The Role of Singing Familiar Songs in Encouraging Conversation Among People with Middle to Late Stage Alzheimer's Disease

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Background: *Language deficits in people with Alzheimer's disease (AD) manifest, among other things, in a gradual deterioration of spontaneous speech. People with AD tend to speak less as the disease progresses and their speech becomes confused. However, the ability to sing old tunes sometimes remains intact throughout the disease.*
Objective: *The purpose of this study was to explore the role of singing familiar songs in encouraging conversation among people with middle to late stage AD.*
Methods: *Six participants attended group music therapy sessions over a one-month period. Using content analysis, we qualitatively examined transcriptions of verbal and sung content during 8 group sessions for the purpose of understanding the relationship between specific songs and conversations that occurred during and following group singing.*
Results: *Content analysis revealed that songs from the participants' past-elicited memories, especially songs related to their social and national identity. Analyses also indicated that conversation related to the singing was extensive and the act of group singing encouraged spontaneous responses. After singing, group members expressed positive feelings, a sense of accomplishment, and belonging.*
Conclusions: *Carefully selecting music from the participants' past can encourage conversation. Considering the failure in spontaneous speech*

in people with middle to late stage AD, it is important to emphasize that group members' responses to each other occurred spontaneously without the researcher's encouragement.

Keywords: *familiar songs, conversation, Alzheimer's disease, AD*

I[1] have been working as a music therapist with people with Alzheimer's disease (AD) for almost 17 years. In my clinical work, I have encountered numerous people who have lost their ability to speak as a result of their cognitive decline. On the other hand, these people are often capable of singing old tunes without any hesitation or difficulty. Furthermore, I realized that even after only one session of music therapy that included singing, people with AD had the ability to respond verbally in a coherent way. Statements such as "What a beautiful song"; "I like that"; "It's very nice," have been a tremendous achievement for people with middle to late stage AD who have difficulty communicating through words. My clinical experience has led me to study the role of singing familiar songs in encouraging conversation among people with AD.

Background

The Impact of Alzheimer's disease on Conversational Skills

Alzheimer's disease (AD) is a progressive neurological disease that leads to deterioration in cognitive abilities. People with AD encounter a progressive decline in their neurological capabilities, which manifest in language deficits, among other cognitive difficulties. The main failures in speech include naming difficulties, verbal fluency deficit, comprehension problems, and deterioration of spontaneous speech. The speech of people with AD is usually considered "empty" – it contains a high proportion of words and utterances that convey little or no information compared to the speech of elderly people without AD (Kavè & Levy, 2003). People with AD tend to have "discourse deficits", which include empty phrases, indefinite words, and repetitions. The speech of a person with the above deficits is difficult for an interlocutor to follow. Thus, these progressive language failures can lead people with AD to isolation (Dijkstra, Bourgeois,

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[1]   The first author of this article.

Burgio, & Allen, 2002; Moss, Polignano, White, Minicheillo, & Sunderland, 2002). Aldridge (2001) refers to the neuro-degenerative process as dialogic-degenerative. Due to their progressive inability to communicate, people with AD need interventions that address their communication needs and help prevent social isolation.

Interventions used to Improve Communication with AD

Increased social interaction can improve quality of life by enabling people with AD to remain socially engaged (Dijkstra et al, 2002). Communication training for caregivers of people with AD has been used to enhance social conversation. Communication trainings include active instruction such as role playing and analyzing video observations of conversations with people with AD. Computer based systems are also used, providing multimedia stimuli (Green, Guinn, & Smith, 2012). Reminiscence therapy is another example of an effective tool in encouraging conversation when working with people with AD. Reminiscence uses the intact long-term memory that enabling people with AD to engage in a conversation about their past experiences (Thorgrimsen, Schweitzer, & Orrell, 2002). Fels & Astell (2011) suggest engaging people with dementia in conversation where they are prompted to recall and recount personal stories, perhaps with the aid of prompts, such as generic photographs.

Music Therapy and Singing as a Bridge for Communication

Music therapy plays an important role in creating new ways of communication for people with AD and their caregivers. Olderog-Millard and Smith (1989) report that singing is the favored activity among people with AD. Their research shows that most of the patients sang during music therapy group, including those with language failure. Several studies (Clair, 2000; Prickett & Moore, 1991; Tomaino, 2002) indicate that despite memory loss, people with AD continue to sing old songs that remain intact in their memory.

Tomaino (2002) states that people have memories not only of a song's details, such as the melody or lyrics, but also of the memories and rich associations related to the song. Thus, songs can evoke these associations and enable memories and a sense of self to emerge. In this context, Sacks (2008) defines music as a memory aid that elicits long-forgotten emotions and associations, giving the patient access to moods, memories and thoughts.

