, can trigger memory and reminiscence equally, yet the literature still shows that music has the strongest impact in persons with severe dementia when compared to other stimuli (Lord & Gardner, 1993; Smith, 1986; Tomaino, 1996).

Music is often so well preserved in our memories that only a fragment of a melody is needed to stimulate recall of the title or lyrics (Bartlett & Snelus, 1980). Although a sound, such as a bell, can evoke a simple attention response, music reflective of an individual’s past, e.g., songs of childhood, homeland, key life events, result in emotional reactions. It is the connections of the auditory nerve to key limbic structures that account for such emotionally charged response to familiar music (Tomaino, 1993b). The limbic area of the mid-brain has been indicated in long-term memory storage and emotional processing. There is evidence that memories persist when they have some personal importance for the subject (Barbizet, 1970).

How music affects memory is still unknown, yet we feel the effects of music and memory every time we hear a favorite song. What correlations can be
drawn from current memory theory? Squire (1987) described the parallel processes of declarative and procedural memory. He stated:

Declarative memory is memory that is directly accessible to conscious recollection. It can be declared. It deals with the facts and data that are acquired through learning. . . . Procedural memory is memory that is contained within learned skills or modifiable cognitive operations (p.152).

Procedural memory tends to be better preserved in people with memory deficits. We observe this phenomenon when a person with dementia is able to sing complete lyrics to a childhood song yet cannot recall his or her date of birth.

Music is capable of arousing deep and significant emotion in those who interact with it. John Sloboda (1989) described the autobiographical memories of musical events and the clarity of recall for adults who were asked to reminisce about early experience with music. Not only did they recall the musical event but their physical reactions to the music were recalled as well. All memories were of events prior to the age of 10. Regardless of the number of years that had passed, the total memory of their early experience with music was still preserved. Does this hold true for personal events where music is just a component? Does listening to one’s wedding song, for example, evoke the complete memory and feeling of that day?

Despite the implications of music’s affect on emotionally charged recall and its possible influence on memory, there is little documentation on the consistent use of familiar music as a cue for memory recognition and recall.
The aforementioned research also demonstrated the potential positive effect music can have on persons with dementia. The researchers, however, did not look at the use of music of personal importance to an individual with dementia in regard to memory function, nor did they examine, in depth, the responses of the individuals within music therapy sessions.

Through video analysis of music therapy sessions with four persons labeled as having dementia and based on the history and musical preferences of these individuals, as supplied by a significant other, I hoped to discover more about the responses to music of persons with dementia. In particular, I hoped to observe how these responses may be indicative of preserved memory function.

Statement of Purpose and Research Questions

My principle purpose at the onset of this research was to describe how the use of music of strong personal importance to persons with dementia affects their responses within the music therapy treatment process. In designing this study, I knew that I wanted to look closely at music and memory. Because it is the nature of qualitative research that new questions unfold as the study progresses (Ely, Anzul, Friedman, Gardner, & McCormack, 1991), I remained as open as possible to the process that unfolded before me.

I began the process of this study with the following broad sub-questions:

- How does a person with dementia respond to familiar music?
- How do these responses change over the course of the music therapy sessions?
- How do I, as a therapist, elicit responses from the patient?
These questions gave me a framework from which to begin analyzing the data.

As the data analysis progressed, and I became more aware of each person's response to familiar music, my questions evolved to include the following:

- What responses to familiar music are indicative of preserved memory function in persons with dementia?
- What does a person with dementia communicate about their needs and experiences within this context?
- What special considerations should a music therapist be aware of when working with persons with dementia?

These questions thus laid the foundation for the following study and allowed me the opportunity to look further into the effects of music on the minds of those with dementia.
CHAPTER II

REVIEW OF LITERATURE

There is a wealth of literature in music psychology, neuroscience, and music therapy that examines the effects of music on various aspects of human function. My interests in these areas of study have greatly influenced my work and my perception of how music can be used therapeutically. Combining research from these sometimes disparate fields has been both challenging as well as enlightening. Because my area of investigation cuts across these various disciplines, I have relied on a variety of studies that have helped me to clarify my questions and make sense of my observations. I will present that literature which has been the most beneficial in expanding my understanding of music and memory function as it relates to the organization of my study and data analysis.

Although I reviewed the literature prior to the study, I needed to expand this list as I developed new questions during the investigation process. During the course of this research, I found that the participants showed evidences of memory recall and recognition despite their dementia. Current research indicates that there may be several memory systems that function differently to process, store, and retrieve information (Craik & Jennings, 1992). I present some of these theories in the following section.
Memory Theories

Memory as a function of the living personality can be understood only as a capacity for the organization and reconstruction of past experiences and impressions in the services of present needs, fears and interests. Just as there is no such thing as impersonal perception and impersonal experience, there is also no impersonal memory.

- Schachtel (1947)

The 1990s has been referred to as the decade of the brain. This is due to the fact that the field of neuroscience has embraced the interdisciplinary cooperation of cognitive psychology, medicine, neurophysiology, and neuroanatomy. In addition, brain imaging technology has advanced to allow scientists to watch the brain as it responds to specific stimuli. This new science has led to several recent books on memory systems (Rose, 1992; Squire & Butters, 1984; Squire, 1987; Schacter 1996; Schacter & Tulving, 1994). I have used some of the texts as background study into the phenomenon of long term memory. No text addresses music/memory per se, but each helps unravel some of the mysteries about memory processes.

Steven Rose (1992) tried to draw on all these disciplines to bring some understanding to the workings of memory. He explained that persons with Alzheimer’s disease “experience a frightening loss of the sense of their own identity and access to their store of personal memories - those memories which for all of us form such a central buttress to that very personal identity. Just how these
existential losses might be related to the changes in brain structure is obscure” (p.112).

Everyday emotions are connected to previous life experiences. A feeling depends on the juxtaposition of an image of the body proper (the body as represented in the brain) to an image of something else, such as the visual image of a face or the auditory image of a melody (Damasio, 1994). In answering the question, “To what degree are emotional reactions wired at birth?” Damasio offered some explanations for why we feel the way we do when we remember something and the biochemical correlates and neuroprocesses that may be called into action. Because many of these biochemical changes are mediated subcortically, there is the possibility that this activity is viable despite diffuse cortical disease like Alzheimer’s and multi-infarct dementia. This is why we often observe emotional responses to familiar music in persons with dementia although they cannot recall anything about the music specifically. Recall requires a higher cortical process.

Personal memories may be semantic, episodic, procedural, or implicit. Semantic memory is the vast network of associations and concepts that underlie our general knowledge of the world; episodic memory allows us to recollect specific incidents of our past. Procedural memory allows us to learn skills and know how to do things (Schacter, 1996, p.134). We use implicit memory when we are influenced by past experience without any awareness of remembering. Semantic and episodic memory constitute two types of declarative memory
(Squire, 1987, p. 170), whereas learned skills and implicit memory constitute two types of procedural memory.

The nature and organization of memory systems are fundamental to our understanding of the processes underlying learning and memory in humans (Schacter & Tulving, 1994). Rudy and Sutherland (1994), in discussing assumptions about theories of associative memory, stated:

A target memory is activated by retrieval cues whose representations are connected with the target memory in the network. The retrieval cues themselves are viewed as a set of independent environmental stimuli or as elements each having some representation in the network. The critical assumptions we then make are about how these cues cooperate or combine to retrieve a target memory (p. 121).

The concept of retrieval cues and memory is not new, and, in fact was first suggested by Richard Semon (1921) who argued that any given memory could be elicited by just a few select cues, the parts of the original experience that a person focused on at the time the experience occurred (Schacter, 1996, p. 58).

As these researchers demonstrated, memory processing occurs on many levels. What role does music have as a retrieval cue? Are skills learned with music better preserved? These are questions that are only beginning to receive attention in the literature (McElhinney & Annett, 1996; Wolfe & Hom, 1993).

Preserved Musical Function

Case studies of musicians with diffuse cortical disease indicate that musical skills may still be well preserved despite loss of other cognitive skills. (Crystal, Grober & Mazur, 1989; Polk & Kertesz, 1993; Sacks, 1995). Such an
example of the preservation of musical memory in Alzheimer's is described by Crystal, et al. (1989). They studied the ability of an 82-year-old musician with Alzheimer's disease to play previously learned piano compositions from memory. Although the man had impairment of declarative memory, there was relative preservation of procedural memory. He could still perform compositions on the piano after cueing even though he could no longer recall the name of those compositions.

Performance ability may be preserved despite global impairments in other areas of function. Beatty, Zavadill, Bailly, Rixen, Zavadil, Farham & Fisher (1988) described an 81-year-old woman who retained considerable skill at playing the piano and some knowledge of music theory. This was remarkable because she had global impairments that included temporal and spatial disorientation, marked anamia, receptive aphasia, severely depressed verbal fluency, constructional and ideomotor apraxia, impaired abstract reasoning, and severe anterograde and remote memory deficits that included serious disturbances in the identification of well known songs and other musical compositions. Despite these deficits, the subject was able to sight-read an unfamiliar song and perform on the xylophone, an instrument she had not played in 11 years. Because the spatial arrangement of the keys on the xylophone resembles the layout of a piano but the motor actions required to play the two instruments differ considerably, the researchers concluded that the subject retained the “concept” of how to play the piano. They also noted that her preserved piano playing skill could not simply reflect retention
of a highly overlearned motor act because she was unable to perform other less complex skilled movements such as waving “good-bye”.

I have observed, in my clinical work, that musicians with Alzheimer’s disease, although unable to perform simple tasks such as buttoning a shirt, can still perform well on their instruments. One would think that dressing or waving “good-bye” should be a better preserved function than playing a musical instrument because it is a simpler motor skill. Procedural memory for skills acquired over a long period of time, like playing a musical instrument, does seem to be better preserved as these studies indicate but it also appears that musical skills, in general, seem to be better preserved than language, visual recognition tasks and simple motor tasks. What does this indicate about music learning and memory? Further research into preserved music skills of persons with dementia is important because it may provide a clearer understanding of the link between music skill and cognitive function (Lipe, 1995).

Memory for Songs

The road to the heart of the living is more difficult, more circuitous, by way of the visible than of the audible.

- Zuckerkandl (1956)

There has been a growing interest in the field of music psychology concerning memory for songs. A song can represent a gestalt of a period of one’s life allowing for remembrance upon each listening of the familiar tune. Radocy and Boyle (1979) stated that “Listening to music of one’s childhood or
adolescence evokes feelings of childhood and adolescent experiences associated with the music. ...The power of music to elicit strong feelings of experiences associated with it provides individuals with a mechanism for re-experiencing many significant events within their lives” (p. 189).

Individuals with dementia have often lost the capacity to process many types of information. Even though the ability to identify a song may be gone, one can still respond emotionally to it. The response is almost spontaneous with no thought given to recognition of the song. This is an example of implicit memory described earlier.

“These imagings, whether conscious or unconscious, are the stimuli to which the affective response is made. In short, music may give rise to images and trains of thought which, because of their relation to the inner life of the particular individual, may eventually culminate in affect” (Meyer, 1956, p. 256).

There is also evidence of bilateral involvement in emotional processing at the subcortical level. Blonder, Gur and Gur (1989) investigated emotional and linguistic functions of prosody as well as facial and musical processing in 21 patients with lateralized subcortical disease. Fourteen subjects had right hemi-Parkinson’s disease (RPD) and seven had left hemi-Parkinson’s disease (LPD). Both groups were compared to seventeen normal controls. The patients were impaired on receptive and expressive tests of emotional and linguistic prosody and were selectively impaired on emotional processing of facial stimuli and in musical processing of pitch and tonal memory, though not timbre. No differences
were found between the RPD and LPD groups in the pattern of deficits. Although the researchers only studied persons with Parkinson’s disease, their findings suggest that emotional processing occurs at the subcortical level. If this is a valid conclusion it would explain why those with dementia still respond emotionally to familiar music despite cortical damage.

In addition to emotions, associations are also connected to musical memory and experience. “It is the inner life of music which can still make contact with their inner lives, with them; which can awaken the hidden, seemingly extinguished soul; and evoke a wholly personal response of memory, associations, feelings, images, a return of thought and sensibility, an answering identity.” (Sacks, in press, pp. 11-12).

Music is an important contextual element. In studies investigating context-dependent-memory, where words, for example, were learned with certain melodies as the contextual background, recall was best when the music was the same during learning and recall (Weinberger, 1997). There is also a physical interaction hypothesis which holds that one component of a song exerts subtle but memorable physical changes on the other component, making the latter different from what it would be with a different companion. Crowder, Serafine, and Repp (1990) investigated the physical interaction hypothesis in three experiments with 69 subjects. They examined the influence words could exert on the subtle musical character of a melody. In addition, they investigated the degree to which simultaneous presentations of spoken text with a hummed melody would induce
an association between two components. Their findings supported the hypothesis that two events presented in close temporal proximity may become connected in memory such that each acts as a recall cue for the other. This study, however, was limited to the association between words and melody. In an earlier study, Serafine, Crowder, and Repp (1984) investigated whether the first melody line of a song could cue recognition of the lyrics or the song title. They found that normal adults had an 85% success rate in identifying old songs when one component (melody or text) was facilitated by the simultaneous presence of the other.

Other elements of music can also serve as retrieval cues. Dowling and Harwood (1986) explored the features of pitch and rhythmic organization that tend to make patterns difficult or easy to perceive and remember. They stated:

A listener's knowledge of a piece or of a style is stored in semantic memory, and that knowledge is integrated with specific episodic memories of local events in the cognition of a passage....That type of cognition is not usually explicit and conscious, but rather functions subconsciously to provide the listener with the conscious experience of the music (pp. 176-177).

These significant findings demonstrate that familiar elements of a song can trigger memory responses and associations. One aspect of a musical piece, be it melody, rhythm or lyrics, can trigger recall of each of the other components. If this is the case for those with normal mental functioning, how much does this hold true for those with cortical damage such as Alzheimer’s? Such phenomena are evident clinically when a simple tapping of the melodic rhythm of a song can evoke
recognition of the melody. Similarly, playing the first line of a song can cue recognition of the lyrics or song title. However, there are limited studies of these effects in persons with dementia.

Swartz, et al. (1992) suggested that person’s with Alzheimer’s disease are capable of attending to and discriminating differences in fundamental music elements. In an earlier study they suggested that there is an independent neurological process for music processing as compared with language processing (Swartz, et al., 1989).

Recall is thought to involve the search and retrieval of information in the memory store, whereas recognition is thought not to involve retrieval (Botwinick, 1978, p. 359). This issue of recognition versus recall was investigated by Gardiner, Kaminska, Java, and Clarke (1990) who tested the generality of the Tulving - Wiseman (TW) law concerning the relation between recognition and recall in regard to music memory which holds that there is a different memory process for recognition versus recall. Their study was limited to 36 undergraduates who were tested in two experiments regarding memory for well-known musical phrases. The subjects were first tested for recognition in the absence of any specific musical context and then for recall given a preceding musical phrase cue. Recognition and recall were found to be largely but not completely independent. If the Tulving - Wiseman Law can be applied to music recognition and recall in young adults does it hold for persons with dementia?
Auditory memory for melody has been studied in those with brain damage. Samson and Zatorre (1991) investigated the role of the left and right temporal lobes in memory for songs (words sung to a tune). 40 patients who had undergone a right (RIT) or left (LT) temporal lobectomy for the relief of intractable epilepsy along with 15 normal control subjects were tested in two recognition memory tasks. Although the 40 patients showed impairment in learning and delayed recognition of both unfamiliar melodies and nonsense words, some preserved learning did occur with successive trials. Those with the RIT improved in word recognition, whereas those with the LT tended to improve on melody recognition. The researchers’ concluded that there is evidence for the use of dual memory codes, and that the verbal code is consistently related to the left temporal lobe structures; whereas, the melodic code may depend on either or both temporal lobe mechanisms, according to the type of encoding involved. These findings are supported by the work of Matteis, Silvestrini, Troisi, Cupini, and Caltagirone (1997) who investigated cerebral blood flow changes during melody perception and recognition tasks in twenty right-handed musically untrained volunteers. They observed a bilateral increase in flow velocity during melody perception tasks, whereas a significant increase in flow velocity occurred only on the right side with respect to the left side during the melody recognition tasks.
Use of Music for Cued Recall

Music has been shown to aid memory of persons with Alzheimer's disease and can be used as a cue for recall. In a study by Prickett and Moore (1991), ten patients with a probable diagnosis of Alzheimer's disease and who resided in an intermediate care facility were assessed for recall of material, both sung and spoken, with which they had lifelong familiarity. They were also assessed for recall of material, both sung and spoken, which was being presented for the first time. The authors found that the patients recalled the long-familiar songs with greater accuracy than the newly presented songs. Most patients, whether or not they recalled words to the new songs presented, still attempted to sing, hum or keep time while the therapist sang. In this study, however, there was no attempt to select songs of particular meaning to the individuals. Rather, songs were selected by the therapist based on popular hymns familiar to most people in the care facility. Nevertheless, the patients demonstrated that they were able to recall the lyrics of these popular hymns dramatically better than the spoken words or spoken information presented by the researchers.

