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## Caregiver Singing and Background Music in Dementia Care

*Eva Götell*  
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*Caregiver singing and background music were incorporated into the interaction between caregiver and patient, the aim being to illuminate the meaning of verbal communication between persons with severe dementia and their caregivers. In the absence of music, patients communicated with cognitive and behavioral symptoms associated with dementia. In these situations, caregivers devoted their verbal communication to narrating and explaining their caring activities to the patient. The patient and caregiver, however, had difficulties understanding one another. In the presence of background music, caregivers decreased their verbal instructing and narrating while the patient communicated with an increased understanding of the situation, both verbally and behaviorally. During caregiver singing, a paradoxical effect was observed such that despite an evident reduction in the amount of verbal narration and description by the caregiver, the patient implicitly understood what was happening.*

People suffering from dementia have a diminished ability to communicate with other people due to a host of problems, including aphasia (difficulties in speaking and understanding speech), agnosia (difficulties in recognizing persons and objects), and apraxia (difficulties in promoting voluntary actions and gestures). As dementia progresses, behavioral problems such as screaming, wandering, agitation, aggressiveness, and general confusion further

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compromise communicative abilities (American Psychiatric Association, 1994). A great effort also has been put into developing caring models to cope with the behavioral problems of people with dementia, including activity programs, behavior therapy, light therapy, and massage (Deguchi et al., 1999; Finnema, Dröes, Ribbe, & Van Tilburg, 2000; Forbes, 1998; Opie, Rosewarne, & O'Connor, 1999).

Interventions involving music have been found to have remarkable effects on people with dementia and have been shown to improve emotional, cognitive, and social skills as well as decrease overt behavioral problems among persons with dementia (Brotons, Koger, & Pickett-Cooper, 1997; Gerdner, 2000; Koger & Brotons, 2000; Snyder & Chlan, 1999). There is an extensive research literature devoted to analyzing the effects of music on persons with dementia (reviewed in Aldridge, 2000, and Koger & Brotons, 2000). The majority of these studies have been carried out by music therapists and include analyses of interventions such as music listening, instrument playing, singing, rhythm exercises, and dancing. If one looks at the comparable literature in nursing research, one sees that it is limited to the use of background music alone (Kneafsey, 1997; Snyder & Chlan, 1999). Only a handful of studies have examined anything related to active musical involvement by caregivers (see, for example, Mathews, Clair, & Kosloski 2000).

There are two problems with this scenario. First, music therapy occurs outside of the context of most of the daily activities of importance for people with dementia. Second, there has been a tendency to undervalue the musical skills of people lacking formal music training. In a previous study, we examined the interactions between caregivers and patients with suspected or confirmed dementia during music events in the ward and found that caregiver involvement in instrument playing, singing, and body movements led the personnel to experience a greater sense of bonding with the patients, who themselves seemed easier to care for both during and after the music events (Götell, Brown, & Ekman, 2000).

This study is the first analysis of caregiver singing as a therapeutic intervention in dementia care and is thus the first study to examine the employment of active music making by caregivers during the course of their actual caregiving activities. Our results provide encouraging support for the use of active music making by caregivers in dementia care (see Brown, et al. 2001, for a theoretical discussion).

## METHOD

### Participants

The study was carried out in a special care unit for people with severe dementia located in an urban area in Sweden. Initial participants in the study were 8 women and 2 men. They were chosen upon the advice of the head nurse, who was asked to suggest patients and caregivers who had an extensive history of interaction. There were no rigid inclusion-exclusion criteria except the requirement that the patient have late-stage dementia. The next of kin or a trustee gave written consent for the patients' participation. The caregivers' participation was obtained at the request of first author. One female patient dropped out after the start, as she did not want to be video recorded, and so a total of nine patients were analyzed. They all scored between 0 and 12 points (out of 30;  $M = 1$ ) on the Mini Mental Status Examination (MMSE), a test of cognitive function (Folstein, Folstein, & McHugh, 1975). Participants were between 80 and 90 years old ( $M = 84$  years old), were native Swedish speakers, and had resided in the special care unit for a period of between 9 months and 5 years, 9 months ( $M = 3$  years, 1 month). Five female caregivers participated in the study, all of whom were licensed practical or mental health nurses. They varied in age between 20 and 39 years old ( $M = 29$  years old) and were fluent Swedish speakers (one was a native Spanish speaker). They had worked in geriatric care between 2 and 19 years ( $M = 10$  years) and had been caring for the participating patients for at least 1 year prior to the start of the study. The ethics committee of Huddinge University Hospital provided consent for this study.

### Design and Data Collection

The basic situation analyzed in this study was a "morning care routine," which took place in a bathroom between 7 a.m. and 9 a.m. and lasted from 6 to 22 minutes. These morning care sessions were video recorded for analysis. Both caregiver and patient were included in the videos, but only the upper body of the patient was recorded. After the sessions were over, the caregiver was interviewed about her experiences during the caring situation. This was tape recorded. Later the same day, the caregiver and the first author watched the video-recorded sessions together to give the caregiver the opportunity to comment further on her own experiences during the session and to give confirmation of her earlier observations. Those interviews were again done with a tape recorder.