Songs play an important role in reinforcing a sense of belonging (Amir, 1997, 1999). Apart from being a recreational activity, group singing enhances group cohesion and serves as a way to escape solitude and distress (Clair, 2000). Group singing sessions that focused on singing and reminiscing have been found to be significantly helpful in reducing symptoms of depression among people with AD (Ashida, 2000). Singing gives comfort since it brings something familiar to the environment while other activities have become demanding and frustrating due to the cognitive decline (Clair, 2000). In this respect, Ridder (2003) emphasizes the importance of creating the optimal possibilities to enter dialogue with the person with AD. Using songs that are significant to the person can help regulate his anxiety and therefore help him to enter into a dialogue.

Improved Language Capabilities through Singing

An analysis of singing performance in patients with brain injuries provides key information regarding the autonomy of music processing relative to language processing. Vanstone, Cuddy, Duffin, & Alexander (2009) state that the preserved recognition memory for songs in many AD patients is striking and should be investigated. Baird & Samson (2009) further reinforce the idea and add that in a disease that destroys memory, preserved musical memory could serve as an important tool to enhance the quality of life for people who have lost so many other abilities.

Aldridge (1996) states that in the decline of language abilities in people with AD, some skills seem to be preserved longer, like the prosodic aspects of language and music-related skills. Levitin (2006) explains that musical activity involves nearly every region of the brain that we know about and nearly every neural subsystem. Recalling lyrics in a song invokes language centers in the brain. Although the literature emphasizes the wonderful benefits of singing, there are limited references on the impact singing has on conversational patterns of people with AD (Brotons & Koger, 2000; Prickett & Moore, 1991; Sambandham & Schirm, 1995; Smith, 1990). Singing had a positive impact on verbal fluency and reminiscence among people with AD (Sambandham & Schirm, 1995), and on the recall ability of lyrics in songs (Prickett & Moore, 1991; Smith, 1990). A study conducted by Brotons & Koger (2000) measured the impact of singing in music therapy group on the language abilities of people with AD compared to conversational sessions. Results from 20 participants revealed that

music therapy significantly improved performance on speech content and speech fluency in the language scale measuring spontaneous speech from the Western Aphasia Battery (WAB). Contrary to the lack of research pertaining to the impact of singing on conversational patterns of people with AD, there is abundant information on this subject with other patient populations, mostly stroke patients (Norton, Zipse, Marchina, & Schlaug, 2009; Racette, Bard, & Peretz, 2006; Straube, Schulz, Geipel, Hans-Joachim, & Miltner, 2008) and people with Parkinson's disease (Haneishi, 2001; Wan, Rüber, Hohmann & Schlaug, 2010). These studies show the importance of singing in enhancing fluency, articulation and vowel phonation in the production of speech. In general, the literature review shows that singing abilities are relatively preserved in people with AD and there is a potential for improved language capabilities through singing.

Background on the Larger Study

Data for this qualitative analysis were gathered as part of a larger study that examined the impact of singing on the language abilities of people with AD. In this article, we report findings from the qualitative aim of the study, which was to explore the role of familiar songs in encouraging conversation among people with middle to late stage AD. The quantitative aim of the study examined speech quality, singing quality, and aspects of conversational speech during a group music therapy sessions that included singing familiar songs. Given the scope of analyses and independent nature of our aims we report findings in separate manuscripts.

A total of 22 nursing home residents in Ramat-Gan, Israel participated in the larger study. Eligibility criteria for study participation were as follows: (a) participants must have a diagnosis of AD without any history of mental health or communication problems; (b) participants who are not Israeli born, must be fluent in Hebrew and have immigrated to Israel by 1950 (the participants came from diverse cultural backgrounds); (c) participants must be in the middle to late stage of the disease with Mini-Mental State Examination (MMSE) cognitive scale score ranging from 0–20; (d) participants must have unimpaired hearing and intact eyesight, understand spoken language and do not suffer from agitation. All parameters were taken from an assessment conducted routinely by the head nurse of the facility. Cognitive impairment was assessed using the

Mini-Mental State Examination (MMSE) prior to the study. The MMSE (Folstein, Folstein, & McHugh, 1975) is a brief 30-point questionnaire test that is used to screen for cognitive impairment. Any score greater than or equal to 25 points (out of 30) indicates normal cognition. Below this, scores can indicate severe (≤ 9 points), moderate (10–20 points) or mild (21–24 points) cognitive impairment.

A subsample of participants from the larger study was randomly selected for participation in the qualitative portion of the study, which is reported here. The aim for this study was to explore the role of familiar songs in encouraging conversation among people with middle to late stage AD. Research questions that guided the investigation were:

1. What were the main topics of conversation discussed by the group during the music therapy sessions?
2. What was the connection between song content and musical features, and conversation topics that followed the singing?