Melodic cueing may be more effective than verbal cueing. Bartlett and Snelus (1980) compared the recall for popular songs of 32 middle-aged (37-57 years old) and 32 elderly (60-76 years) people. They concluded that both groups had long-term memory for songs, and that people recalled lyrics better when prompted by a melodic cue than when given a title cue. Research also indicates
that words learned with music are better recalled than those learned without music (Balch, Bowman, & Mohler, 1992; Weinberger, 1997). This might explain why phrases learned to music are better remembered than those learned by rote. The evidence of this phenomenon is present every day in the form of the commercial jingle.

The positive impact of the use of music for recall in persons with dementia may be greater for those who exhibit the greatest mental impairments. Sambandham and Schirm (1995), in a study of the use of music as a memory cue for patients with Alzheimer’s disease, found that three participants with the poorest cognitive functioning improved in memory and reminiscence abilities after the music sessions as compared with the 16 subjects with only moderate or moderately severe impairment, measured by the Global Deterioration Scale (GDS). Each subject was questioned on recent memory (able to identify day, year, and place), long-term memory (able to identify birthdate and place, mother’s maiden name), and reminiscence (prompted and spontaneous recall of past events or feelings) before and after listening to taped music selections recommended by family members of the participants. The researchers suggested that further study in this area is needed to determine whether music functions to increase periods of lucidity.

For music to be used effectively as a cue it must convey meaning to the participant. Wylie (1990), who compared the effects of old familiar songs, antique objects, historical summaries, and general questions on the reminiscence
of nursing home residents, attributed the low correlation of old songs to verbal reminiscence to the fact that subjects did not choose the music used for the study. She concluded that more research on the specific effect of music on reminiscence needs to be conducted. In contrast, Lord and Garner (1993), who compared the mood and mental states of 60 elderly patients with Alzheimer’s disease, found those in the music listening intervention were happier and had a higher level of recall of past personal history than patients in the other two groups (puzzle/exercises, and drawing/painting). The correlations between pre- and post-tests scores for recall, social interaction, and mood consistently indicated a P value of less than .01 for those in the music group compared to no significance in the other two groups. The researchers, who selected “Big Band” music of the 1920s and 1930s for the music intervention, suggested that music selected from a period when Alzheimer’s patients were much younger could assist them in recall, social interaction, and generally improved mood.

In another study, Smith (1991) provided a comparison of group performance and song familiarity on cued recall tasks with 37 older adults from three different care centers - an adult day care, a retirement community and a nursing home. Six song segments of popular tunes from the 1940s and 1950s were presented to the residents of the retirement community while the other two groups listened to three of those six song segments. Recall performance was not significantly different between songs designated familiar and those that were considered less familiar. Significant differences were found between group
responses for each of the three songs used in the abbreviated assessment. Analysis indicated that factors such as tempo, length of seconds per word, and total number of words might be more closely associated with lyric recall than the relative familiarity of the song selection. The songs selected in this study were from a later time period than those selected by Lord and Garner (1993) possibly indicating that songs popular during a time when the participants were younger may have a better effect on recall.

For the older person it is the telling of life stories over time that keep the memory alive. In the same sense, songs that one enjoys are listened to and sung over and over throughout one’s life. This may help keep memories for songs stronger than other memories that may not be called to attention as often (Tomaino, 1993a).

Although most of these studies indicate that familiar music may improve recall and reminiscence, there is still a need for further research in this area.

**Music Therapy with Persons with Dementia**

There have been many articles concerning the use of music therapy with older adults including those with dementia as evidenced in several reviews of literature (Clair, 1988; Prickett, 1988; Wheeler, 1988). Much of the research falls into three categories: age-related physical considerations, aptitude and preference, and treatment procedure (Prickett, 1988).
Clinical observations indicate that persons with dementia do show affectual changes when listening to music. Olson (1984) investigated the change in 11 clients’ cognitive, affective, and behavioral reactions to taped player piano music. His observations showed an increase in rhythmic movements and smiles while the music was playing compared to before and after the music. Reminiscence also constituted 40% of the verbal responses. However, no comparison was made to any other musical medium.

Participation in music activities has been shown to improve self-concept, life satisfaction, and music attitudes in elderly nursing home residents (VanderArk, Newman, & Bell, 1983). Music may also have a positive influence on cognitive function in relation to orientation, attention and language skills in persons with Alzheimer’s disease (Aldridge, 1994; Smith, 1986).

There is a strong possibility that music can stimulate specific images because of the overlapping of the auditory cortex with part of the visual cortex that deals with visual associations as suggested in a study by Susan Hale (1990). These images may be positive or negative. She recommended that therapists must be aware of the negative aspects of memory, be sensitive to the client’s defenses against facing the memory alone, and provide support and encouragement without interpreting or judging the images from the client’s memory. Music therapists need to be aware of the negative feelings that music may arouse within the treatment situation (Clair, 1996, p. 24; K. Aigen, personal communication, December 24, 1997).
There are specific ways in which music therapy can be beneficial in the treatment of Alzheimer’s disease. David Aldridge (1995) stated that musical abilities appear to be preserved in cases of cognitive deterioration, therefore, music therapy can be used in treating elderly and AD patients. He suggested that music therapy, along with group activity, can expand socialization and communication skills in elderly, and thereby reduce problems of social isolation. He described a case study of a 55-year-old woman which shows that music therapy based on the improvisation of music between therapist and patient improves the quality of life of AD patients, giving them the feeling of social acceptance and sense of belonging. He suggested that improvised music therapy supplements mental state examinations, and is useful in testing prosodic elements of speech production and their areas of functioning. In an earlier work, Aldridge (1993), discussed the benefits of the use of music therapy for assessment and treatment of cognitive loss due to Alzheimer’s disease. He also explained how music therapy can be used to stimulate cognitive activities and help maintain mental functioning.

**Music Preferences of Older Adults**

There have been several studies of the musical preferences of older adults. Gibbons (1977) found that when song choices were analyzed by age group (e.g., 65-75, 75-85, 85-95), there was a significant preference for the songs which had been popular when respondents were between 20 and 30 years old.
One particular style of music may also be preferred. Jonas (1991) investigated seniors' comparative music preference for four generic styles including art music, country music, popular music of today, and traditional jazz. The 63 participants (aged 59-101 yrs.) from four nursing homes were interviewed and a musical preference test was given. The listening test consisted of 16 music selections, four from each style. Country music style was preferred the most, followed by traditional jazz, art music, and popular music, respectively. Subjects made comments about preferring the "old songs." The preference for country music may be reflective of the geographic area where the study and should not be generalized as other studies have indicated other musical preferences with this population (Lord & Garner, 1993; Moore, Staum, & Brotons, 1992).

In addition to song preference, Moore, Staum, and Brotons (1992) recommended that clinicians consider other aspects of musical preference. They investigated the preferences of 514 older adults (60-110 yr.) in regard to repertoire, vocal ranges, tempos, and accompaniments for singing. They found that (1) patriotic and popular songs and hymns were preferred over folk songs, (2) vocal ranges averaged 19 semitones for women and nearly an octave lower for men, (3) slower and moderate tempos were preferred to faster tempos, and (4) live and recorded chordal accompaniments were preferred to recorded melodic line or synthesized accompaniments.
Although these researchers indicated that music preferences can be studied between groups, they did not consider the individual nature of music preference nor the effects of using such music in the therapeutic situation.

**Language and Aging**

In doing the final analysis of this study I found some issues relating to language and hearing problems in persons with dementia. Several language changes may follow a specific pattern in those with Alzheimer’s Disease. Jarvik and Trader (1988) summarized the problems as follows:

Aphasia, i.e. errors of grammar and word choice, have been shown to be persistent features of AD. The language of Alzheimer’s patients is often free flowing but of an empty quality, with indefinite references (e.g. thing, it, they). Patients gradually lose the ability to find the right word (anomia), usually starting with words they use infrequently. They may substitute descriptions for specific words. In wanting to use the word “purse” a patient may say, “I can’t find my...you know...the thing I carry my money in.” They may also substitute other words or syllables for the right ones (called paraphasias). For example, a patient may use the word “furse” instead of “purse.” Comprehension of both spoken and written language is also progressively impaired in AD. Patients may be able to read aloud, but they may not understand what they have read. In the terminal phases of AD, speech may be reduced to repetitive sounds (p. 133).

The effects of cognitive aging on language may mimic in reverse developmental patterns observed in children but for different reasons (Kemper, 1992).

“Individuals with middle-stage dementia may no longer possess the facility with language to ask comprehensible questions or to successfully communicate verbally at all. They may use ‘word salad’ (disjointed word or sentence fragments) which makes it difficult to interact with them. When they are
misunderstood, they can become frustrated and have outbursts of anger” (Clair, 1996, p. 70).

There is also an indication that persons with dementia may lose the ability to distinguish various phonemes thus leading to misinterpretation. Marshall and Duke (1996) studied the effects of age and Alzheimer’s disease on recognition of gated words. Ten highly familiar and relatively concrete monosyllabic nouns were presented to 36 participants including 12 young adults, 12 older normal adults, and 12 older adults with probable early-stage Alzheimer’s disease. Time-gated sequences for the test words were created so that only the initial 100 ms of the target word was presented with each subsequent stimulus presentation including 50 ms increments. Participants were asked to identify at what point they could identify the words with some confidence. The authors concluded that both age and Alzheimer’s disease negatively effected the ability to use acoustic-phonetic information to access the target words after identification of the initial phoneme indicating a decline of automatic processes involved in word recognition. Changes in both peripheral auditory processes and higher order cognitive processes may also play a contributing role in age related spoken word recognition problems (Van Rooij & Plomp, 1992). There is a need to better understand the language problems of persons with dementia as miscommunication impedes therapeutic interactions.
Awareness in Persons with Dementia

There is limited information in the literature on the subjective experience of persons with dementia (Cotrell & Schulz, 1993). A recent study showed that persons with Alzheimer’s disease are aware of at least some aspects of their environment and are capable of meaningful social responses (Danner & Friesen, 1996). Although their study made no attempt to elicit information about the patients’ awareness of their illness, seven of the ten participants voluntarily verbalized direct or indirect comments on the effects of their illness. The authors stressed that systematic studies of awareness and of remaining functional language capabilities of the severely-impaired Alzheimer’s patient are still needed.

There is limited research on perceived loneliness in older adults. Unfortunately, most studies of loneliness that include older adults focus on individuals who are already lonely and therefore provide no indication of what may cause loneliness in particular. It is difficult to compare this type of social loneliness to the affectual changes observed in those with dementia. Research findings suggest interventions depend upon external factors such as socialization and functional status which are not always feasible for older adults who have experienced social and functional losses (Rane-Szostak & Herth, 1995).
Some attempt has also been made to assess non-verbal expressions of persons with dementia as indicators of preference and aversions (Lawton, Van Haitsma & Klapper, 1996). However, studies on the use of such tools are limited.
CHAPTER III
RESEARCH METHOD

In this study, I explore the responses of persons with dementia to familiar music. In presenting my research method, I begin with my stance as a researcher because my background and experience have greatly influenced how I arrived at the questions I chose to investigate. The following sections describe my research method.

Stance of the Researcher

My main interests have always been music and science. It was the possibility of combining these two interests, and a strong desire to help people, that brought me to music therapy. Although my music therapy training focused on psychodynamic principles of using music therapeutically, it was my interest in the neurological correlates of behavior that grounded my clinical work.

When I began working with persons with dementia I did not see depression or loneliness first, I saw persons who had become greatly incapacitated due to a progressive brain disorder. It was trying to understand their responses in the context of this disorder that led me to study memory function, and in particular, how music could facilitate its recovery. I also began to realize that the
psychological issues present were often directly related to the underlying neurological problems.

For the past 18 years I have had the good fortune to have as a friend and colleague an eminent neurologist, Dr. Oliver Sacks, who has introduced me to his views of the mysteries of the mind and the science of Neuropsychology. In the early days of my work, he shared diaries written by some of the post-encephalitic patients during their "awakening." These diaries told of deep personal experiences and frustrations of those patients who were now again "frozen statues" as he had previously described them (Sacks, 1973). This was both a shock and revelation to me as a novice with this population. I came to appreciate the fact that no matter how regressed or removed from reality a person appeared, they may still comprehend everything that is happening around them.

This humbling realization has caused me to demonstrate the utmost respect for each person with whom I have worked. In the sessions, during this study, I always sat at eye level with each person. I always tried to work with them at a pace that appeared the most comfortable and provided the greatest opportunity for their response to the music. I spoke clearly and slowly allowing time for verbal responses. Although I tried to speak simply, I did not speak in a way that might demean their self respect.

It is my interest in, and respect for, the individual that has motivated me toward naturalistic inquiry and qualitative research. I have learned that no two people respond to music in the same way. This is especially true for those with
dementia as their cognitive deficits greatly affect how they respond to their environment. I have come to appreciate, through the process of this study, the need to look closely at the individual, and by doing so, learn more about the potential for meaningful responses in others with dementia.

During my formal education both at the Masters and Doctoral levels there have been several courses that have provided me with greater knowledge of the aging process. These include the Developmental Psychology of Aging, Neuropsychology, Psychology of Music, and Perceptual Development.

My continuous fascination with the neurological basis of music memory has led me to analyze much of my work in music therapy within this context. Over the past ten years I have presented many papers related to this area of study. It is only in the past five or six years that there has been an increased understanding in neurosciences as to the complexity of memory systems. New knowledge is continually emerging in this area which may help us understand how music affects and stimulates memory. Although I have made many clinical observations of responses by persons with dementia to music, and have many anecdotal case studies, I have not video taped individual music therapy sessions with the rigor I have undertaken here.

As a research assistant in the New York University Human Performance Analysis Laboratory from 1988-1990, I learned the principles of quantitative analysis. As a researcher, and founding member of the Institute of Music and Neurologic Function, I am expected to design studies with strong quantitative
components. I have realized the importance of qualitative research in music therapy work and am working to better understand this process. Knowing the principles of both types of research, I chose a qualitative design because I believe it essential to study each person's response at the moment of the experience as well as over time. To establish the parameters of behavior before the study would have greatly limited what responses were captured and analyzed. Indeed, each person had a particular response unique to herself yet presented needs and issues common to all.

Qualitative research allows the researcher as an instrument of inquiry to follow a process of change and natural occurrences within a given situation. This is the ideal framework from which to work as a music therapist as so much of what occurs in a session cannot be measured by statistically based tools. In a final report I made to the New York State Department of Health Office of Aging on research findings for a study which they funded, I stress the limitations of existing measurement tools in research on aging. This is especially true when working with persons with dementia. The measurement tools available do not capture the subtle responses and cognitive changes that do occur when such persons are exposed to music therapy (Tomaino, 1996).

I know that there is an inherent value in studying the effects of music on those with memory deficits especially in what it can tell us about memory function in general. This is a monumental task and one that is difficult to examine given the complexities that music presents to the researcher. If a quantitative
scientist wanted to examine brain response to familiar music the parameters of the music would have to be controlled in regard to frequency range, tone, harmony, rhythm and other factors. In doing so the personal aspect of the music disappears. Yet it is precisely the personal aspect of music that makes it a valuable tool in therapy with those with memory deficits. Qualitative research allows for the individual to be studied and for science to be derived then from these studies. One only needs to read the case studies of A. R. Luria (1972) and Oliver Sacks (1973, 1995) to realize the wealth of knowledge and theory to be gained by entering into the lives and experiences of those with neurologic diseases.