Methods

Participants

Six people with middle to late stage AD (MMSE scores ranged from 7–20) were included in the qualitative analysis. Two participants were male and four were female.[2] This group of 6 participants was randomly selected from the 3 groups that participated in the larger study. Eli, born in Israel, 65 years old, MMSE 7/30; Simon, born in Israel, 83 years old, MMSE 14/30; Talia, born in Romania, 75 years old, immigrated to Israel at the age of 14, MMSE 10/30; Ahuva, born in Poland, 83 years old, immigrated to Israel at the age of 13, MMSE 20/30; Yaffa, born in Israel, 83 years old, MMSE 10/30; and Rivka, born in Israel, 82 years old, MMSE 12/30.

Procedures

People with AD who participated in this study could not consent to their participation because of their cognitive condition; therefore, the researcher received permission to conduct the research from

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2 Pseudonyms are used.

the Bar-Ilan University's Ethics Committee. In addition, the legal guardian or main caregiver signed a consent form approving the participation of their loved ones. All video recordings of the participants were used solely for the purpose of data analysis and then destroyed once the work was completed.

Songs Selection

Here we describe the systematic process we used to select songs for the study. To begin with, 24 Israeli songs that were popular from 1930 until the late 1950s were chosen. During those years, the participants were in either their adolescent years or their early twenties. The songs were chosen from various books relating to the history of popular songs in Israel between 1930 and 1950. Songs that appeared in at least two different references were selected (Ben-Yehuda, 2002; Eliram, 2006; Hacohen, 1984; Shahar, 2006; Taharlev & Naor, 1994). The songs were sung by 12 randomly selected participants that were then equally divided into two groups of six participants. Two sessions were conducted for each group and 12 songs were sung in each session. The degree of familiarity was rated by two independent judges on a Likert Scale from 1 to 5. Each song was given a final score and the 16 songs that scored highest were chosen for the research (see Table 1). Since participants came from different countries and cultures, Israeli songs served as common ground and were chosen to ensure that all participants were familiar with them. It is well documented that in the first years of the State of Israel, songs played a significant role in building the new Israeli identity and helped to unite immigrants with different cultural backgrounds (Eliram, 2006).

Music Therapy Session Content

The group participated in eight music therapy sessions, twice a week, over a period of one month. Each session lasted about 45 min. The group sessions were filmed using two video cameras (Canon Legria FS200) positioned in two different corners of the room, to allow for a full frontal view of the participants. The session recordings were used for data analysis.

The therapist, who was also the researcher, sang with the group members and played guitar chords as accompaniment. The

TABLE 1
Sixteen Songs that were Chosen for the Research

1. *Shir HaEmek* (Song of the valley). Lyrics: Nathan Alterman; Melody: Daniel Sambursky.
2. *Thumbalalaika.* Lyrics and melody: Yiddish folk.
3. *Gan Hashikmim* (Sycamore garden). Lyrics: Yitzhak Yitzhaki; Melody: Yochanan Zaray.
4. *Ve'ulai* (And perhaps). Lyrics: Rachel Blubstein; Melody: Yehuda Sharet.
5. *Erev Shel Shoshanim* (Evening of roses). Lyrics: Moshe Dar; Melody: Yosef Hadar.
6. *Halicha Leqesaria* (Going to Caesarea). Lyrics: Hanna Szenes; Melody: David Zahavi.
7. *Shir HaPalmach* (The Palmach song). Lyrics: Zrubavel Gilad; Melody: David Zahavi.
8. *Shir Boker* (Morning song). Lyrics: Nathan Alterman; Melody: Daniel Sambursky.
9. *Shir Hanamal* (The port song). Lyrics: Leah Goldberg; Melody: Rivka Levinson.
10. *Al Tomar Li Shalom* (Don't say goodbye). Lyrics and melody: Tuli Raviv.
11. *Shoshanna* (Rose). Lyrics: Haim Hefer; Melody: Italian folk.
12. *Mal'u Asamenu Bar* (Our barns are full of grain). Lyrics: Pinhas Elad; Melody: David Zahavi.
13. *Pizmon LaYaqinton* (Hyacinth lullaby). Lyrics: Leah Goldberg; Melody: Rivka Gvilli.
14. *Be'arvot HaNegev* (Plains of the Negev). Lyrics: Rafael Klatzkin; Melody: Pyotr Mamyachok.
15. *Dugit* (Dinghy). Lyrics: Nathan Yonatan; Melody: Lev Schwartz.
16. *Finjan* (Coffee cup). Lyrics: Haim Hefer; Melody: Armanian folk.

participants were given a handout with the lyrics for each song that was sung (see Table 1). Since there were 8 sessions in total and 4 songs were sung during each session, each song was repeated twice during the study.

The format of the sessions was similar in all eight meetings and included the following:

- The music therapist greeted each group member individually.
- The music therapist sang and invited the group members to join her in singing the song.
- At the end of each song, the music therapist facilitated a conversation using open-ended questions related to the song's lyrics. For example, "How was the first port built?" (*Shir Hanamal* - The Port Song) or "What kind of fragrances were

in the garden?" (*Erev shel shoshanim* - An evening of roses).
The aim of the conversation was to elicit memories and to
evoke feelings concerning those memories. Each song and
subsequent conversation lasted about 10 min.

• The session ended with the therapist's appreciative and
encouraging remarks to each of the group members.

Content Analysis

Using content analysis, the investigators examined the songs' role
for the purpose of understanding the relationship between specific
songs and the conversation that followed each song. The group's
eight meetings were transcribed and classified into categories and
subcategories. In an effort to identify the main topics of conver-
sation during the music therapy sessions, the verbal content was
transcribed and the sung content was described indicating the par-
ticipants singing style, (that is, with or without words, recitation,
pausing, and/or raising their voices or hardly being heard). Verbal
remarks made while singing were included in the description. This
research method of text analysis included a systematic process of
step-by-step categorization. Content analysis involves a process of
condensing raw data into categories based on valid inference and
interpretation. In this process, themes and categories emerged
from the raw data under the researchers' careful examination and
constant comparison. The researchers immerse themselves in the
data and allow the themes to emerge from the data (Kohlbacher,
2005). The categories and subcategories were revised throughout
the analysis process until they were formulated (see Table 2).

Table 2
Categories and Subcategories of Conversation Themes

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1. Conversation related to the songs
    1.1. Memories that relate to patriotic events
    1.2. Memories that relate to social gatherings
    1.3. Memories that relate to family and the participants' homes
    1.4. Memories that relate to musical experiences
2. Conversation related to the activity of group singing
    2.1. Singing promotes well-being
    2.2. Singing promotes a sense of self-esteem
    2.3. Singing together reinforces a sense of belonging

Song Analysis

Song analysis was conducted in order to answer the second research question regarding the connection between the musical features and conversation topics that followed the singing. The song analysis was conducted according to previous musical analyses of Israeli folk songs in the music literature (Eliram, 2006), a consideration of the musical elements (melody, rhythm, harmony), the song's structure (strophic, through-composed), the lyrics and the song's central themes (patriotic, lullaby), and cultural contexts (background, events, decade). An example of a song analysis is given in Table 3.

Trustworthiness

The following steps were taken in order to ensure trustworthiness:

- Researcher's log: I kept a log throughout the sessions to examine my interventions as a therapist and track my feelings and thoughts regarding my dual role as a therapist and researcher. For example, relying on my experience as a music therapist with this population, we speculated that group members would participate in singing and that the songs would elicit memories. I did not expect that singing as a group would serve as a topic of conversation. The ongoing writing allowed me to reflect on my beliefs and expectations derived from my extensive experience with this population and to put them aside in order to get a more authentic picture from the analysis.
- Peer review: In order to validate the content analysis made by the researcher, a peer review of the analysis was conducted by two other professionals working with people with AD (a social worker and an occupational therapist). Some of their comments were integrated into the findings. The peer review helped to verify the match between the categories and the information that was gathered during the study.

Results

The content analysis produced two main categories. Each category also contains subcategories. Each subcategory will be explained

TABLE 3
An Example of Song Analysis

Shir HaEmek (The Valley Song)

Lyrics: Nathan Alterman; Melody: Daniel Sambursky.

Translation from Hebrew: Liora Claff

The weary came to rest
and finish their labors.
Pale night spreads over
the fields of the Jezreel Valley.
Dew underneath and moonlight above,
From Beit Alpha to Nahalal.

Oh, what a night of nights
Silence over Jezreel
Sleep my beloved valley, land of glorious beauty
We shall be your guardians.

One of the classic Israeli songs. In the mid 1930s, a propaganda film called "LeChaim Chadashim" ("The land of promise") was made about pioneering Israel. A song was needed, so they asked the poet and lyricist Nathan Alterman to write the lyrics. The music was composed by Daniel Sambursky, a recent immigrant from Germany. The song Alterman and Sambursky came up with was called Shir HaEmek, the Valley Song. Sambursky performed the song along with members of Kibbutz Givat Brenner. The valley is the Jezreel. Beit Alfa and Nahalal are settlements in the valley (Shahar, 2006).

The original 'clip' can be watched here:
https://www.youtube.com/watch?v=dZ-RUGhtNb0

TABLE 3
Continued

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	Song structure[5]		
Song form	**Structural elements**	**Length of strophic unit**	**Melodic variety of strophic unit**
Strophic	Six stanzas refrain and repeating four stanzas chorus. Repetition of the last two lines in the chorus. Refrain – Rhyme in 1-3, 2-4, 5-6 Chorus - Rhyme in 1-2, 3-4	Refrain – 6 stanzas Chorus - 4 stanzas	Refrain – 4 melodic lines. Chorus – 3 melodic lines.