There are many inherent challenges to being a clinician/researcher, in using myself as an instrument of inquiry. Who I am as a therapist very much defines who I am as a researcher. It is a multi-faceted role. The following quote from Stewart Shapiro (1967), a pioneer in Humanistic Psychology, reflects my own philosophy both literally and figuratively:

What I really mean by an “instrument” is the capability of my guts, my body, and my computer-brain to pick up subtle cues given by other people, the environment, and myself as I encounter people and move through the world....Not only do I pick up cues, but I also decode them, translate them, and I express myself. I am message sender as well as recorder....I suppose I am just as much computer, too, as a recorder, and I am also a musical instrument. Not only do I try to listen to the music as well as the words that people say, but I also sometimes play a tune myself on the instrument. My tune could be my pattern of feelings expressed, my voice, my facial expression, a sigh or frown, or it could be something less tangible for which others might have to listen...I often tell people, “Listen for the music, not the words” (p. 235).
It is often difficult for me to describe my clinical method. So much of it has evolved over the past 20 years, and so much of it is intuitive. As stated by Polanyi (1964):

"Every interpretation of nature, whether scientific, non-scientific or anti-scientific, is based on some intuitive conception of the general nature of things... A potential discovery may be thought to attract the mind which will reveal it--inflaming the scientist with creative desire and imparting to him intimations that guide him from clue to clue and from surmise to surmise. The testing hand, the straining eye, the ransacked brain, may all be thought to be labouring under the common spell of potential discovery striving to emerge into actuality (pp. 10-14)."

Observing people with dementia respond to music over these years has convinced me that there must be underlying neurological processes that enable them to respond so well to music when all else has failed, yet nothing that I read can explain why. The brain does not function like a homologous -- each aspect of human function being assigned to a particular region of the brain; but, rather, as a dynamic, ever changing system of interconnecting neurons that work in consort to produce our complex, dynamic, insights of, and responses to the world around us. This is the concept of neural networks that has almost replaced the concept of localized brain function. The more I learn about these networks the more I wonder about the "music connection," because so many skills are better preserved when music is a component of the learning process.

Music can be defined in many ways. In this study, I use the term *familiar music* to mean songs, with and without words, which were identified as each participant’s favorite songs by their caregiver. I was curious to examine whether
or not these particular songs might act as an important therapeutic cue for retrieval of lost memories and skills. The experience of familiarity is important as it tells us that our memory contains additional information about what we have just encountered.

My definition of memory is also very broad. A child begins life with little knowledge of his new world. His/her reactions are spontaneous, not predicated by previous knowledge or experience. In contrast, adult responses, language, habits, and social skills are all based on one’s life experiences. It is the comparison, both conscious and unconscious, of these verbal and affectual responses to previous life experiences, that I define as memory. Each new experience is spontaneously compared to some similar event or set of responses in our long term memory. Learning is an act of remembering; remembering an act of learning anew. These preconceptions have influenced my approach to this study.

There are other factors that influenced me at the time of this study. When the newly admitted patients, with a preadmission diagnosis of dementia, were referred for this project, I was hoping to find potential participants whose care giver was a spouse or significant other. I thought they would have the best information about the significant music of their partner. However, I found that none of the newly admitted patients had a surviving partner. Three of the participants had adult children and the other, a sister-in-law. Although they were able to provide information about favorite music and songs, they could not provide the specificity I originally hoped for. My process, in the first few
sessions, was to explore the preferred music with each participant and find which songs they knew the best and were the most responsive to as evidenced by their verbal comments and affectual responses.

During these past four years, after completing the intervention and video taping for this study, I also received several research grants. Two of the research grants needed to be completed within two years. A different research study is presently at midpoint. This distracted me from processing my data for the study I present here. One of the studies (Tomaino, 1996) investigated music and reminiscence as compared to verbal reminiscence groups. In writing the final report for that study however, I became further aware of how familiar music can increase attention and recall. Each research process adds to my knowledge and perception of each subsequent therapy interaction thus continually altering my interpretation of what has transpired within the session.

Research is an ever changing experience as one always needs to build from what has been discovered before. For this reason, I am now looking at my data with different eyes and ears than I had four years ago when I first began the data analysis.

In the process of doing research as a clinician and observer, I find that my roles are many. I am researcher, therapist, and advocate for those with neurologic impairments, especially those with dementia.
Setting

The music therapy sessions were held in the music therapy studio located in the skilled nursing facility where I work. This facility has provided long term care for hard-to-place, severely disabled patients for over seventy years. Skilled nursing, short-term rehabilitation, and sub-acute care are some of the levels of services provided in the 520 bed facility.

I have been employed as a music therapist here for 18 years and am Director of the Department of Music Therapy. The music therapy studio is equipped with a high quality stereo system, a variety of instruments, and a variety of plants. The windows look out to the tops of trees. The room tends to reflect the weather, on bright sunny days it has a warm feeling and on rainy days just the opposite. I mention this because the windows and what the patients thought they saw through them often figured into their responses.

The sessions took place from 6/22/93 - 8/12/93. Although I had some volunteers to help escort the patients to the studio, I often picked them up on their units and so my time with each resident sometimes started before the session began.

Selection of Participants

Participants were referred to this project by the admitting social worker.

One patient had been admitted in March, 1993 and three had been admitted in June, 1993. Each person had a preadmission diagnosis of dementia. The newness
of admission was important as I have observed that long term institutionalization may effect a person's level of responsiveness. It has been observed that persons with dementia quickly decline in cognitive abilities and become more depressed immediately after their admission to a long term care facility. Fear of unfamiliar surroundings along with lack of appropriate sensory stimulation causes these persons to stop interacting with their environment thus leading to rapid decline (Tomaino, 1993b).

For each of the participants in this study the diagnosis of dementia was made by the referring physician. I reviewed the admissions report of all new residents with this diagnosis and then met with the attending physician and social worker to discuss the patients’ inclusion in this study. During the preceding two months only eight patients were admitted with a diagnosis of dementia and all of them were female. Of these eight, four residents were selected based on permission of their caregivers and their willingness to participate. Each participant did have remaining verbal skills, although these skills were impaired to varying degrees with each participant. Each participant had at least one family member or close friend who had knowledge of the music most important to the participant. I wanted to limit the number of participants, as this allowed me time to meet with each person twice a week on an individual basis, and provided rich exchanges that enabled me to focus clearly and in depth on the interactions and responses that transpired.
I did not know three of the participants prior to the first music therapy session for this study. The fourth participant, Rose, I knew for several weeks before the first session, although I had only met with her twice before starting the intervention.

Working with the participants individually was important for this study. Dr. Oliver Sacks often reminds me of the need to look at individual clinical cases. No neurologic condition is the same for each person who experiences it. Once the experience is explored and explained, however, the implications for others becomes much clearer.

Data Collection

After several residents were referred for possible inclusion in this project, I contacted each of the responsible caregivers and invited them to discuss the possibility of including their relative in the study. Of these residents, four became the participants based on permission of the caregiver and the resident’s willingness to participate. I discussed what may take place in the sessions, spoke about music therapy and my past experiences with persons with dementia. Each caregiver was asked to read the research release forms and complete a music interests questionnaire. General questions about the participants’ musical background were asked. These included questions concerning type of preferred music such as classical, pop, and jazz; whether or not the participant was a musician; and titles of favorite songs. Questions concerning the participant’s
association of a specific song with any important event in his/her life were also asked.

I kept a journal of each session, noting key responses, what music was used, any significant responses by the participants, contemporaneous impressions of the sessions, and notes concerning significant changes in each participant as per their medical records. I reviewed the journal from session to session to maintain continuity and to build upon the previous session. I videotaped each session so that both the participant and myself were captured on film. I reviewed the video several times and then transcribed the verbal responses from each video tape. I again reviewed the videos this time noting both my and the participants' non-verbal responses and commented where in the music each had occurred. There were some points in the video where some of the verbal comments were inaudible. This was due to noises outside the studio and the loudness of the recorded music. In these instances, I noted non-verbal responses and commented about the level of engagement with the music. I also compared my transcripts of the verbal and non-verbal responses from the video with information in my journal to insure that each transcript was an accurate depiction of the session.

Each participant met for individual music therapy two times a week for 20 minutes per session. This is the usual duration of my individual sessions with dementia patients. Participants were involved in at least 16 music therapy sessions. The sessions took place over the course of eight weeks. I proposed this
amount of time because most of the changes I have observed in persons with
dementia have been during this time period.

The sessions were all held in the music therapy studio. Only the
participant and I were present in the room during each session. The music was
selected from that named by the participant's significant other. I also used other
popular songs from when the participant was between 20-30 years old to examine
the participants' range of responses.

I played the songs on the piano or accordion or used previously recorded
material. During the course of each session I chose the songs based on my
perception and intuition of what music would evoke a response from the
participant at that moment in time. Whether I used recorded music or played the
music on an instrument depended on the participants' responses and what I
thought would best involve the participant in the music for that particular session.
With each successive session, I tended to use only those songs which evoked the
greatest responses from the participants. The responses, which were verbal and
non-verbal, varied from session to session.

Data Analysis

Data analysis began with start of the music intervention and data
collection. After completing the intervention, I began to process the various types
of data that I had collected. This included the video tapes of each session,
participant information from their medical records, and my journal. Analysis
proceeded along with my processing of this data. No predetermined category
system was used to analyze the data; rather a coding system did emerge from the
data that made sense within the context of the sessions and the initial research
questions. This process was based on coding systems described by Ely, Anzul,

After transcribing the verbal and non-verbal information from the videos,
I reviewed the tapes several times to insure that the transcripts were correct
reflections of what transpired in each of the sessions. In the written transcripts, I
noted changes in the environment, the weather, and other details that may have
had an impact on the interrelationships between me and the participants, as well
as their responses to music in general.

Because I was interested in the participants’ responses to meaningful
music, I initially read the transcripts and circled verbal and nonverbal responses
that occurred during, and immediately after each song was played. My ideas and
impressions were noted in the margins on each page. Other key observations
were circled within the transcripts and descriptive words placed in the margins.
The key elements of each session were highlighted and formed into the
summaries. Each summary portrayed the content of each session and captured the
change over time, the struggles, the unfolding of self, and the relationship
between me and each participant. A clearer picture of each participant began to
emerge. I went through the summaries and wrote words in the margins which
identified what type of memory function was being demonstrated at that moment.
I discovered that the verbal and nonverbal responses could be divided into categories regarding some aspect of memory function. This included the areas of self identity, melodic memory, remembrance, increased word finding, familiarity, and spontaneous responses. For each of these areas I allocated a code number. I then went back over the transcripts entering the code numbers to each participant’s response to music. As I coded the transcripts I also entered words in the margins that were reflective of the therapeutic process and of my interactions with each participant. I continued to process the transcripts until I could no longer find anything new to document.

Some of the verbal elements were further analyzed in regard to verbal processing problems that occurred within the sessions. Misinterpretation of verbal comments by either myself or the participant led to miscommunication. For example, there were times when the participant had misheard what I said resulting in an answer that sounded confused at the time of the session. Yet, in retrospect, the remark was perfectly on target given what the person thought I said.

As my analysis progressed I also found several words and phrases which were repeated often by each participant. Words like love, family, loneliness, although somewhat related to memory, were more about personal feelings and needs as expressed by the participants than past associations. I formed these need statements into four themes.
My final presentation of findings was based on an analysis of the codes and themes that emerged and an evaluation of what this information means in the context of work with persons with dementia as well as the work of the music therapist. My ultimate purpose in this analysis is to provide a methodologically convincing story which Miller and Crabtree (1994) stated should have the following components: 1) the investigator’s relationship with the participants, 2) the relationship to the data, and, 3) the relationship to readers.

It is my hope to convey the stories of four very different persons each struggling to make sense of a changed life, who become further connected to me and their worlds through music, as well as provide insights into clinical music therapy practice with such remarkable individuals.

Standards of Evaluation

In quantitative analysis, standards of evaluation include tests for internal and external validity, reliability and replicability. In qualitative analysis, the researcher, must also present the rigor, efficacy and trustworthiness of the research findings.

Trustworthiness relies on my commitment to truthful and prolonged observation, ongoing reflection, analysis, and interpretation with an in-depth reporting of process and conclusions. To maintain trustworthiness in this qualitative research process I was initially part of a peer support group of other doctoral students who were not music therapists, and for a short while, a group of
music therapy doctoral students. Both these groups helped me in the conceptualization of my research design. These groups ended when I completed the intervention.

During my coding and analysis, I shared transcripts and videos with colleagues with whom I work, to gain from their insights and as a means of external checking. I also shared copies of the session transcripts, along with my coding and analysis, with these colleagues. I also relied on the support and input from other doctoral students, in particular, a fellow staff member who was completing his qualitative dissertation as I was writing mine. We exchanged ideas about coding techniques and then shared our various drafts during our process of data analysis. We also gave each other much moral support and encouragement to continue through this process.

This final presentation of my study was the result of several stages of drafts and analyses which I shared with my dissertation committee, two doctoral students and other colleagues. Their input and insights were invaluable in helping me clarify my data and provide a cohesive description of the research process and findings.

Triangulation, or checking the data obtained by the various methods, such as analysis of videos and session logs, is another aspect of trustworthiness. The convergence of data from these sources increased the likelihood that my analysis was a truthful representation of the information collected. I continually compared data from the transcripts, with the video and journal entries. After I processed the
codes and themes I went back to the original transcripts again to make sure I captured everything. When I finished the first draft of my analysis, I returned to my original coding system to insure that my reasoning was congruent with the summaries and codes.

Many qualitative researchers rely on member checking as a means of establishing credibility. The researcher shares findings with the study participants to see if it is a representative picture of their experience. Because the participants in this study could not share in this process, I shared some of my observations with the participants' caregivers as a form of member checking.

Ely, Anzul, Friedman, Gardner, and McCormack (1991) stated that “it is essential for qualitative researchers to understand that hunches, insights, directions do not arise out of nothing and that often they are the results generated from meaningful lived experience” (p. 104). At the onset of this investigation, I relied on my insights and hunches to engage the participants in the music therapy experience. In analyzing the data, I again had to rely on my scope of knowledge, at the present, to do my best to present a viable interpretation of the process and data.
CHAPTER IV

PARTICIPANTS

Introduction

The following short case histories introduce the four female participants and provide an overview of how I came to choose the music I used for the sessions. I want to give the reader a portrait of each participant so that you may better understand the work that followed. The total transcripts amounted to over four hundred seventy one pages of single spaced text, so the task of summarizing these sessions was a monumental one. I have also included the titles of the initial songs that were used but, due to American Society of Composers, Authors, and Publishers (ASCAP) restrictions, cannot provide the lyrics to these songs. When relevant, I describe what the lyrics to the song mean and if such meanings may have influenced the participants’ response.

Each participant was very different. One of the participants, for example, was almost silent initially and then started to speak more as the sessions progressed. The others were able to speak although they presented varying degrees of cognitive loss.

The participants’ names and those of their significant others have been changed to respect their privacy and preserve their anonymity. Each of these
women responded to music differently and each differed in the degree in which they changed over time.

**Molly**

Molly was a quiet, soft spoken 87-year-old woman who was born in Ireland and moved to London, England as a young woman. There is no record of when she came to the US. She was admitted to our facility, in June 1993, just two weeks before I began working with her.

Her son reported that his mother had been becoming progressively confused. She had fallen at home, hit her head, and was admitted to the local medical center where she was found to have severe dementia. She was recommended for long term placement. Her son was saddened by his mother’s need for continued care but felt that our facility would provide the best care for her.

Molly spent most of her time over the past several years with her family. She enjoyed television game shows and James Cagney movies. She required assistance in activities of daily living which meant she needed someone to bathe and dress her. Although she could physically do these tasks, Molly no longer remembered how to do them. Her orientation was also impaired due to her dementia. She was unable to recall anything about herself or her family. She could just tell me her name, Molly. This is important to note here because during the course of music therapy she did provide information about her family.
Molly was quiet during the music therapy sessions. Her facial expressions and spontaneous physical responses demonstrated to me from the first session that Molly was aware and responsive to me and the music. The feelings and emotions she demonstrated provided a glimpse of who Molly once was. I found her to be a loving, nurturing woman, who had become fearful as a result of her lack of understanding of the unfamiliar surroundings.

When I interviewed her son regarding Molly’s favorite songs, he suggested Irish songs like “When Irish Eyes Are Smiling.” The songs I used in the first session were: “When Irish Eyes Are Smiling,” “Molly Mallon,” “Donnegal,” “Yankee Doodle Dandy,” “Over There,” “It’s a Long Way to Tipperary,” “Let Me Call You Sweetheart,” “Irish Washerwoman,” “Immaculate Mary,” and “London Bridge.” These songs were chosen as they reflected her personal identity and interests - being from Ireland and England, her Catholic religion (Immaculate Mary) and James Cagney (Yankee Doodle Dandy).

Although I came back to these songs during the subsequent sessions, I also introduced other songs that were from the same musical genre and time period. In the second session and in subsequent sessions, I introduced new songs, which were similar, in a effort to further engage Molly in the music and in interactions with me.
Sadie

Sadie was a 75-year-old woman who was born in Poland in 1918. Her family left Poland for Palestine, Israel, when Sadie was approximately 3 years old. She was one of 4 siblings and had one brother still living in Israel. Sadie received the equivalent of a high school education and completed Seminary training there. She taught for a while and then came to the United States in 1949 to get medical treatment when she lost an eye in an accident. She married a family member of a successful company in 1951. They had one son and she returned to work when the boy was fourteen. She taught arts and crafts in a senior center for a while. After her husband’s death in 1988, her own health started to deteriorate.