	Musical elements				
Scale	**Meter**	**Frequent intervals**	**Scale notes variety**	**Frequent notes**	**Rhythmic structure**
D – Dorian mode	4/4	Major second (32) Minor second (12)	All scale notes	Tonic (14) Subdominant (14) Dominant (11)	Repeated syncopated pattern

5   The structure analysis relates to the Hebrew version.

TABLE 3
Continued

Relation between text and music	
Text	**Music**
The song describes the area south of Galilee, the Jezreel Valley. The poet gives us a picturesque description of the valley as transformed by the Kibbutzim that drained the swamps and developed the valley into a major area for the production of agricultural goods. It also emphasized the need to stand watch over the fields and settlements during the night for fear of attack from the Arab inhabitants in Galilee at that time.	The musicologist, Herzel Shmueli wrote that it seems like the good fairies blessed Samburksy when he composed this very peaceful melody which provide a serene atmosphere (Shahar, 2006). There is a frequent use of syncopation as a characteristic element of the Hora dance that represents life in the Kibbutz.

Relation between song and conversation			
Category	**Song appearance**	**Category**	**Song appearance**
1.4 Memories that relate to musical experiences 1.1 Memories that relate to patriotic events 2.2 Singing promotes a sense of self esteem	First time (Session 2)	1.4 Memories that relate to musical experiences 2.2 Singing promotes a sense of self esteem 1.3 Memories that relate to family and the participant' homes 2.3 Singing together reinforces a sense of belonging	Second time (Session 5)

and followed by participants' citations[3]. The findings are presented according to the research questions.

What were the main topics of conversation discussed by the group during the music therapy sessions?

Based on the analysis two main categories emerged concerning the topics of conversation during the music therapy sessions: 1. Conversation related to the songs; 2. Conversation related to the activity of group singing.

The core theme in the first category was memories that were evoked following the songs. This category was divided into four sub-categories: (a) Memories that relate to patriotic events: After some songs had been sung, the group reminisced about patriotic events in the years following the declaration of the State of Israel (in 1948). Some of the group members talked about the building of the Tel Aviv Port, life on the Kibbutz and the *Palmach*[4]. For example, following the song *Tumbalalaika*, which mentions the Kibbutz, Talia said: "I loved Kibbutz life, everyone supported each other" (Talia, Session 1); (b) Memories that relate to social gatherings: Some of the group members talked about the social customs and the fashion during the early years of the State; (c) Memories that relate to family and the participants' homes: For example, following the song *Al na Tomar Li Shalom* (don't say goodbye) with a tango dance tempo, Rivka said: "I used to go out with my friends but I told my mother I was going to study. At home, they didn't approve of going out to dance" (Rivka, Session 5); (d) Memories that relate to musical experiences: Some of the group members talked about the songs they learned at school and even remembered the name of their music teacher. The dancing style in those years was also discussed.

The core theme in the second category was the impact of singing on group members. This category was divided into three sub-categories: (a) Singing promotes well-being: For example, after singing, Talia explained: "Perhaps we feel better because we came here. There's nothing like singing to make us feel better" (Talia, Session 3); (b) Singing promotes a sense of self-esteem: Some of the

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[3]   For the sake of brevity, only a few citations are provided.
[4]   The *Palmach* was the Jewish settlement's fighting force during the British Mandate.

group members expressed a sense of pride at being able to remember the songs' lyrics. For example, after singing *Shir Ha'Palmach* (The Palmach song), Talia said: "When I sing, I can remember the words of the song" (Talia, Session 3), Ahuva was proud she recognized the songs and said: "I know these songs from years ago, everyone knows them" (Ahuva, Session 5); (c) Singing together reinforces a sense of belonging: Some group members expressed their desire to continue meeting. For example, at the end of the sessions, Ahuva said: "Don't forget to remind us when we can meet again" (Ahuva, Session 8). Some of the group members addressed their singing as a group. They offered suggestions for improvement in their singing; they gave advice to each other, paid compliments, and expressed joy. Most of the remarks concerning their way of singing occurred spontaneously without any guidance from the music therapist - researcher. For example, after singing *Erev Shel Shoshanim* (Evening of roses), Yaffa exclaimed: "Bravo, Bravo" (Yaffa, Session 4), Ahuva claimed that they have to concentrate on practicing their singing: "I think we stop too much, we have to sing more" (Ahuva, Session 5).

What was the connection between musical features and song's content, and conversation topics that followed the singing?

In order to address this research question the sixteen songs that were used in this research were divided into four main topics: (a) Zionist ethos songs, (b) songs that evoke memories of social gatherings, (c) personal songs, and (d) lullabies. Conversation topics that were directly relevant to the songs' content and musical features emerged from each group of songs. The Zionist and the social songs evoked memories of patriotic and social experiences. The personal songs led to a conversation about personal experiences of love and romance. The lullabies raised a concrete conversation about topics that appeared in the songs' lyrics. By analyzing the songs and particularly the connection between the lyrics and the melody, it became clear how the songs' musical features, such as rhythm, scale and melody connect and intertwine with the songs' content and the conversation topics. For example, in the Zionist ethos songs, the music emphasizes the text that relates to the enthusiasm of building the new country. The songs are written in march tempo, which usually elicits a feeling of unity and was

probably the reason for the patriotic memories that were evoked in the group.

The second group of songs also has similar musical features that connect with the songs' content and the conversation topics. The songs are all written in a triple meter; three out of the four songs in the group are in a minor key and have a simple repeating rhythm pattern. The refrain in all songs has a repeating syllable ("La-La" or "Tumala-Tumbala") that elicits a feeling of people sitting around a campfire together, swaying and singing. The lyrics relate to memories of social gatherings and the conversation in the group in the present research matched that. The third group of songs deals with the personal aspect of love and romance. The musical features are again similar in all four songs: they are all written in a minor key and there is a widespread use of "word painting", a musical technique used to emphasize the content of the song by reflecting the literal meaning of the lyrics in the music. For example, the word "God," which appears at the beginning of the song (*Halicha Leqesaria* - Going to Caesarea), is reflected by ascending an octave in the music. The conversation topics in the group following these songs dealt with personal memories and evoked emotional reactions. The last group of songs is lullabies. Their musical features and lyrics did not evoke any memories and the conversation in the group following these songs addressed the songs' lyrics.

Discussion

Songs Elicit Conversation about Past Experiences

The process of reminiscence is well documented as an effective tool that enables people with AD to engage in a conversation (Thorgrimsen et al., 2002). Using old tunes to elicit memories stored in long term memory is also well documented as beneficial for people with AD (Tomaino, 2002).

The content analysis in this research showed that songs from the participants' past elicited the richest memories, especially the songs that relate to their social and national identity. The majority of seniors' accessible songs are from earlier decades of life (Cohen, Bailey, & Nilsson, 2002). Thus, it is recommended to choose songs from the early decades of the participants' lives.

Shahar (2006) states that Israeli songs from the 1930s to the 1950s can be seen as a reflection of the events that occurred in the country, such as immigration and new settlements. Accordingly, the content of the conversation in the group after these songs included reminiscing about past patriotic themes, such as memories from life on the Kibbutz, memories about the intensive building of roads, houses and the port that took place during the early years of the fledgling country. The results showed that the Zionist ethos songs and the songs that relate to social gathering elicited the richest memories.

As can be seen in the findings of this research, the content and musical features of the songs in the various aforementioned topic groups elicited a conversation relevant to the content of the songs. Focusing on the songs' topic of conversation is not an easy task for people with AD in moderate to late stage, considering the language decline. People with AD have difficulty following a conversation and staying focused on the topic being discussed because of the failure in naming and fluency (Kavè & Levy, 2003). This study's findings show that the participants concentrated and took part in the conversation.

Singing as a Group was a Dominant Topic and Encouraged Spontaneous Conversation between Group Members

The content analysis also indicated that conversation related to the singing in the group was extensive and the act of singing encouraged spontaneous remarks. A large part of the conversation included group members' responses to how they sang as individuals and as a group. The group members expressed positive feelings and a sense of accomplishment following the singing activity. Eliram (2006) emphasizes the songs' importance in the process of uniting people and creating a sense of belonging and devotion to the country. In the present study, the group members proudly declared that they could still remember the songs from their past.

The importance singing has to the group members was evident in their comments about the emotional impact of singing. Group members referred to the positive feelings that were evoked while singing together and talked about the ability that singing had to improve their mood. They encouraged each other to sing and emphasized their desire to keep on singing. Clair (2000) refers to

the importance of singing for people with AD. Singing songs from the past provides a familiar experience that enables people with AD to enjoy and participate in a social gathering. All the songs in this research group were familiar to the participants and were selected following a systematic analysis that determined their degree of familiarity. The fact that all the group members were familiar with these songs contributed to their sense of belonging and success. For most people with middle to late stage AD, conversation becomes a burden due to the deterioration in their language capabilities. Singing in the group, on the other hand, helped them to connect with each other through a simple and familiar activity. The spontaneous reactions among the group members might have stemmed from the excitement of this experience and feelings of success that elicited declarations of enthusiasm and motivation to keep singing together and improve their singing skills as a group. Thus, singing encouraged conversation. As Kitwood (2007) states, emphasizing the strengths and abilities of people with AD helps them feel a sense of worth in their social activities. In a treatment model that focuses on the person and not the illness, referred to as person-centered dementia care, Kitwood stresses the emotional needs of the person with dementia and presents twelve positive interactions, including "creation", where the person with dementia takes the lead and spontaneously offers the group something from his or her own ability and social skill, and "celebration", which involves acknowledging and maintaining moments that are intrinsically joyful, and fully engaging in them. Innes & Hatfield (2002) state that in person-centered music therapy, when group members initiate singing and talking, it enables them to feel a sense of creation and connection with each other. Singing together is a celebration that emphasizes the beauty of the moment with the group.