Though the youngest of the participants, she looked the oldest. Hints of possible mistreatment and neglect, prior to her admission, were evident in this once proud, wealthy, elegant woman. She had been admitted to a local medical center after a hip fracture and was found to have severe protein and caloric malnutrition. She was first admitted to our restorative rehabilitation program at the son’s request, but due to her confusion, was soon placed on one of the dementia units. Sadie presented herself as an anxious woman who was obviously fixated on her broken teeth. She would constantly state “my broken teeth, is it dangerous?” She only had two teeth remaining in her mouth and both were very loose.
Her son was the only local next of kin, but he was unable to provide much information about his mother’s interests. In fact, he was somewhat reserved about answering any questions. He agreed to let his mother participate in this project as he was happy that she would be getting individualized attention. Not having specific songs to use with her, I relied on my experience to draw from a variety of music. Since Sadie was verbal, I hoped that she could then reveal to me if any of these songs were meaningful to her. The music used was a mixture of Israeli, Hebrew, and Yiddish songs, as well as some Polish songs and some waltzes. I found that the music took her attention off her teeth and other problems as she would listen quietly as the music played but, as soon as the music stopped, continued voicing her worries.

In the first session I introduced: “Tum Balalaika,” Schoerne de le Voonen,” “Pappirossen,” “Shalom Allechem,” “Hussen Challa Mazeltov,” “Tzena Tzena,” “Merry Widow Waltz,” “Bashana Habaha,” and “O say Shalom.” I tried to introduce a different song in each session because I did not have much background information on her specific musical interests.

Rose

Rose was an 80-year-old woman with a preadmission diagnosis of dementia, anemia, arteriolosclerotic heart disease (ASHD), osteoporosis, and pneumonia. She was born, in upstate New York, into a family with 3 brothers, all of whom are deceased. She most likely went to high school and then worked for
her brother until he sold his business. Rose worked for a prominent newspaper as
an ad taker until her retirement at age 65. She married in 1946 and her husband
died only 5 years later at the age of 40 from rheumatic heart disease. She never
remarried and the couple had no children. Her only significant other was her
sister-in-law with whom she had been friends from before her marriage. They
lived in the same building until recently. Rose enjoyed reading newspapers and
magazines, going to movies, taking cruises, and vacationing in the Catskills.

You could tell that Rose was a very social woman. She was friendly to
everyone she met and the staff was already becoming friendly with her only days
after her admission. She was very easy to get along with. Despite her apparent
orientation to self and excellent verbal skills, she had shown no awareness of her
new environment or that there was anything wrong with her.

Rose was placed on a unit that I was assigned to prior to the start of this
study. I had the chance to work with her twice in the music therapy group I led on
her unit. She liked to play a large tom-tom and would play the rhythm “shave and
a hair cut” which I would repeat on the accordion and then she would laugh. I
knew from her reactions that she knew the song “I Don’t Know Why I Love You
Like I Do” and this became a key song in our sessions together. Her sister-in-law
mentioned that Rose liked Frank Sinatra and most popular music of the late ‘30s
and early 40s. I found from the admitting social worker, who got the information
from Rose’s sister-in-law, that Rose had many friends including male friends with
whom she would socialize.
The songs I used during the sessions included songs from a tape of Frank Sinatra "I Remember Tommy," especially "I'll be seeing you," "Without a Song," and "For Somebody Else." The rest of the songs I played on the accordion or the piano.

**Carmen**

Carmen was the oldest of the participants but she definitely did not look her 87 years. She was born in Puerto Rico and lived in an orphanage until she was adopted by an American family and brought to the US at the age of two. She finished high school and worked briefly until her marriage to John. They had one son whom they named John. Her husband took her back to Puerto Rico where she met her blood relatives for the first time. She remained in Puerto Rico for six years causing her husband to leave her. She remarried in 1946 after meeting her second husband where they worked. He had drinking problems and they separated in 1960. He was killed in Puerto Rico. She remained close to her son "the love of her life."

She used to enjoy sewing and listening to music. Her son was very involved and visited Carmen almost every evening. He said that she loved to sing especially popular Latin songs. She also enjoyed songs sung by Frank Sinatra and Tony Bennett.

Carmen must have been a feisty woman because she would spontaneously utter some profanity, not in the same way that someone with Tourette's or Kluver-
Bucy Syndrome might, but definitely as one who has lost some inhibition.

Dr. Sacks suggested that this may be indicative of frontal lobe or other cortical damage (personal communication, January 24, 1997). At other times she would appear frozen almost statuesque, like a person with Parkinson’s Disease; yet she did not have this diagnosis. These behaviors were quite transitory and would appear and disappear with no apparent reason or specific stimulation.

The music I used included a recording of Edye Gorme singing some Latin tunes and the Frank Sinatra tape that I used for Rose. In the first sessions I included a recording, primarily mambos, of Tito Puente which I thought Carmen might know since she enjoyed Latin dance music. She did not convey any interest in or familiarity with the music so I did not use the tape in the rest of the sessions.
CHAPTER V
MEMORY

In this chapter I present my observations and findings in regard to indications of memory function in these four individuals as evidenced by their responses to familiar music. What do responses, indicative of memory recognition and recall, look like in a person with dementia? In first analyzing the video tapes, I could see signs of recognition of the familiar songs in each of the participants. This was evident by their attention, smiles, and eye contact; yet there seemed to be no evidence of memory recall. The statements made by the participants were in fragments over the course of the session. Separated they were meaningless phrases, typical of the confused speech often presented in persons with dementia. Pieced together, though, the participants' words did form cohesive thoughts showing evidence of recognition and recall. It became clear that fragmented statements, made after or during music listening, did relay personal information. The process of analysis was like breaking a code.

Other indications of improved memory or change in cognition also occurred. Besides memory of personal information, there was evidence of improved melodic memory and recall of lyrics, increased word finding ability, and spontaneous recollections. I will start by presenting the responses I observed
most frequently, i.e., spontaneous physical responses and discuss how these might be related to recognition.

Some changes were more noticeable, and occurred over the course of many sessions. These were the changes in melodic memory, recall of lyrics, and increased word finding. There were less obvious responses as well. These were the spontaneous recollections presented by each participant after a particular song. The recollections appeared to be unrelated to the music and the music therapy interaction, yet may reveal something about music as a memory trigger.

The remembrances or recall of more factual and related events also occurred within these sessions. These were isolated events that happened within a single session.

Human memory is complex and goes deeper than that which is visibly tangible. The sense of self, of who we are, and who we have become, also rely on our capacity to remember. What I found striking, in the process of this study, was the degree to which the awareness of self is preserved in persons with dementia. Cohen and Eisdorfer (cited in Sacks, 1997) suggested that there is some preservation of identity in persons with Alzheimer’s disease. Because there is limited research in this area ( Cotrell & Schultz, 1993), I feel that it is important to present these findings and insights separately. These expressions of self and personal needs are discussed in the following chapter. I present these in the form of themes, the recurring themes presented differently by each participant; themes that persisted from session to session.
Spontaneous Physical Responses

“Whether it is recorded or live, music can effectively elicit observable responses (e.g., changing facial expression and tension, increasing eye contact, vocal activity, and physical movements of arms, legs, and feet) in people with late-stage dementia. However, these manifestations of attentive behaviors do not occur in the same way in all people” (Clair, 1996, p. 82). Even when other responses have declined, spontaneous physical responses to music seem to be preserved in those with dementia.

In this study each participant clearly demonstrated several types of nonverbal response to the music. These included tapping feet and hands, clapping, laughing, smiling, continued eye-contact, exclamations, crying, singing, and making gestures. The more familiar the music, the more prominent the spontaneous response.

I initially relied on these responses to determine which music to use in the subsequent sessions. For example, in my journal for Molly’s first session, I note that she was more responsive to the Irish songs than to some of the Irving Berlin tunes. I played both types of songs on the accordion and the songs were similar in rhythm. If this were just a spontaneous response to rhythm, without recognition or preference, she should have responded the same for both types of music, yet she consistently moved, smiled and attempted to sing more often with the Irish songs.
A person’s spontaneous response to music can also indicate states of perceptual awareness as well as recognition. Sadie, for example, consistently “conducted” and then put out her hands, as if to say “the end” at the end of the songs. She did this from the very first session. This action did not occur before a refrain, but at the end of the song just as I stopped playing. For her to do this she needed to not only recognize the song, but also know where it ended. There was also the possibility that her sense of the music was so strong that she could anticipate my cadences.

Some responses were not as overt. There were several sessions when Carmen was very tired and displayed almost no response. On closer observation, however, I could see that her breathing was synchronized with the rhythm of the music. Whether or not this was a conscious response is difficult to discern. There is evidence in the literature that music has an effect on neurovegetative states (Koepchen, Droh, Spintge, Abel, Klussendorf, & Koralewski, 1992). The entrainment of breathing with musical rhythm is representative of this phenomenon. Although she appeared to be asleep, her synchronized breathing indicated some level of attention.

At times, spontaneous responses may reflect a neurologic problem. During my second session with Carmen, as I played the song “Amor” on the accordion, she suddenly interrupted and declared “AMOR!” while reaching her hand to her forehead. She then remained frozen in this position for several minutes. Because she did not have Parkinson’s disease, according to her medical
records, her responses puzzled me. I have often observed similar behavior in some of our residents with that diagnosis. Concerned about what this behavior may have indicated for Carmen, I relayed this observation to the attending physician. It was possible that some of her medications were causing this type of side effect.

Spontaneous responses may be limited by previous experience as well. I recall a story that a student once told to me. She was starting a music therapy group in a private senior residence. Although she tried to be engaging in her musical interactions, the participants all sat very still with their hands folded on their laps until the end of each song at which time they quietly applauded. She thought she was a failure; the participants thought they were at a recital. One’s learning and expectation in a given situation can greatly influence how one responds in a similar situation in the future. As one gets older, these reactions become a part of one’s personality. Rose, for example, did not move to the music in any of our sessions. During the sessions, I tried to engage her in playing the large bass drum which she enjoyed. Her musical response was the same all the time. She played the rhythm to “Shave and a hair cut” no matter how hard I tried to introduce a new pattern. She also played the rhythm to her favorite song “I Don’t Know Why I Love You Like I Do.” Despite her stereotypic rhythmic responses, she was able to tell me that the melodies she attempted to play on the piano did not sound right.
Other spontaneous responses indicated awareness of the type of song. In my fourth session with Molly, I played “Wearin’ of the Green.” She immediately picked up the hem of her dress and lifted it up and down in time to the music as if she were dancing a jig in her wheelchair. Her characteristic movements of dancing to a jig, i.e., holding up her dress and moving her feet up and down, indicated this awareness. These responses were limited to the jigs and did not occur with other fast tempo songs. At other times, she exclaimed “Whee!” or “Hooray for us!” at the end of the jig.

It is possible for the therapist to use these spontaneous responses to draw the individual further into the music therapy experience. For example, as Molly or Sadie moved (danced or conducted) to the familiar songs, I accentuated the rhythm as I played to encourage continued physical engagement. This long engagement not only helped to maintain each participants’ attention but also caused an emotional release such as “Yeah!,” “Whee!,” and in Sadie’s case, an “OK” sign.

**Familiarity - Security**

Each participant showed an increase in familiarity with me over the course of the eight weeks. This increase in familiarity was also a indicator of memory function as each participant recognized me as someone that they had met before. As each participant became familiar with me, they appeared to be more secure. Lucann Bailey (1984) spoke of songs providing a sense of security to patients
within the therapy process. I believe the familiar songs did help contribute to this process and helped establish a sense of trust. Music provides structured reality, order, and predictability. It brings something familiar to the environment (Clair, 1996).

With each participant, especially in the first few sessions, I used their preferred music to provide familiarity and encourage their responses. As time progressed, their sense of security, and their ease in relating to me also improved. With the increase in familiarity and security came recognition and trust.

Molly showed her first sign of recognition with me by the fourth session. I went to pick her up on the unit and she waved to me when I entered the day room. Not only did she recognize me within the music therapy sessions, but Molly was able to carry over this recognition outside of the music therapy situation.

Familiarity does not come immediately in working with persons with dementia. It is something that needs to develop. Sadie was aware that she did not know me, yet as time went on, told me that she was happy I was there. After eight weeks though, she was able to recognize me by name and associated me with the music when she saw me on her unit.

The sense of familiarity may be there although the person may not know why. This is an example of implicit memory described earlier. Rose and I had a few contacts with each other prior to this study. On the day of our first session together she realized that I am familiar but could not remember how she knew me.
As soon as we played music together she remembered that we had done this once before. The context of the experience had aided in her recall of our previous meeting.

**Melodic Memory and Recall of Lyrics**

All the participants, from the very first session, seemed to know the melodies to most of the familiar songs. This was evidenced by their singing on single syllables, or singing some of the lyrics. By the last session they were able to recall many of the lyrics. In several instances the participants demonstrated memory of the songs by singing lyrics, yet they verbally stated that they did not know the song when given the title. This is similar to the findings reported by Bartlett and Snelus (1980).

There was an observable progression of skill from first session to the last in regard to recall of melody and/or lyrics to the familiar songs for each participant over the course of the eight weeks. There was also a demonstrated increase in perceptual awareness.

From her first session, Molly sang just on single syllables or on the last phrase of a song, e.g., “my fair lady” at end of “London Bridge.” I needed to sing the lyrics with her to cue her to sing the words. Her melodic memory was intact for the familiar songs and remained intact for all the sessions. Her recognition of the melody with just of few notes as a cue became stronger as the sessions progressed also. After several weeks she sang parts of the refrains of songs and
then the first line. By the last few sessions she was singing complete lyrics to “An Irish Lullaby” and most of the other songs.

Sadie was also able to sing on single syllables from the first session. She only sang fragments of the lyrics. However, as the sessions progressed, this skill also improved. In the first session, she sang parts of “Oif'n Pripetshuk” along with me and obviously knew the melody and lyrics, although she could not recall the title of the song. It is only after I stated the title that she acknowledged, “I know.”

There are times when a person with dementia compensates for their poor memory by giving a characteristic response. When Sadie said “I know,” I wondered if she actually recognized the title. To see if this were the case, I played another song, “Let Me Call You Sweetheart,” which was a popular song that most people her age know. I asked if she knew it. She gave no verbal response at all. Recognizing a song by title or by melodic line seem to be two different cognitive tasks and may be indicators of different levels of neurologic function and deficit.

Rose and Carmen did not show as many cognitive deficits as Molly and Sadie. This was evident in their memory and recall of the melodies, lyrics, and titles of familiar songs. All I needed to do was play the first three notes to “I Don’t Know Why I Love You Like I Do” and Rose would immediately show recognition by singing the lyrics. Her rhythmic perception was excellent as well, but only when it followed the lyrics. For example, when I played “I Don’t Know Why I Love You Like I Do” on the piano, she watched my hands intently then
played the rhythm correctly - I don't know why - I love you like I do, with the exact tempo and spacing between words. Without the melody as a cue, her rhythmic response returned to “Shave and a Hair Cut.”

Rose and Carmen’s higher cognitive skills were also evident in their ability to sing the lyrics when just the title of the song was given with no melodic cue. Rose, many times, would confuse the lyrics of one song to the song she had just heard. This happened in our second session when she sang the words “I don’t know why” to the melody of “There Goes My Heart.” There were other times when I would play a song and she would fill in with lyrics reflecting her thoughts or feelings. For example she sang “I Love, You Always” to the melody of “You Made Me Love You” and laughed when she realized what she said.

After four weeks, Rose was able to correctly name the title of some of the songs when I just played a few notes. By the fifth week, I noted that she was able to sing a song when only given the title without any musical cue.

All participants were able to convey the sentiments of the songs they were familiar with whether or not they recognized or remembered the lyrics or the song title. Sadie, for example knew that the song “Bashana Habaha” was about Israel. Carmen was able to translate the lyrics of the songs from Spanish to English and then describe what the songs meant. She demonstrated much higher cognitive skills in some areas than the other three participants, nevertheless, Carmen also had severe cognitive losses.
The preservation of musical function was similar in these participants to responses of normal college aged subjects and healthy elderly described previously in the literature (Crystal, Grober & Mazur, 1989; Crowder, Serafine & Repp, 1990; Sloboda, 1989). There may be a hierarchy of musical ability somewhat like the developmental stages of Piaget (1936). The following is an ordered list of the more frequently observed responses as presented by the participants. The best preserved skill, i.e., the skill most observed in all the participants, was the rhythmic responses to the music. The most difficult task, i.e., the skill that was least demonstrated, was the ability to name a song title when given just the melodic cue. The list goes from the response seen most often to the response observed least often during the initial sessions. As the sessions progressed, the skills toward the bottom of the list were observed more often.

1 - Rhythmic responses i.e., clapping, moving
2 - Displaying recognition for a melody through facial expressions
3 - Singing the opening melody or part of the refrain or the ending melody on a single syllable
4 - Singing the complete melody on a single tone
5 - Singing the opening lyrics
6 - Singing the lyrics to the refrain
7 - Singing the complete lyrics
8 - Recognizing a song title when the melody is played
9 - Recognizing a song title when it is spoken
10 - Naming a song title when given the melody
This was the progression of improvement I observed based on the various responses of each participant over time. Each of the above represent different levels of cognitive skills. Each of these skills may be partially or completely lost with damage to a specific part of the brain. For example, a person who suffers a stroke in the right temporal region of their brain will not be able to sing a melody.

It is important to be aware, however, that the above is based only on my observations with four individuals and should not be generalized. Sloboda (1985) cautioned that one of the major problems in studying the effect of brain damage on musical skill is that the level of skill prior to damage can be varied (p. 262). Each of these participants may have had varying levels of musical awareness prior to their dementia.

There have been some questions raised in language studies regarding the regression of language skills in older adults mirroring the acquisition of these skills in children (Kemper, 1992). It would be interesting if the same developmental pattern held true for musical functioning.

**Increased Word Finding**

Speech and singing are different in regards to neurologic processing. Some of the language problems I observed in recognition and retrieval of lyrics were different from the language problems evidenced in conversational speech. Each person showed semantic impairments as well as problems in word retrieval and conversational speech. As the sessions progressed, increased word finding
was demonstrated in each person’s ability to sing more words to the lyrics of the
songs, to use more appropriate words to describe objects, and to converse
appropriately.

In this section I will focus on each participants’ improvement in word
retrieval and conversational speech. In particular, I will describe how music could
be used as a cue for retrieval of specific words.

Nebes (1992) suggested that the semantic - memory system of those with
Alzheimer’s type dementia suffers from possible breakdown of the associational
links between concepts and their specific attributes or properties. This happened
to some degree, for example, when Rose mistook the plants on my windowsill for
people. However, in this study, as the sessions progressed, I observed several
occasions when a specific song aided in the recall of a related word or idea. This
happened with Molly in our fourth session with the song “It’s a Long Way To
Tipperary.” Although I played the song in the preceding sessions, this was the
first time Molly sang some of the lyrics. In the first session she cried a little when
she heard this song. I did not play it in the second session, but did play it in the
third session and she laughed when it ended. In the fourth session she sang with
me at “good-bye Piccadilly.” Because she was so responsive and maintained eye
contact with me, I continued to play another verse to keep her engaged. At the
end she commented “That’s nice.” This was the most coherent and connected
Molly had been in a session. I took this opportunity to ask her some questions
about herself.
C: Molly where are you from?

M: Me? From Dublin? (Her hospital records had stated that she was from England so I asked her)

C: From England?

M: She looks at me "Oh England" and mumbles a few words.

C: I realize that she sincerely means Ireland so I ask "From Ireland?"

M: I was born there.

C: Where was everyone born?

M: County Cork

C: Do you know where Dublin is?

M: Oh, easy to get to - nice little town.

C: Ever go to County Cork.

M: Beautiful

Prior to this session Molly was only able to tell me her name. She could not answer any questions about her past. Yet, in this session we were fully engaged in a meaningful exchange about her birth place. The song connected her to a thought and she was able to maintain it for a short while. After the session, I spoke to Molly’s son about her place of birth. He said that she was born in Ireland although she moved to England as a young child.

There were observable improvements in Sadie and Rose as well. Each started to speak in more complete sentences as the sessions progressed.
Rose's conversational speech improved tremendously. Her comments were more focused. She would often say "Whatchamacallit" when she couldn't think of a word. For our first three sessions she had trouble remembering the word piano even though it was the focus of many of our sessions. At the beginning of our fourth session, though, she stated the word clearly "When you were here and I was here and you were playing the piano."

In our second to last session she again had a hard time recalling the word piano.

R: For a while I wasn't feeling well. For a while. And ah, then I got a little better, and then I think the second time I came here, the second or third time that I came here with the, you know, ah, I forgot what's the name of this, a name (points to the piano)

C: You said it before.

R: Huh?

C: You said it before when you came in.

R: Oh I did? What did I say?

C: Well what is it called? (I point to the piano)

R: Huh?

C: What is it called?

R: What was it called?

C: What is it called? What do you call this? (I then play some notes on the piano.)

R: A PIANO! I still remember from the first time I came here I think.
As soon as I played the notes on the piano she recalled the word. Without this cue we might have continued with this circuitous conversation for some time.

**Spontaneous Recollection**

When I first thought about undertaking this study, I envisioned that the familiar songs would stimulate a flood of meaningful verbal responses in the participants. This did happen to some degree, but not dramatically. As I first started to read the transcripts, and had others read them, it seemed that the participants’ conversations with me were so unrelated, and the music so distant to what was going on in the session, that little appeared related to music and memory. Yet, as I started to group similar words or comments from the participants, I observed a connection, a train of thought. Independently, these phrases seemed to be unrelated or distantly related to what was taking place in the moment, typical of the verbal patterns of someone with dementia. Pieced together, however, the words formed a congruent whole that provided a glimpse into the thoughts of these four women.

As I processed the transcripts, and began observing more of these spontaneous “unrelated” statements, I was reminded of the writings of Wilder Penfield (1963). While performing a neurosurgical procedure on patients with epilepsy, Penfield stimulated their exposed temporal lobes with an electrode. This electrical stimulation produced apparent memories of hallucinatory or dream-like quality. Sometimes the patients would speak of “a lot of people in the room” or “a
dog is chasing a cat." Because auditory stimulation causes electrical activity in
the temporal lobes, I began to wonder if the participants’ spontaneous
recollections were triggered by the music. I discussed this possibility with Dr.
Kumar, Chief of Molecular Neuroendocrinology and Neurotransmitters at the
University of Miami, who is presently studying, with Dr. Ted Tims, Director of
Music Therapy at Michigan State University, biochemical changes in patients
following their involvement in music therapy. He suggested that my observations
may be suggestive of neurochemical activity as well, leading to cognitive
stimulation and recall (personal communication, November 19, 1997).

Each of the spontaneous recollections were triggered after listening to a
familiar song. This happened several times with Molly. In our first session, after
I played the song “London Bridge,” Molly tried to get out of her wheelchair. I ask
if she was all right and she took my hand and kissed it stating “My mother’s
home, (mumbles) the kids are there.”

In our seventh session, shortly after the session began, I played “An Irish
Lullaby” and Molly looked sad. I then played the song, “Does Your Mother
Come from Ireland” after which Molly stated “54” then “gotta have.” I played
two other songs and the Molly stated “the key” and later on “I want to go home.”
Each word came after a song. I do not believe the songs interrupted her thoughts
but rather helped her hold on to them.

I was able to converse well with Rose, yet she also displayed these
spontaneous, seemingly unrelated thoughts. In our first session, after listening to
a recording of Frank Sinatra sing “I’ll Be Seeing You,” she mentioned that somebody came to her the other day and did not remember if it were me or somebody else. She remembered the drum and I played the rhythm she played the other day “Shave and a Hair Cut.” She then said:

“Yeah I knew I heard it someplace....ni-ni-ni-ni-ght is something, a day. It was still there, it was still there with mothers and fathers and so forth and so on...just around here you know.”

Carmen was very verbal, like Rose, but her train of thought was loosely connected to the music. Each of her spontaneous recollections occurred when a song ended. During our eighth session I asked about the songs she sang as a little girl. She said “..today’s songs like you sing them now” so I played “Cilito Lindo.” There was a long pause, then she pointed to the wall:

Ca: The Christmas tree

C: Where?

Ca: Where, in the center there

C: Is it decorated?

Ca: No

There was not a Christmas tree in the room, yet she saw it. I asked if it were decorated to get more detail about the image. Several sessions after this one she mentioned that she was “Hungry for Christmas.” What was causing her to think of Christmas? She could not tell me.

In another session a similar exchange occurred. After I played the song “Amor” she nodded her head in time to music then interrupted “an extra pepper.”
The music stops. “Juan safoy” “He’s not here.” I answered. “Well he was here a little while ago.” I asked if he came to visit and she replied “did you think everybody was in the kitchen!” “They’re going to have some supper.”

All of the above occurrences are just a few samples of the many seemingly unrelated statements made by the participants. Can simply listening to a song stimulate the auditory cortex in the same way that Penfield described? If this were true it would make a lot of sense of the seemingly meaningless but still vivid images that some persons with dementia relay during music therapy sessions.

**Remembrances**

In many instances recall did occur and was seemingly triggered by a particular song, or happened spontaneously within the session. In one session, when Molly mentioned her son’s name I played the song “O Danny Boy.” Although this was not her son’s name, the song conveyed the idea of love for one’s son. At the end of the song she sang the last line and then placed her hand on her chest. After the same song, several sessions later, she not only mentioned her son’s name but stated that she had not seen him for a while. She then asked if I had seen him. Considering that she was unable to relay any information about herself in the first session, this demonstrated change in memory was remarkable to me. It is also possible that our speaking about her son in the earlier session had been paired with the song. Then in the later session this pairing came back to her
mind when she heard the song again. Because her short term memory was so poor, I doubt if this were the case; however, the possibility is fascinating.

Sadie seemed to recall more information after listening or singing the songs of Israel. Rose and Carmen appeared to have the most evidences of memory recall. Because it was interesting to observe how these memories were presented within the sessions, I have included the following examples from the transcripts of Rose and Carmen.

For Rose, the sessions evolved around sitting at the piano with me and trying to play some of her favorite songs. Her memory from session to session improved as well. She remembered the songs that we played and especially the piano. In one session after I played "I Don't Know Why," I asked her if she ever played the piano. She replied "Yeah I did but at that time it wasn't such a big, such a big, ah you know...but I don't think I have it now anymore." After a few more songs she continued her thought. "a long time ago, you know, before I went to work, you know, and ah, you know, we had a piano."

Her memory of the piano and the studio carried over from session to session. She talked about playing the piano when she was smaller. "I had a piano like that, one time." I asked her where it was and she said, "In the living room." She then said that she would have to look at it when she got back because she forgot what it looked like. "I think I always had it in my house, no my mother's house." I asked her where was her mother’s house and she replied "It was like a park or something." She remembered that she played it but could
recall only a few memories of the piano. "I know I have the same kind of color but I when I get home." I asked who else played the piano and she said she thought that she was the only one.

R: And I had this other one, and I don't know what happened to it now.

C: Well your sister Elsie said that is was at your mother's house.

R: I don't think so. Well in the first place she wouldn't know what to do with. It was in this place and she doesn't have a piano, and uh, I didn't have it either but uh I got used to it but uh I didn't really have all these. Sometimes I do it right away, and sometimes I didn't know to do it.

Rose started to remember other information about herself as our sessions together progressed, though at times she forgot that she had just seen me on her unit the same morning. She also started to remember that she was not at home and that she had changed. "Sometimes I get lonely...........Yeah, because I was the only girl in the house and ah sometimes you had to go out you'd do go out to work or someplace like that and I stay in then and then I stopped doing that little things that I, I remember (looks more serious)." I asked her what kind of things she did when she was home "At home I don't hardly do anything, on it, nothing really, unless they call me on the phone or something and want to say something and that's about it. But also may I, I'm working."

She also began to remember my name. "Connie when I was coming from the hospital I...think I know this one - (points to my ID)," "I wasn't too sure about the name...Now I am, and ah, I was thinking about you, you know? For some reason you weren't here, and I was thinking, I wonder where is Connie."
Rose continued to recall bits and pieces of the preceding sessions and of other activities in her life. She became confused, however, when she tried to integrate the past images and memories, that would spontaneously come to her, with the reality of her present condition and placement at the nursing home. This did not seem to frustrate her, but it did confuse her at times. Her memory of playing the piano became such an integral part of our sessions. It was interesting for me to learn that she only had a piano in her mother’s house when she was very young. Yet, her images of the piano were still very vivid.

In the final session Rose told me of how she was now playing the piano and everyone seemed to like it (she could only play single random notes, but the staff gave her a lot of encouragement). Her childhood memory of the piano, and whatever associations that brought to her, were still richly connected to the present and somehow became her reality in “playing” the piano every day.

I used many of the Latin songs with Carmen as a stimulus for conversations about her son or her family, her two favorite topics. At other times, though, her remembrances were more obscure. In one session, for example, she tried to tell me something about her son. She was unable to think of what it was so I played a song, “Besame Mucho” which she had told me was her son’s favorite song. She interrupted the song and stated that she wanted to hear something Jewish. She then started to talk about her son. When I asked her where he worked she said:
Ca: In New York where I work, here in a store.

C: In a store? I ask and she recounts

Ca: Not in a store, but you know where I was. I always had three chairs sitting there for for putting the buildings the bellies on them, and the, with all of those things on them you know, you know, you know.

C: What kind of work did you do?

Ca: Ay, ay....I still had, ah, to work when he came in.

C: You had to work?

Ca: No, I took over the tips for ..the chicks standing over for beer, was there you know, for instance, you have sitting along... He was always right, really. Take it and then have four children...all this talk about John and this gives me it takes a picture it makes me ill. No for him. George Gomez."

C: Who's that?

Ca: I don't know I heard them out there from the street.

Each participant presented these remembrances in a very matter-of-fact manner as if the information were easily accessible. Yet, it was often difficult to make sense of these remarks within the context of the session. It was only after reviewing the transcripts and video tapes that I could begin to see the true connections of these responses.
CHAPTER VI

THEMES

Within the sessions, and from session to session, there were recurring themes that each of the participants presented. These were also indicative of memory function but more complex than just remembering a lyric to a song or a past event of one’s life. The Themes reflect aspects of an increased understanding of self and of personal needs that are still very much present in persons with dementia despite their apparent lack of awareness. However, there is little information in the literature about self-awareness in this population.

The themes that evolved in this study deal with basic human needs. With advancing cognitive decline, the articulation of these needs may be impaired; however, the potential to express them seems very much possible as I will describe in the following sections.

Because of the subtle ways these themes presented themselves over the course of the eight weeks of this study, it was impossible for me to notice them during the sessions. It was in the analysis of the video transcripts that this became apparent to me.
One of the wonderful aspects of qualitative research is that revelations do unfold as part of the process, giving the researcher a chance to capture the reality that otherwise would have been missed.

I Know Who I Am

Self identity seems such a basic element to life that you would think this could survive to some degree despite brain injury. In interviewing each of the participants, I observed that they had difficulty remembering information about themselves. Molly had trouble recalling her name at times. As mentioned in the previous chapter, she recalled the town of her birth and several times mentioned the children. Her nonverbal responses also conveyed information about herself—that she had a warm and loving personality. This was demonstrated in the manner in which she often held my hand or patted me on the head.

Sadie was able to tell me much about her self, although this too came after familiar songs and over the course of several sessions. In the first session, when I call her Sadie, she corrected me, “Sadie Rosenstein.” She could not tell me anything else. After I played several Israeli songs and then a Yiddish song, “Tum Balalaika,” she exclaimed “I’m a teacher.” I continued to use these songs in the following sessions to encourage her to talk about being a teacher. She later told me that she was an arts and crafts teacher.

Sadie’s thoughts were often distracted by her preoccupation with her broken teeth. She only had two loose teeth remaining. No reassurance I gave
verbally could comfort her. I used the songs throughout the sessions to bring her back to the discussion about herself as a teacher. Thinking back, I might have reflected her feelings about her teeth somehow in the music, but chose to focus on more positive memories. As the sessions progressed she was able to tell me her home address and that she came from Israel. In our last sessions she recalled that she was not a teacher now. She mentioned that she was a beautiful woman and that she is not today.

Her statements always came spontaneously after a song and gave me the impression that she was recalling something. It was clear that her appearance had been an important aspect of who she was, and now her awareness of how she had changed made it difficult for her to deal with much else. Acknowledging who she once was helped in the therapeutic process and validated her as an individual.

Rose, over the course of our sessions together told me many things about herself - that she worked for her brother and then when his business stopped she worked for a newspaper, and of course, that she had a piano. The songs I played for her were often from the 1940s. In one session, after I played “Yes, Sir, That’s My Baby,” Rose sang “no, sir there’s no baby.” I corrected her and she replied “You don’t have any babies?” When I told her I was going to have one she then remarked “some of them don’t have it, some do.” What she may have been trying to convey to me was the fact that she and her husband did not have any children.