Another reason that singing as a group was a dominant topic of conversation might be due to the fact that singing together is rooted in Jewish customs and Israeli culture. Israeli songs in the days of the pioneers, served as nation-building. Jewish immigrants from around the world brought with them their musical traditions, melding and molding them into a new Israeli sound. Public sing-along was a common pastime and served the pioneers as a force in defining their identity (Eliram, 2006; Shahar, 2006). Four of the group members were born in Israel and grew up during the new country's establishment. The other two came to Israel as teenagers

with Zionist youth movements. The group members reminisced about past singing experiences as part of their affiliation with these Zionist groups. These songs were part of their identity in the era when the new State was emerging. As Bright (1988) states, singing together is a shared pleasure, and many people have happy memories of occasions throughout the life-span when singing together was a joyful experience. These memories live on in our memories as occasions in which the event is permanently linked with the singing we shared.

As is evident from this analysis, singing provided the group with a conversation topic and served to stimulate and reinforce discussion. Considering the failure of spontaneous speech in people with middle to late stage AD, it is important to indicate the group members' responses to each other about their singing, since they occurred spontaneously without the researcher's encouragement.

Limitations of this Study

This study consisted of only one group of six participants, which gives rise to the problem of generalization. Nevertheless this study provides a rich and holistic account of a phenomenon and much can be learned from a particular case. In this study I also played two different roles that occasionally conflicted - a music therapist and a researcher. As a music therapist my knowledge about working with people with AD might have interfered with my data analysis. To avoid my subjectivity, I used the process of peer review in the content analysis. To prevent crossing the line between my two roles, I kept a written log throughout the sessions, where I examined my interventions and reflected on my thoughts and behavior.

Recommendations for Future Studies

The findings of this study demonstrated that singing familiar songs helped to encourage conversation among people with AD in moderate to late stage. In a state of language decline, it is important to find ways to prevent people with AD from withdrawing into silence. This research focused on middle to late stage AD. Further research is needed to examine the role of singing throughout different stages of AD and in people in the early stage of AD. In addition, the emotional impact of singing was evident in the reactions of the participants throughout the study. Perhaps the emotional and arousal

states of participants had an effect on their ability to concentrate and therefore influenced their language ability. Further research should assess the emotional and agitation state of participants to more fully understand the connection between the emotional effects of singing on conversational patterns. Further research can also study participants' nonverbal communication such as smiles and gestures and explore the preservation of nonverbal communication in a state of language deterioration. This study examined the role of singing familiar songs from a specific culture and era. Further research can examine the impact of songs from other social groups, such as youth organizations or sports clubs, among people with AD.

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References

Aldridge, D. (1996) *Music therapy research and practice in medicine: From out of the silence*. London: Jessica Kingsley Publishers.

Aldridge, D. (2001). Music therapy and neurological rehabilitation: Recognition and the performed body in an ecological niche. *Music Therapy Today* (online). Retrieved from http://www.wfmt.info/Musictherapyworld

Amir, D. (1997). Understanding the role of folksongs in Jewish-Israeli culture: Implications for music therapy. *The World of Music*, 39(1), 111–127.

Amir, D. (1999). *The role of music therapy in establishing cultural identity in a multicultural state, namely Israel*. E-book of articles from the Ninth World Congress for Music Therapy. Washington DC. Retrieved from http://www.wfmt.info/WFMT/Home.html

Ashida, S. (2000). The effect of reminiscence music therapy sessions on changes in depressive symptoms in elderly persons with dementia. *Journal of Music Therapy*, 37, 170–182.

Baird, A., & Samson, S. (2009). Memory for music in Alzheimer's disease: Unforgettable? *Neuropsychology Review*, 19, 85–101.

Ben-Yehuda, N. (2002). *Autobiography in Shir Vazemer - Israeli Folksong* (in Hebrew). Jerusalem, Israel: Keter Publishing House.

Bright, R. (1988). *Music therapy and the dementias – Improving the quality of life*. St. Louis: MMB Music, Inc.

Brotons, M., & Koger, S. (2000). The impact of music therapy on language functioning in dementia. *Journal of Music Therapy*, 37, 183–195.

Clair, A. A. (2000). The importance of singing with elderly patients. In D. Aldridge (Ed.), *Music therapy in dementia care* (pp. 81–101). London: Jessica Kingsley Publishers.

Cohen, A., Bailey, B., & Nilsson. T. (2002). The importance of music to seniors. *Psychomusicology*, 18, 89–102.

Dijkstra, K., Bourgeois, M., Burgio, L., & Allen, R. (2002). Effects of a communication intervention on the discourse of nursing home residents with dementia and

their nursing assistants. *Journal of Medical Speech-Language Pathology*. Retrieved from http://findarticles.com/p/articles

Eliram, T. (2006). *Come, thou Hebrew song – The songs of the land of Israel – Musical and social aspects* (in Hebrew). Haifa, Israel: University of Haifa Press.