Playing the music on the piano became important to Rose. Even though she could not play any songs, she would go to the piano, during other activities on
her unit, and try to play. Although she had not had a piano since her childhood, Rose's current identity and sense of self were somehow related to the piano.

Carmen, in contrast, could tell me general information about herself, but, as mentioned previously, the music often triggered unusual images that may have been reflective of a certain aspect of her life. It was difficult for me to determine whether or not these images were related to her past. However, her recounting was quite vivid and she did, at times, provide me with more information of who she was.

Don't Leave Me Alone - Stay with Me

Besides self-identity, the need to know someone cares was also very much present in these four women. Feelings, too, are related to memories as how we feel at any moment is connected to past experiences. Damasio (1994) classified adult emotions as secondary in contrast to the primary emotions of infancy. As we develop and experience life we begin to form associations between events and life situations with certain emotions. As adults we unconsciously, or subcortically, compare what we are feeling now to all the times before when we felt the same way.

A theme that came up for each participant was "don't leave me alone - stay with me." Although not expressed from the beginning of the sessions, each person, in her own way, communicated the need to be with someone. Whether it was a simple "I'll come back again" from Molly, Sadie "I'm glad that you are
here. You're going to be the whole time with me right?,” Rose “I don't know what I'd do without you. I'll always need somebody, and I've always liked you.” and for Carmen asking if I would go back with her “Good! so I won't be here alone. You come back and get me.” No matter how confused or disoriented, this basic need was stated clearly.

To an adult, listening to music with someone is a social event. Although these patients did not know me, listening to familiar music with me somehow made me an instant acquaintance, someone with whom they felt safe. What other reason could they imagine for being in a room listening to music with me. The familiar music provided a sense of security, a sense of belonging and I was a part of that experience.

Sometimes this need was presented nonverbally like Molly’s hand holding and sometimes overtly like Sadie’s constant asking for reassurance; both extremes are possible in persons with dementia. The important fact is that these behaviors are communication as well - something that calls out for attention.

In many instances songs, in the context of a therapeutic relationship, can convey sentiments of reassurance and comfort. This was often the way I used the Israeli songs with Sadie. In one session, she was constantly asking to sit down or lie down. After I played several songs she stated “It's beautiful. I'm glad that you are here. You're going to be the whole time with me right?...well it's wonderful.” I then played “Tum Balalaika,” which is like a lullaby, and she responded “Isn't it funny. I thought I didn't really know who you are and now when I go to a new
place you’re where I go.” In a later session, after I played “Hatikvah,” she immediately responded, “I’m telling you I’m lucky today..., it hurts here and there but you’re not far away from me..., then you’ll know where I can stay and where I can go. That’s good. I didn’t know what shall I do. I’m jump through the window.” “No don’t jump through the window,” I replied. “That’s what I felt. It hurts me here and there..., I’m feeling really bad.” I offered reassurance and then played “O Say Shalom” after which she said, “You know I didn’t know that You’re such a beautiful.........All of a sudden? Sadie, arts & crafts teacher. I was a teacher. Lie down. If not you, I don’t know what I’ll do to myself. Sadie ... Arts and crafts teacher.” The music, especially the Israeli folk songs and Yiddish lullabies, served to connect her to me, and gave her comfort and reassurance that she was being cared for.

Rose expressed her need for companionship much more directly. At the end of the first session she stated that she would like to see me again. In response, I played “Til We Meet Again.” She often invited me to her house and also told me how much I meant to her. “Yeah I need you, for a long time I need you. You should come a little more often to where I live now....I have to forget where I am.........I love you.”

At times, Rose changed the lyrics of the songs to convey these feelings. For example, I played the song “I’m In The Mood For Love” but she sings, “I’m in the love with you. I do love you.”
Most of my interactions with Rose were about being together. She recognized me when I came to visit her on the unit and the staff told me that she asked for me often. Rose was involved in many other programs and received a lot of positive attention from the staff nurse and attendants, yet I wonder what is was about our interactions that made her attached to me. It could very well be the types of songs or the undivided attention, but I believe it was a combination of the type of songs and the developing relationship that made her so attached to me.

Carmen, in contrast, was more self-assured in her personality and so only conveyed this feeling to me once. She did on occasions, though, mention that she was lonely for a man. Most of the times, at the end of a session, when I told her it was time to go back, she often asked if I was going with her. “Good! so I won’t be alone. You come back and get me.” One of the songs, “Don’t Leave Without Me,” from the Edie Gorme recording, reflected this sentiment. One time after listening to it, Carmen remarked, “Don’t leave without me. Don’t go home without me....where are you going now la concita?” This need was not expressed again for six sessions, but toward the end of the eighth week, Carmen appeared very sick and her breathing was heavy. She asked me to stay with her. “We will be together right?”

I Don’t Know Why I Love You Like I Do

There are times in the therapeutic relationship that the feelings of security and companionship become stronger. In persons with dementia these feelings are
also present but often without their conscious awareness of where the feeling originated.

As each participant became more familiar with me, they each said that they loved me. Many of the songs I played were love songs suggested by the family members. It seems possible that the words of the songs could have triggered and reinforced stronger feelings of affection with me. This feeling can also be an extension of the basic need of wanting someone and having someone return those feelings. It also reflects the need for love in all stages of one’s life. Mary Priestley (1994) in her “Essay on Music Therapy and Love,” stated that “therapy is about this special way of loving, and music therapy offers the additional dimensions of subverbal communication with loving meetings via sound” (p. 119).

Though quiet, Molly was very expressive. At times, after a song was over, she would often reach to grab my hand and then kiss it, and once said “I love you.” By our sixth session she showed more affection and reached to give me a hug. She then put her arms around my neck and said “I love to see you.” There were no more verbal statements of affection but many nonverbal ones. One instance she gently held my head, brought it to her lap and stroked my hair as if I were her child.

Sadie, often used words of endearment like “Sisila” to address me and Carmen once told me, “Ok. moma, I love you, I love you.”
In contrast, Rose spoke of love in every session. Although I used love songs in sessions with the other participants, only Rose articulated her love and need for my companionship in every session. One time she explained, "I forgot, I forgot about a lot of things...You’re the only person that I really care about...love."

At times, she used the lyrics of the songs to convey these feelings. For example, in the song, "You Made Me Love You," she sang the correct lyrics "You made me happy sometimes you mad me sad" then stopped and said, "You make me happy all the time." In another session, when we sang "I’m In The Mood For Love," she sang, "I’m in the love with you I do love you." In one of our last sessions she sang "I don’t know why I love you so much, I don’t know I just do."

All the songs Rose knew best were love songs and I used these because she often introduced them spontaneously. She often kept the theme of the song and then transferred the meaning to me which was awkward at times for me, but helped Rose in regaining many social and cognitive skills.

Mary Priestley (1994) spoke of "maternal holding" offered by the therapist. "In the music the therapeutic couple can partly revive the memories of the emotion and kinesthetic awareness surrounding the preverbal communication of the earliest stage of life, with its mysterious loving and incubating qualities" (p. 120). Allowing these feelings to be stated without judgment, on my part, validates each person's self-expression. Naomi Feil (1982) stated that "Early
learned emotional memories replace intellectual thinking in the disoriented old-old. When emotional memories are validated, the old-old person regains dignity......to validate is to say that their feelings are true” (p. 1).

What’s Wrong? What’s Wrong With Me?

There are moments of disorientation in everyone’s life. Waking up in a strange place, for example, can be confusing for a few minutes, until the reality of the situation comes to mind. The feeling that something is different without the understanding of why is a constant reality for someone with dementia.

Each participant had the realization that they were no longer the same, that there had been a change. Although this awareness appeared transitory, it provided a glimpse of the struggle that these women must have been going through. The theme, “What’s wrong with me?,” became apparent as I analyzed each of the music therapy sessions.

Sometimes this awareness is presented nonverbally. Molly, because of her severe level of dementia, did not ask outright “what is wrong with me?” but demonstrated this with her worried look and the amount of fidgeting that she did. I had the impression that this was not from physical discomfort but rather from a general sense of uneasiness. Something as simple as a pair of new shoes caused Molly to fidget in many sessions. During the sessions she would bend over and attempt to touch the shoes. It was not until the last session that she could tell me, “Shoes, not mine.” She had had no memory of being fitted for the shoes. When I
realized what had happened, I told her that the shoes were made for her and that she did not need to worry about them. She exclaimed "Yeah!" and laughed. She was glad that I had finally acknowledged her distress and clarified how she got the strange shoes.

How frustrating both for Molly and myself. I could not help her because I did not understand what she was trying to tell me. She knew something was wrong but probably did not recognize the shoes nor remember being fitted for them.

Rose and Carmen did not display any anxiety about their changes. Their awareness about something being different came during the last sessions. Rose stated "I don't know just where I am anymore. I don't know. I don't know what's happening to me lately." Carmen joked, "I'm crazy, yeah, koo, koo, nuts. Everybody has some part of koo-koo in them." Each of these remarks were presented matter-of-factly with no evidence of worry.

Sadie's principal theme could be "What's wrong with me?" She was so absorbed by her physical changes, especially her teeth, that it precluded any response to the music. "What's the matter with me?" she often asked. "Why am I sick.......all I can do is lay down, sit down and walk around." In later sessions she was able to state, in broken phrases, that something was bothering her. She mentioned that she was once a beautiful woman but not today and near the last session stated, " I don't know I'm not the same as I was." She seemed aware that
she was different and yet, in one of the later sessions asked, "What happened to me anyhow?" "How long have you been sick?" I asked. "No? I was sick?"

In all the participants, the awareness that something was wrong or different with them came after several sessions. I believe this growing self-awareness was triggered by their involvement in music therapy. I have observed this in another study (Tomaino, 1996) as well. In that study, it appeared that as cognitive functioning, in terms of self-awareness, improved in those with severe dementia, the level of their agitation increased. Those who were higher functioning improved in many areas of their experienced quality of life and showed a decrease in agitation and depression. These findings made me aware of need for caregivers to be sensitive to a person’s potential for improvement. If improvement in self-awareness will increase the feeling of “something not being the same” without providing any sense of comfort, is it appropriate to encourage this awareness in the first place? This is an important issue to consider as more special care units are designed for the increasing number of people with dementia entering long term care facilities.

Did You Just Say What I Think You Said?

The participants had many evidences of cognitive problems that sometimes led to misunderstandings and miscommunication during the music therapy sessions. This was not always the participants’ problem, but often my inability to understand what they were trying to tell me. Communication
problems occur when there is misunderstanding, not necessarily when there is a language problem. In order for a therapeutic interaction to be successful, both the therapist and the patient need to understand each other and find a means to communicate. In working with persons with dementia this can be challenging because of the number of perceptual and cognitive deficits that do exist. The therapist needs to learn each individual’s “language,” both verbal and nonverbal, to better interact with them.

As I processed the transcripts, I began to realize how many times I misunderstood what one of the participants was telling me and in doing so changed the course of the interaction. Although people with dementia do tend to substitute words, this may not always be the case. When Molly asked me if I had a little doggy, for example, I thought she asked me if I was having a little baby. I said that I was, but in the next session she asked about the doggy again. When I reviewed the videos I heard a sound in the hallway that could have been mistaken for a dog’s bark. She was obviously responding to a real event yet I perceived her response in a different context.

There were times when the participant clearly asked the right question which I answered without realizing the hidden, unspoken question. This occurred in the following exchange with Sadie:

\[ S: \text{What do I do sit down?} \]

\[ C: \text{You are sitting down.} \]

\[ S: \text{Walk around?} \]
C: No you can't.

S: Why can't I walk around.

C: Because you are sitting down.

S: Because I'm sitting down so I can't stand up?

C: No

S: But I don't understand.

In reviewing the transcripts from that session I note:

"When I reread the transcripts of this session I feel so badly because I missed so much of what Sadie was trying to say and in doing so added to her confusion and frustration. She starts by asking... I play another song and she rubs her stomach... She leans forward and pulls at her seat belt. 'This, this. I cannot walk' I realized then that she was making reference to being restrained in her chair. That's why she couldn't walk or lie down and yet my misunderstanding created a nonsensical verbal exchange."

For Rose misinterpretation is a real issue and I am aware of it from the first session. In one session, when I sing "there goes romance" she starts to laugh because she heard me say "I lost my pants."

Some of this may be an indication of poor hearing as well. My voice tends to be soft and I realized that several times Rose could not hear what I was saying. More often her problem was in interpreting words out of context. I began to notice that there was a problem because she made these mistakes when she read something. In the last session, for example, she had a piece of paper on her lap. The unit nurse had written her name on the back of it. On the front side was the printed agenda from a staff nurse conference. Rose tried to read it to me.
"Emergency Care Profile for Nursing. I'm not nursing anyone." She did not understand what the paper was for and consequently interpreted all the words in regard to nursing an infant. Without the correct mind set, she continued to misinterpret the text until she finally exclaimed that the whole thing did not make any sense. She often misread the lyrics to songs as well. If she did not know the melody, the words became a jumble of senseless phrases. Sometimes she merged two lines making the lyrics again meaningless.

Carmen presented a different type of problem. Because she had very good conversational skills it was hard to determine her level of dementia. She was able to converse sensibly and interacted well with the staff and residents. Yet, at times, I observed clearly that she tended to merge ideas or go off on a tangent. In one session for example, she noticed the Metropolitan Opera poster and asked "What's that? A parade?" I then played "DeColores" and asked her what the title meant. She replied "Ahah! They got the opera in the colors and that's what." She was still thinking about the poster and combined it with the song.

Once when I asked her my name? "Colaguapa!...I'm kidding I know its Connie." Colaguapa is what the word sounded like, but, if she said "ola guapa" which means "hello pretty woman" then it would of made sense within the context of our exchange. However, when I did ask her what "Colaguapa" meant she said "Sarah has a car and she has the stuff to run it." Another time she looked at my desk and said in Spanish "la luna hecha de queso" (the moon is made of cheese). When I asked her to translate she said, "My son. Ah I really
don't know they're crazy you know. The whole bunch of you is crazy. Mira me
vien una aquacate en gonchauto!” Loosely translated means -Look at me good,
an avocado stew.

The above examples demonstrate the need for a greater understanding of
the language problems and miscommunication that may occur when working with
this population. It is obvious that this is not an easy task due to the cognitive,
perceptual and semantic problems that people with dementia may exhibit. Yet, an
awareness of these issues is essential to insure the effectiveness of any therapeutic
interaction.
CHAPTER VII
SUMMARY AND DISCUSSION OF FINDINGS

This research project was a qualitative study of the effects of using familiar music to stimulate preserved memory function in persons with dementia. It is obvious that the analysis brought out much more than that. Music memory is still preserved in those with dementia despite language deficits and other cognitive problems. The themes presented personal issues that are still very real for those with dementia yet rarely addressed in the literature.

Although the music did elicit memory responses it also helped build relationships and gave me the opportunity to understand better the day to day life struggles of someone with dementia. The sense that life is different, but you cannot tell why. The fact that your room looks different, and you cannot tell why. The fact that bits and pieces of your life unfold before you without warning and you cannot make sense of it all. These are constant issues that someone with dementia lives with day to day.

Music is very individualized and this study represented only four women’s responses to familiar music; yet some generalizations can be made that have also been supported by other related research (Bartlett & Snelus 1980; Clair, 1991; Tomaino, 1996). Familiar music does trigger emotional responses, be it crying,
laughing, or exclamations. This was obvious from the very first sessions.

Spontaneous movement is also possible and can be encouraged to draw the person
closer into the musical experience. These findings support the fact that auditory
processing has strong connections to subcortical areas involved with emotions and
associative areas as well. This in many ways reinforces the concept of using
music as a retrieval cue, a concept discussed by memory theorists (Balch,
Bowman, & Mohler, 1992; Balch, & Lewis, 1996; Levitin, & Cook, 1996; Rudy,
& Sutherland, 1994). Much of what I observed in the participant’s verbal
responses immediately following a familiar song could be identified as associative
memory. Using the right retrieval cue with a strong association to the target
memory can cause a memory to be called into consciousness.

For each participant several abilities improved over time. All books about
dementia speak of the progressive nature of the disease which is definitely true.
However, I have found in this study, and in another recent study (Tomaino, 1996),
that improvement is possible in many areas. If this is so, what does this say
about the rapid decline in cognitive function that is normally observed?
Moscovitch and Wincur (1992) have shown that environmental influences and
psychological factors can significantly affect cognitive function in old age. Does
this hold true for those with already progressed impairment? Was the sensory
stimulation and the caring individual attention each participant received in the
course of eight weeks enough to improve their functional status? If this type of
intervention is provided early on, can the progression of dementia be slowed
down? These are all questions that need further exploration. What can also be said about music processing and its connection to other cognitive skills? There are several studies on the effects of listening to music, especially Mozart, on learning in children (Rausher, Shaw, Levine, Wright, Dennis & Newcomb, 1997; Wolfe & Horn, 1993). If learning is heightened by music and if musical skills are better preserved, as in the cases of the musicians with AD, is music a better cue for mental functioning? Does music help better organize thought processing? These are all questions that one needs to ask given the responses observed in this and other studies.

The process of this study also increased my own insights into how I work with people with dementia. In my clinical work and research, my main concern is with the individual, who they are, and what music best exemplifies their history. I then use this music to connect to the person to provide a feeling of safety and familiarity. I prefer playing the music live as I can change from song to song and adjust the tempo to meet the person where he or she is during the therapy session. I reflect what he or she says in order to offer confirmation to his or her meaning.

Based on the discussion presented in the preceding chapter, it is obvious that miscommunication is a real problem when working with people who have cognitive impairments. Not only must you be clear in expressing yourself, but you must be sure that what you think you heard is what the person was trying to communicate. In working with persons with dementia or any patient, clarifying
communication is essential. It also becomes somewhat of detective work as you never quite know what may have triggered the verbal response.

Throughout the sessions and in all my work, I find that I often automatically repeat what someone says to me. I notice that I also do this with my four-year-old daughter almost unconsciously. Again, if you misinterpret and reflect the wrong phrase or meaning you can create a lot of frustration for the person who is trying to be understood. My four-year-old will yell, “NO mommy!!” but persons with dementia will become anxious or be led into a meaningless conversation which you have just created.

In clinical work with verbal clients, one may reflect back what you, as the therapist, thought the client meant. This is similar to member-checking which is an important method in qualitative research. However, when you work with someone with dementia, it is not always possible to have this kind of exchange. By reflecting words or confirming an observation, no matter how simple, I found that I was able to bring myself closer to each of the participants. Molly, for example, often played with the hem of her dress. Because she did this often, it looked like a perseverative movement, typical in many people with dementia. When I asked her what she was doing with her dress, however, she stated that she was gathering it. I realized that she was “sewing” the hem on her dress.

Sometimes, this reflection and confirmation was nonverbal on my part. When Carmen or Molly exhibited sadness or discomfort, I would change my facial expression, nod my head, and touch their arm to let them know that I was
with them. At other times the reflection was musical. Many times I played lullabies for Sadie when she seemed to be uncomfortable, whereas I played Irish jigs for Molly when she appeared to be feeling well.

There are many losses and problems presented by persons with dementia. Communication is often one of the most difficult because first the therapist needs to understand what the patient is saying and second the patient needs to understand what is being said. By being aware of the semantic problems, by reflecting what the person is trying to say, and by validating any thoughts, you may be able to get closer to the truth. Some truth is communicated, and over time each person - therapist and patient - gets a better sense of each other.

Many times words are not possible or effective. When a person was non-responsive or asleep, I provided tactile cueing to reinforce the sound of the music. The type of music was essential and the more personal the music, the better the responses. This way of interacting, along with the use of familiar music can positively effect change in those with dementia.

In reviewing the responses to music and the changes over time I observed in this study, I am reminded of some of the neural network theories which speak of neural plasticity and areas of convergence (Damasio 1994; Rose 1992).

Somehow, somewhere, there is a link to preserved function if the right set of circumstances or the right stimulation is provided. Familiar music can be a powerful stimulus because a song can be an engram, a code, a representation of a piece of one’s history. Despite the cognitive deficits in these four women, I still
observed intact personalities and function that improved to some degree during
the course of the music therapy sessions. Oliver Sacks, during one of our walks in
the Botanical Gardens, explained that everything that we experience as adults has
some link to a memory of the past and even a seemingly unrelated piece of music
can have rich association. He mentioned how a work of a contemporary piece of
music brought back vivid recollections of his trip to Guam and Micronesia. He
realized later that he had listened to this recording often during the period
immediately following his travels (personal communications September, 1996).
In the same way all of the songs I used in the sessions represented something to
each of the woman with whom I worked. At times I consciously chose a song
such as “Oh Danny Boy,” to connect to Molly’s talk about her son, but at other
times the songs were just played because I knew each person had had some
connection to it. I could not anticipate the responses or outcomes I received. In
the process of the preceding analysis and discussion, I have tried to give some
meaning to them.

The following summaries can be made on the basis of this analysis.

Physical Responses

Even at the most basic level, people respond physically to music. This is
an underlying premise in music therapy but interesting here because even when
there seemed to be no response, no awareness, like the times that Carmen was
asleep, there was musical movement - her breathing in time to the songs.
Familiar Music

Familiar music does serve as a catalyst to disclose past associations. Molly’s connection to Ireland, Sadie’s connection to Israel, and Rose’s memory of the piano in her mother’s living room all demonstrate that the music was needed to access these associations.

Familiarity and Security

Persons with dementia need familiarity and a sense of security. Familiar music can provide this and helps to improve trust within the therapeutic relationship.

Melodic Memory

Melodic memory is better preserved than memory for lyrics or titles. In all cases the melody was preserved even when none of the lyrics were remembered. The lyrics that were remembered tended to be opening or closing phrases or refrains of the songs.

Word Finding Capabilities

Despite impaired verbal skills, persons with dementia can improve their word finding capabilities through association. Each woman improved in her ability to sing complete lyrics to songs that she began to recall with each successive listening to the tunes. Recall of names, or improvement in semantics, was also evident in the course of the eight weeks of this study.
Lost Memories

Many seemingly lost memories still exist and can be stimulated with familiar music. The stream of consciousness, the random words, the visual images all were presented at the end of a song. As the sessions progressed, some of these thoughts became more coherent.

Intact Memories

Persons with dementia still have intact memories which often cannot be retrieved through verbal means alone. In several instances I show that the participants could remember information better after a song was provided as a cue. This was most evident with Molly where the songs allowed her to talk about where she was born, remember her son’s name, and even recall her own name.

Language

Language issues such as mishearing and tangentation need to be addressed in clinical work. In working with this population one must be aware of the semantic and cognitive problems that are present and how these may be presented in the clinical interactions. Misinterpreting the meaning of what someone is trying to communicate can only serve to further isolate them from meaningful interactions.
Self-Identity

Despite dementia, the need to retain a self-identity is ever present. Be it the nurturer like Molly, who cradled my hand and head, or Sadie the Arts and Crafts teacher or Rose, the piano player, each woman held on to this identity which needed to be reinforced and acknowledged.

Love and Companionship

The need for love and companionship are very real for persons with dementia. Loneliness was expressed by each of the participants. Knowing that someone is there to spend time with you, to visit, to share an experience, satisfies one of the most basic human needs.

Awareness

Persons with dementia are aware at some level that something is wrong with them and need comfort and reassurance to reduce anxiety. Much of this anxiety is exhibited in the perseverative behaviors such as fidgeting or calling out for attention. Sadie, for example, who is so focused on her broken teeth, responded to my reassurance and eventually was able to engage in more meaningful dialogue.

These findings are important not only for the music therapist but for any professional or caregiver working with persons with dementia. I have already asked many questions that arose after completing this study. There are still others
I am reminded of. To what extent was the familiar music a factor in reminiscence? If I had just met with each woman and spoke to them would they have been able to tell me anything about themselves. Mary Priestley (1994), as I mentioned before, spoke of music providing a sense of “holding” and comfort and Naomi Fiel (1982), in her validation therapy technique, stated that music stimulated group cohesion and feelings of well-being for the “old-old” persons with whom she worked (pp. 6-7).

I truly believe that the familiar music had an integral role in all that unfolded within the sessions. I know that the rigorous process of analysis and the qualitative research methods applied here have further opened my mind to the challenging nature of music therapy work with persons with dementia and has given me a real appreciation for the science of this method of inquiry. It is essential that further research in preserved memory function in persons with dementia is undertaken, especially in regard to music and memory, as there is still much to learn.
BIBLIOGRAPHY


**Style Manual**

APPENDIX A

SONGS

**Songs for Molly**

*Molly Malone:* traditional ©1978 Robbins Music Corp.

*When Irish Eyes are Smiling:* words by Chauncey Olcott and Geo.Graff Jr.,
music by Ernest R. Ball ©1912 M. Whitmark and Sons renewed by
Chappell & Co., Inc.

*Yankee Doodle Boy:* words and music by G.M.Cohen ©1948 Jewel Music
Publishing Co., Inc. And Harrison, Music Corp. New York

*Its a Long Way to Tipperary:* - words and music by Jack Judge and Harry
Williams © by B. Feldman and Co. London. Renewed by Chappel and
Co., Inc.

*Let Me Call You Sweetheart:* words by Beth Slater Whitson, music by Leo
Frieman ©1910 Shawnee Press, Inc.


*Immaculate Mary:* - Lourdes hymn by Jeremiah Cummings 1814-1866 ©Grenoble
1882.

*London Bridge:* traditional

*Sweet Rosie O'Grady:* - words and music by Maud Nugent © 1978 Robbins Music
Corp.

*O Sanctissima:* traditional

*A Bicycle Built for Two:* ©Hal Leonard 1981

*Wearin' of the Green:* - traditional Irish
I'm Looking Over A Four Leaf Clover: words by Mort Dixion, music by Harry Woods ©1927. Renewed 1954 Fred Ahlert Music Corp. on behalf of Olde Clover Leaf Music.


My Wild Irish Rose - words and music by Chauncey Olcott © 1978 Robbins Music Corp.

Did Your Mother Come From Ireland: words and music by Jimmy Kennedy and Michael Carp ©1936 World Copyrights, LTD. renewed Chappell & Co., Inc.

Danny Boy - Adapted from Old Irish Air by Fred E. Weatherly words by same.

Always - words and music by Irving Berlin.


My Bonny - traditional

Harrigan - words and music by George M. Cohen © 1968 G. M. Cohen Music Co.

‘Til We Meet Again: music by Richard Whiting, words by Raymond B. Egan.

Baby Face: words and music by Benny Davis and Harry Akst ©1926 B&G Akst Publishing Co. and Benny Davis Music

5 Foot 2, Eyes of Blue: words by Joe Young and Sam Lewis, music by Ray Henderson © 1925 Leo Fiest, Inc. renewed 1953 Warock Corp.

Peggy O’Neal: words and music by Harry Pease, Ed. G. Nelson and Gilbert Dodge ©1921, renewed 1949 Leo Feist, Inc.

Songs for Sadie

*Tum Balalaika* - A.Bitter ©1940

*Shein vi di L'vone* - music by Joseph Rumshinsky, words by Chaim Tauber, ©1938 Henry Lefkowitch, NY


*Hussen Challa Mazeltov* - traditional Hebrew

*Tzena:* words by Issachar Miron (Michrovsky)

*Merry Widow Waltz:* Franz Lehar

*Bashana Habaha* - traditional Hebrew

*O say Shalom* - traditional Hebrew

*Poi lastika poi* - traditional Russian

*Hava Nagila* - Jewish folk ©1971 Chappell & Co., Inc.

*Haktikvah* - Jewish folk ©1971 Chappell & Co.

*Raisons and Almonds* - Rozhinkes Mit Mandlen - words and music by Abraham Goldfaden © 1880 same.


*The Anniversary Song:* words and music by Al Jolson and Saul Chaplin © 1946 Mood Music Co.


*Thoses Were The Days:* words and music by Gene Raskin ©1962 & 1968 Essex Music, Inc. NY


Chag Purim: traditional Hebrew

Gold and Silver Waltz: Franz Lehar © 1978 Robbins Music Corp.

Songs for Rose

I'll Be Seeing You - words and music by Irving Kahal and Sammy Fain © 1938 by Williamson Music Inc. Administered by Chappell and Co.

I Love You - words by Harlan Thompson Music by Harry Archer © 1923 Renewed 1951 Leo Feist, Inc.

Without A Song - words by William Rose and Edward Eliscu Music by Vincent Youmans.

I'm Always Chasing Rainbows - words by Joseph McCarthy, music by Harry Carroll © 1918 renewed 1946 Robbins Music Corp.

I'm Through With Love - words by Gus Kahn, music by Matt Malneck and Fud Livingston © 1931 renewed 1959 Metro-Goldwyn- Mayer, rights through Robbins music corp.

You Made Me Love You - words by Joe Mc Carthy, music by James V. Monaco ©1913 Broadway music co. renewed 1941 Edwin H. Morris Co.

I Don't Know Why I Love You Like I Do - words by Roy Turk, music by Fred E. Ahlert ©1931 and renewed 1959 Cromwell Music, Inc. NY.

'Til We Meet Again - words by R.B.Egan, music by Richard Whiting.

There Goes My Heart - words by Benny Davis, music by Burt F. Bacharach ©1964 by Anne-Rachel Music Corp. Blue Seas Music, Inc. and Jac Music and Co. All Rights administered by Chappell & co.

Heart and Soul - music by Frank Loesser
Gimme A Little Kiss - words and music by Roy Turk ©1926 and renewed 1954 Cromwell Music, Inc. and ABC Music Corp. NY, NY.

Fur Elise - Beethoven

Over There - words and music by G.M.Cohen © 1917 renewed 1945 Leo Feist, Inc.


You Made Me Love You - words and music by Joe McCarthy, music by James V. Monaco ©1913 Broadway Music Corp. Renewed by 1941 Edwin H. Morris Co.

I'm In The Mood For Love - words and music by Jimmy McHugh and Dorothy Fields ©1935 renewed 1963 Robbins Music Corp.


Songs for Carmen

DeColores - Spanish folk

Amor - music by Gabriel Ruiz

Cilito Lindo - Spanish folk

Pescador De Hombres (Lord You have Come) Cesareo Gabarian ©1979 OCP Publications

Besame Mucho - words and music by Consuelo Velazquez © 1941 by Promotora Hispano Americana de Musica.

You Belong To My Heart - words and music by Agustin Lara English lyrics by Ray Gilbert

Green Eyes - Spanish Lyric by Adolfo Utrera music by Nilo Menendez © 1941 Peer International Corp.
Spanish Eyes - words by Charles Singleton and Eddie Snyder, music by Bert Kaempfert © 1965 renewed 1994 Edition DOMA Bert Kaempfert

Guananamero - Spanish folk

Cuatro Vidas: Peer International Corp, BMI

Mas Amor: words and music by Steve Lawrence and Eydie Gorme, Westside Music inc. BMI

Luna Lunara: Peer International Corp, BMI.

Desesperadamente: Peer International Corp, BMI.

Roman Guitar: Alfred Music Co. Inc. ASCAP.