Fels, D. I., & Astell, A. J. (2013). Storytelling as a model of conversation for people with dementia and caregivers. *American Journal of Alzheimer's Disease & Other Dementias* 26(7), 535–541.

Folstein, M. F., Folstein, S. E., & McHugh, P. R. (1975). Mini-Mental State: A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, 12, 189–198.

Green, N. L., Guinn, C., & Smith, R. W. (2012). *Assisting social conversation between persons with Alzheimer's disease and their conversational partners.* Papers from a workshop on speech and language processing for assistive technologies (SPLAT). Montréal, Canada, 7–8.

Hacohen, E. (1984). *Be-Khol zot yesh bah mashehu – The songs of Tel Aviv* (in Hebrew). Tel Aviv, Israel: Dvir Publishing house.

Haneishi, E. (2001). Effects of a music therapy voice protocol on speech intelligibility, vocal acoustic measures and mood of individuals with Parkinson's disease. *Journal of Music Therapy*, 38, 273–290.

Kavè, G., & Levy, Y. (2003). Morphology in picture descriptions provided by persons with Alzheimer's disease. *Journal of Speech, Language, and Hearing Research*, 46, 341–352.

Kitwood, T. (2007). *Tom Kitwood on dementia – A reader and critical commentary*. C. Baldwin and A. Capstick (Eds.), New York: Open University Press.

Kohlbacher, F. (2005). The use of qualitative content analysis in case study research. *Forum: Qualitative Social Research* (online), 7(1), Art. 21. Retrieved from http://www.qualitative-research.net

Levitin, D. J. (2006). *This is your brain on music*. Plume, Penguin Books Group.

Moss, S. E., Polignano, E., White, C. L., Minichiello, M. D., & Sunderland. T. (2002). Reminiscence group activities and discourse interaction in Alzheimer's disease. *Journal of Gerontological Nursing*, 28(8), 36–44.

Norton, A., Zipse, L., Marchina, S., & Schlaug, G. (2009). Melodic intonation therapy. *The Neurosciences and Music III: Disorders and Plasticity*, 1169, 431–436. doi: 10.1111/j.1749-6632.2009.04859.x

Olderog-Millard, K. A. O., & Smith, J. M. (1989). The influence of group singing therapy on the behavior of Alzheimer's disease patient. *Journal of Music Therapy*, 26, 58–70.

Prickett, C. A., & Moore, R. S. (1991). The use of music to aid memory of Alzheimer's patients. *Journal of Music Therapy*, 28, 101–110.

Racette, A., Bard, C., & Peretz, I. (2006). Making non-fluent aphasics speak: Sing along! *Brain* (online), 129, 2571–2584. Retrieved from http://brain.oxford-journals.org/cgi/content

Ridder, H. M. O. (2003). *Singing dialogue: Music therapy with persons in advanced stages of dementia - A case study research design.* Doctoral Dissertation, University of Aalborg, Denmark. Retrieved from http://www.musikbiblioteket.aau.dk/dissertations

Sacks, O. (2008). *Musicophilia – Tales of music and the brain*. New York: Alfred A. Knopf.

Sambandham, M., & Schirm, V. (1995). Music as a nursing intervention for residents with Alzheimer's disease in long-term care. *Geriatric Nursing*, 16(2), 79–82.

Shahar, N. (2006). *Song o song rise and soar* (in Hebrew). Ben Shemen, Israel: Modan Publishing House Ltd.

Smith, S. (1990). The unique power of music therapy benefits Alzheimer's patients. *Activities, Adaptation and Aging*, 14(4), 59–63.

Straube, T., Schulz, A., Geipel, K., Hans-Joachim, M., & Miltner, W. H. R. (2008). Dissociation between singing and speaking in expressive aphasia: The role of song familiarity. *Neuropsychologia*, 46, 1505–1512.

Taharlev, Y., & Naor, M. (1994). *Shiru, Habitu Ur'u: The stories behind the songs* (in Hebrew). Tel Aviv, Israel: The Ministry of Defense.

Thorgrimsen. L., Schweitzer, P., & Orrell, M. (2002). Evaluating reminiscence for people with dementia: A pilot study. *Arts in Psychotherapy*, 29(2), 93–97.

Tomaino, C. (2002). The role of music in the rehabilitation of persons with neurologic diseases. *Music Therapy Today* (online). Retrieved from http://www.wfmt.info/Musictherapyworld

Vanstone, A. D., Cuddy, L.L., Duffin, J. M., & Alexander, E. (2009). Exceptional preservation of memory for tunes and lyrics. *Annals of the New York Academy of Sciences*, 1169(1), 291–294. doi: 10.1111/j.1749-6632.2009.04763.x

Wan, C. Y., Rüber, T., Hohmann, A., & Schlaug, G. (2010). The therapeutic effects of singing in neurological disorders. *Music Perception*, 27(4), 287–295.