No Te Vayas Sin Mi: Edward B. Marks Music Corp. BMI.
APPENDIX B

RECORDINGS

Naomi Shemer Sings Her Famous Jerusalem of Gold. Capitol Records DT 10510

Michael Coleman/The McNulty Family - Irish Dance Party. Coral Records CRL 57464

Eydie Gorme More Amore Edye Gorme and The trio Los Panchos. Columbia CL2376
Cuatro Vidas - four lives
No Te Vayas Sin Mi - Don't Leave without me
Mas Amor - more love
Guitarra Romana - Roman Guitar
Luna Lunera - bright moon

Frank Sinatra - I Remember Tommy - Capitol Records

Tito Puente - the Mambo King: RMM Records and Video. RMFC - 80680.
APPENDIX C
CODING PROCESS - SAMPLE

ORIGINAL CODING

Needs:

1a - Don't Leave me Alone
1b - I don't know why I love you like I do

Clinical Problems:

2a - What's wrong with me
2b - Mishearing, tangentation and circumscription

Therapeutic Intervention:

3 - Reflection and confirmation

Memory:

4a - I increased word finding
4b - Familiarity security
4c - Who am I?
4d - Spontaneous responses
4e - Melodic memory/ word memory
4f - Remembrances

SESSION #2  { } = originally circled items

R: {Oh I know, I know,} I had that one that's there, where you get the--
C: {Piano?} (Recalls piano from last session)

R: Yeah, {the piano when I was home.}
C: What did you used to play?
R: (unintelligible) I've forgotten, it's been a long time.
C: It's been a long time? I'm going to play something for you on the radio.
R: If I saw it, I don't know.
C: {Frank Sinatra sings: "For Somebody Else"}
R: That's nice. {I would like you to come to my house.}
C: You would like me to come to your house sometime? {more talking}
R: I heard it the other day
C: You heard it the other day [more talking] yeah on Tuesday
R: {talking about other day} and Frank sinatra I had my head {{points to
   drum}}{music stops; a siren wails}
R: Is that a big one or a -- maybe it's this one.
C: No, that's a big drum.
R: Oh, that's a big drum!
C: Yeah.
R: Oh.
C: You want to try it?
R: Are you supposed to hit it?
C: Yeah, yeah, stay there, I'll bring it to you.
R: I've been hitting a couple of 'em.
C: I know, you have a different one.
R: O.K. Do you want me to help you? (unintelligible)
C: No. You keep it on the floor and I'll get you a stick.
   (drums)
R: See that? I just did it.[laughs]
C: You just did it all by yourself.
R: Yeah, I just went like this: (drums). Heh-heh.
C: Let me get you, let me get you a stick.
R: Yeah I like that sort of a, sort of a thing anyhow.
C: There you go.
R: (unintelligible). (drums){Oh yeah, that’s the one I go} [hits]
C: Here, you can hit it on the side.
R: Oh, {it's the wrong one.} Heh-heh. (drums) I don't know, is that it?
C: Yep.
   (drums)
R: again?
C: Whatever you want.
R: No, I don't care. (drums) { I think we played that outside.} (unintelligible)
C: Well, I don't think we played that outside.
R: You know, out-out-side there.
C: You were listening to
R: Listen to this, this is it.
C: Yeah. Two days ago you were listening to it.
R: Yeah, yeah, this is it.
C: Yeah. I was playing this for you (unintelligible).
R: Yeah.
C: About two days ago.
R: Why didn't you come down then?
C: Well, I know you were here.
   (conversation unintelligible)
R: Yeah that’s the one there [shows familiarity with accordion points to it]
   Yeah this one there.
C: You were singing some of these old ones. (Accordion plays). Like I played this
   song for you, I played this song for you.
   (Accordion plays: "I Don't Know Why")[ I look at her and nod]
R: [sings with me] I don't know why, I love you like I do, I don't know why, I just
do. I don't know why I love you like I do, I don't know why, I just do. You
never seem to want my romancing......when we’re dancing (Hums.) I don't
know why I love you like I do, I don't know why, I just do. (Sings most
words)
R: That's nice.
C: That's a nice one, yeah.
R: Yeah, you got a very nice one here. [touches accordion]
C: Like this?
R: Yeah, very nice.
C: So you used to play the piano?
R: Yeah, I did. { I used to play the piano. } But at that time it wasn't such a big, you know, such a big, ah, you know--[points]
C: It wasn't that big?
R: Yeah. But ah, I don't think I have it now anymore.
C: No.
R: Playing. If I knew where it was I would have taken it. (unintelligible) sometimes they have it outside, you know.
C: Do you want to try it? Do you want to try the piano? Do you think you can still play it?
R: I don't know, it's been such a long time.
C: Let me (unintelligible) move the chair over and I'll let you try the piano a little bit. OK? [ I get up and move her]
R: OK. { I think we had it yesterday one of the days} [after I move her](unintelligible) yesterday (unintelligible). I don't know what I'd do without you. {I'll always need somebody, and I've always liked you.} (piano) I used to have a piano like this. (drum and piano [just notes]) How does that sound?
C: That's good, that's pretty good!
R: (laughs) How does that sound?
C: That really was pretty good.
(individual notes sound { [I repeat the notes she plays]})
R: You play?
C: Any one you want.
(notes sound)
R: (unintelligible) anything else comes around
C: What else comes around?
R: It comes from the--it comes from here.
C: From inside the piano (unintelligible)
(individual notes: "Let Me Call You Sweetheart")
R: I like that (sings[ sings call you sweetheart looks at me her voice cracks])
{Sweetheart. I'm in love with you You.}
C: Yeah, good. You have a nice voice.
R: {Well, at a long time ago, you know, before I went to work, you know, and ah, you know, we had a piano.} (Piano at home)
C: You had a piano.
R: Yeah. {this is a nicer piano than the one that we had at the time.}
C: Who else played the piano besides yourself?
R: Ah. Nobody else. You played the piano.
C: I did. But who else played?
R: Yeah that's right, and I've been looking forward to that. I want to know (unintelligible) gonna do. (Looks forward to piano and me)
(piano notes; Nice pian, piano, Sohmer & company New York.
C: Do you know this?
(plays "Chopsticks")
R: No. Takes two of them. Here?
C: (unintelligible) Yeah.
R: Like this? Two of them together [gets some notes and pattern] (unintelligible conversation)
R: Together.
C: Together.
    (plays "Chopsticks")
C: That's it!
R: What?
C: That's it!
R: Yeah? Yours is much better.
C: Go ahead, you do it now. Together, you do those two, I'll do these two. You do these two.
R: Here?
C: No no, these. Hit together.
("Chopsticks")
R: [looks intently and plays chop sticks (laughs)]
(more music)
R: [It was a long time ago, when I—had a piano] [touches my ring] I like your ring
C: You like that
R: Yeah.
(music continues)
R: What, this one? (unintelligible) There? Here? What else comes next? I forgot already. (You know I used to have it I don't know this way.) (unintelligible)
C: Play two at a time or what?
R: Well, you can do one at a time.
C: What?
R: You can do one at a time.
C: One at a time?
R: Yeah.
(random notes){ [ccc ddd e-e-e-]}
R: (unintelligible) If you do that, it's kind of a—let me try one more.
C: Go ahead, try it, try it.
(random notes)
R: No. I think yours is better. (Laughs) (notes) Well that's a little better.
(starts on c)[(more notes)
R: Does that mean anything? (laughs) I play some notes back] You do it then [ I play black notes]
(melody)
R: Yeah that's nice. You can really play the piano.
C: You do it.
R: Hm?
C: You do it. You can do it.
(notes) (unintelligible)
R: (sings) I don't know w—
C: [You don't know where? (sings) I don't know where?]
R: Yeah.
C: You know where we're going.
R: Yeah. I started with this one, this one I think.
C: Yeah.
R: (sings) I don't know. (pause) {Where am I going? (laughs)}
C: I don't know where I'm going? Well, I'm going.
R: I get lost. [plays and sings] I don't know (unintelligible)—I don't know. Well you sing with me!
C: I am.
R: [trying to play "I don't know why" has rhythm right but no notes] I mean you sing.
C: No you sing. I'll sing what you're singing. (sings) I don't know.
R: I didn't play the piano very often when I was home and I had a piano. You know, a piano license.

C: Did you used to sing at the piano?

R: Huh?

C: Did you used to sing with the piano?

R: (unintelligible) yes.

C: Then we'll sing together. OK? Can you read music? Did you ever read music?

R: {No, because I was ah with the New York Post, you know the newspaper.}

C: You worked at the Post.

R: {Yeah, and ah, oh yeah, and they also had a lot of these, you know lot of these} things, like (sings) "I don't know." (speaks) I don't know.[bends forward] (sings) "I don't know." (piano, C and R) How does that go again? {I think I hit the wrong one.} (notes and singing) I love you like I do.. I love you like I do, I--. I just lost it again. [I hole her finger and play the song using her finger]

C: (sings and plays) I don't know why. (notes) I'm going on. [sings lyrics and plays] (unintelligible) is when we're dancing.

R: I don't know.

C: I don't feel if I don't know. (laughs)

R: Boy this is a lot of fun..

C: It's a lot of what?

R: Well this music going around.

C: Yeah. You know this one?

R: Huh? That's nice, I like this one. [sings "I don't know why" but realizes its a different song]

C: (plays "There goes my heart" one single notes and sings; unintelligible)

R: (laughs) {You lost your pants.} (Misinterprets what I said)

C: I lost my pants? No I didn't.

R: I thought that that's what you were saying.

C: No no no no. "Good Bye Romance." Not I didn't lose my pants.

R: Yeah, something like that. Yeah, that's right. I don't know what made me say it the other way. Where do I start, here?

C: Do you want to play something? Yeah.

R: Play it on there?

C: No, just play what you want.

R: Just play it? {Goes up scale in rhythm of "I don't know why" notes; sings I don't know, I don't know.} If? I don't know why. I don't know if? If I something. (unintelligible conversation) No? (piano notes) If I what?

C: If I what? You tell me.

R: I don't know if I...

C: That means something. I need you. (Say she needs me and I try to clarify)

R: Yeah.

C: Does that mean something?

R: Something like that. No not you.

C: No, I need you.

R: Huh?

C: You.

R: Yeah. Oh, you mean I'm Jewish! (misinterprets)

C: No, I said, you said, "I need you."

R: Yeah, that's what I said.

C: You need me.

R: {Yeah and I need you, for a long time I need you. You should come a little more often to where I live now.} (unintelligible)

C: I should come more often?
R: Yeah. I have to know where I--I have to forget where I am. That's what I meant. Oh? [piano notes]
C: Thank you.
   (unintelligible; piano, {humming and singing}[goes up scale singing “I - love - you” we sing together] )
C: [sings] I love you
R: [sings] I love you
C: Try it.
R: [sings]{ I love you, I always love you. Is that all right? }
C: That's OK do what you want. (I MISHEAR HER)
R: That's OK - it's been a long time (unintelligible) [spells title of song]
C: That's an old song.
R: That's a nice one. You do very well. I wish I could do it that well.
   (unintelligible conversation; street noises)
R: Who's that?
C: It's a fire engine.
R: Who?
C: It's cars outside.
R: Oh.
C: Well I'm going to take you back because it's getting a little late.
R: Yeah. All right, I can do it but I mean, you know.
C: But I'll see you again. I'll pick you up again.
R: {Oh, I like, I want to be able to see you.}
C: Yeah, you'll see me a lot.
   (unintelligible)
R: Yeah and I want you to come to my place too! Anytime.
C: OK.
R: Anytime. [looks at camera]
   (end of Session #2)
Session #2 Summary

When she comes in the office Rose immediately talks about the piano. I try to find out what she used to play on the piano. 4f
I put on Sinatra “for somebody else”
“That’s nice, I would like you to come to my house.” I reflect what she says. She remembers hearing Sinatra the other day and playing the big drum. she asks to play it and says “Yeah that’s the one I go _da,da,da (hits drum).” 4f
I pick up the accordion which she recognizes immediately. I play “I don’t know why” She sings all the words. 4e
I say so you used to play the piano. She replies Yeah I did but at that time it wasn’t such a big, such a big, ah you know...but I don’t think I have it now anymore. I try to get her to play.
I bring her over to the piano at which she says “I don’t know what I’d do without you.” 1a
I’ll always need somebody, and I’ve always liked you. I used to have a piano like this. (plays a few notes) 1b
I repeat the notes that she plays. (P16) 4e
She asks me to play something so I play
Let me call you sweetheart. she likes that one and looks at me as she sings and her voice cracks.
I tell her she has a nice voice and she says that “a long time ago, you know, before I went to work, you know, and ah, you know, we had a piano (p17 L3). I play chopsticks and ask if she can play it. (figuring anyone who had a piano at some point played chopsticks. She tries to copy me and gets the first two notes right. she looks intently and plays a bit of chopsticks and then remarks that is was a long time ago that she had a piano then she touches my ring and says that she likes it. she tries to play the tune but can’t remember(p18). rose plays a couple of notes and asks if that means anything, a usual phrase for her.
I reflect the notes tat she chooses. she remarks that she gets lost and asks me to sing with her (P20 L7) She tries to play “I don’t know why”. has rhythm right but not the notes. I ask if she ever read music and she no because she was at the newspaper. she tries again and says she got lost so I take her finger and help her play the melody. We play “I don’t know why”.
I then play “there goes my heart” she sings I don’t know why. when I get to the line there goes romance she thinks I said you lost your pants. (P21 L22) when I correct her she remarks “Oh yeah I don’t know what made me say it the other way. She then plays “I don’t know why with single notes. She says she needs me and I try to clarify Rose says” Yeah and I need you, for a long time I need you. You should come a little more often to where I live now. (p23 L6) She then says “I have to forget where I am” and that she loves me. She hears noises out side and I identify them for her
- fire engine and cars. I tell her I will take her back
to her floor but will pick her up another day.
She remarks that she likes that and wants to be able
to see me. and I want you to come to my place anytime” (p. 24) 1a
APPENDIX D

RELEASE FORMS

Disclosure Statement

I am a Certified Music Therapist and a doctoral student in Music Therapy at New York University. I have been a Music Therapist at ____________________________ for 13 years. I am very interested in learning more about the responses by persons with dementia to music of personal importance.

Each participant in this study will be involved in individual Music therapy sessions for 20 minutes, twice a week. The duration of the study is approximately two months. There is no foreseen risk to the participants as the sessions will involve standard Music therapy procedures. Each session will be videotaped and reviewed by myself and three other professional Music therapists who are assisting me in this project. Confidentiality of each participant will be strictly adhered to.

I would like to ask you a few questions about your relative/friend’s previous interest in music and if there are any songs or musical selections that may have personal meaning to him/her. You will also be asked to review and sign the PHOTO RELEASE AND CONSENT FORM which will permit me to videotape the Music Therapy sessions.

I am excited about what we might learn about the responses of persons with dementia to familiar music and of how Music Therapy can best be used in working with persons having dementia.

Thank you.

Connie Tomaino, MA, CMT-BC
Music Therapist

I grant my permission to include (name of participant) in the Music Therapy study described above. I have also read and signed the PHOTO RELEASE AND CONSENT FORM permitting videotaping of the sessions. I understand that the identity of my relative/friend will be kept confidential in any printed reports of the study. I understand that I have the right to review the tapes and to request that all or any portion of the tapes be destroyed. I understand that I may withdraw my relative/friend from this study at any time.

Signature: ________________________________

Date: ____________________
Photo Release Form

I grant my permission, free of charge, to ______________________, CONCETTA M. TOMAINO, MA, CMT-BC, and their agents, to photograph, record, publish, reproduce, and use my picture, features, likeness, voice, and words, whether in photographs, motion pictures, sketches, videotapes, audiotapes, reproductions, publications, negatives, prints, transparencies, or transcriptions, and with a pseudonym, without my name. I grant this permission only for the purpose(s) of a Music Therapy research study: “Analysis of Music Therapy Sessions in the Exploration of Preserved Memory for Familiar Music in Persons with Dementia.”

I understand that I have the right to review the tapes and to request that all or any portion of the tapes be destroyed.

I understand that ______________________ staff will be happy to answer any and all questions I may have regarding this Release and consent form and that I have the right to refuse to permit this release and/or publication. I discharge ______________________, CONCETTA M. TOMAINO, MA, CMT-BC, and their agents from any and all legal liability that may arise from the release and/or publication I hereby have authorized or permitted.

_______________________________
(Print Name of Patient)

_______________________________
(Print Name and Capacity of Legal Representative if such person is signing on behalf of patient)

__________
Date

_______________________________
(Signature of Patient or Legal Representative)

_______________________________
Witness (Print Name)

_______________________________
(Street Address of Patient or Legal Representative)

_______________________________
(Signature of Witness)

_______________________________
(City, State, Zip & Telephone Number)
The Human Rights Subject Statement

(revised 6/1/93)


Selection of Participants

Participants of this study will be selected from newly admitted residents of the skilled nursing facility where I work as a music therapist.

I will select the participants based on a pre-admission diagnosis of dementia of the Alzheimer’s type or multi-infarct dementia. Each participant must also have a close relative or friend who can provide information about the participant’s musical history.

Nature of informed consent

The legal guardian of the potential participant will be informed of the nature of this study and will be asked to answer some general questions about the participant’s previous interest in music and any particular musical selections that may be associated with key events in the participant’s life.

The guardian will be asked to read and sign the standard release form which is used by the facility for all projects involving videotapes.

Confidentiality

Videotapes and my written logs of each session will be locked in a file in the music therapy studio. I am the only one with access to this file. The tapes will also be reviewed by my peer support group which is comprised of other professional music therapists who are also completing doctoral studies at NYU. They are aware of the ethics of confidentiality.

Pseudonyms will be used to protect the identity of the participants in any written reports of the sessions including the final dissertation. The use of pseudonyms will be clearly indicated in the hospital’s photo release as well. All attempts will be made to insure the anonymity of each subject. If a subject is withdrawn from the study, the video tapes of their involvement in the music therapy sessions will be erased.
Rights of the participants

The legal guardian has the right to withdraw the participant at any time during the study. If a participant is withdrawn records of their involvement in the music therapy sessions, including videotapes will be destroyed. Each participant and/or guardian has the right to review the videotapes and request that all or any portion of the tapes be destroyed.

Potential harm/benefit

Since the music therapy sessions involve standard practice no harm is foreseen for any of the participants. Since the participants will be in individual sessions rather than the usual group format they may benefit from the personal contact and use of familiar music.