The basic design of the study consisted of three conditions of the morning care routine for each patient: a control condition (i.e., the usual caring situation), a caring routine done with recorded music playing in the background, and a caring routine in which the caregiver sang to and/or with the patient. The study consisted of 27 observations (3 conditions by 9 patients). All but one of these was video recorded; for technical reasons, one session was documented by means of note taking alone. The schedule of the three sessions varied as a function of the caregiver's work schedule and the patient's state of health. The second condition (background music) took place, on average, 3 days after the first (range of 1 to 27 days). The third condition (caregiver singing) took place, on average, 9 days after the second (range of 1 to 21 days). Thus, the average time period for a patient was 13 days but varied between 3 and 49 days. Although one sequence of conditions was used for all patients (i.e., control condition first, background music second, and singing third), we doubt there were 'order effects' in this study. First, an average of 9 days separated the second and third sessions, thus minimizing possible carry over effects of the background music. Second, in one instance, a fourth condition was included that consisted of another 'control' situation. Although unanalyzed in this study, preliminary observation showed that the communication between the patient and caregiver was the same as that seen in the first condition.

In choosing music for the second and third conditions, we followed literature suggestions that familiar and preferred music be employed (Clair, 1996, 2000; Gerdner, 2000). Because none of the patients had the ability to report on their musical preferences, relatives of the patients or, when patients lacked relatives, participating caregivers were interviewed about the kind of music patients preferred. The suggested music was then played on a CD player, and the patients were verbally asked if they enjoyed the music. Based on a combination of verbal and facial responses by the patients, the first author selected musical examples to be played during morning care sessions in the second condition, which typically consisted of popular songs from the 1920s to the 1960s as sung by a male singer accompanied by an orchestra. In the third morning care condition, the caregivers sang to and/or with the patients while performing their duties. The caregivers were not trained or required to sing particular songs for the study. All of this was up to the will and musical knowledge of the caregivers. Children's songs and/or sing-along songs, however, were suggested as possibilities. The actual songs used consisted of folk songs or popular songs from the early part of the 20th century, including children's songs and drinking songs. Most of the caregivers sang songs with words, but a few chose to hum the melodies alone. According

to the caregivers, they had no experience prior to this study of listening to background music or singing to patients during the morning caring routine.

Although one caregiver had experiences of singing in a choir, the other four had no particular experience at singing beyond occasional events such as birthday celebrations. With regard to the patients, at least five of the women had sung to children when they were younger. One patient had had vocal training and had played the guitar in public, whereas another had previously sung in a choir. Analysis suggested that there was no overall relationship between the musical background of the patient and the results obtained during the musical interventions.

### Data Analysis

Our analysis focused on the verbal communication between caregivers and patients during the morning care sessions. Verbal communication was transcribed into written texts from the video recordings. Analysis of these texts was performed using the phenomenologic-hermeneutic method inspired by Ricoeur's (1976) interpretation theory, which has been employed in several nursing research studies (Lindseth, Marhaug, Norberg, & Udén, 1994; Nilsson, Sarvimäki, & Ekman, 2000), including those, as in the current study, that used video recordings as the data collection method (Ekman, Wahlin, Norberg, & Winblad, 1993; Hansebo & Kihlgren, in press; Routasalo & Isola, 1998).

The analysis was performed in three separate steps. The first step, called the *naive reading*, involved perusal of the text with an open-minded attitude to develop an impression of the overall picture and acquire ideas that could guide the following stages of the analysis. The reading was naive in the sense that it provided only a superficial interpretation of the text. The second step, the *structural analysis*, was designed to explain the text. In this process, the text was divided into "meaning units" based on particular processes occurring in the verbal communication. Each meaning unit was then reflected upon and converted into statements, which were compared across sessions and linked into "themes," themselves composed of constituent "subthemes." The final step of the analysis, called *interpretation of the whole*, was aimed at developing a comprehensive understanding of the session. All texts were reread in their entirety against the background of the naive reading and structural analysis to obtain a deeper understanding of the meaning of the verbal communication between the patients and their caregivers. Table 1 presents an example of the process by which meaning units are developed, condensed into abstract statements, and then converted into themes and subthemes.

**TABLE 1: An Example of the Analysis Process**

<i>Meaning Unit</i>	<i>Condensed and Abstracted Statement</i>	<i>Subtheme</i>	<i>Theme</i>
Caregiver Cecilia (C) and patient Tora (T) (MMSE = 0). C: Do you want to wash yourself? T: Where? [Laughs.] My face or . . . ? C: Yes. T: Here? C: Yes, there too. T washes her arms, right armpit, and under her breasts. T: Can wash myself. All the way up here so that it is right. Here. C: Is it going well? T: Is it ok now? C: Yes.	The caregiver initiates the communication and suggests what the patient should do. The patient is uncertain. She wants guidance and support from the caregiver, which is given.	Caregivers' understanding of confused patients	Caregivers toil to create a comprehensible situation for the patients

NOTE: MMSE = Mini Mental Status Examination.

## RESULTS

A naive reading of the data conveyed the impression that there were different contents to the texts in the three morning care situations. During the background-music and singing conditions, the verbal communication and interpersonal interactions seemed paradoxical by comparison to the control condition: It appeared that the verbal communication had decreased, yet the participants' understanding seemed to increase. This was especially obvious in the singing condition. Another impression was that there were similarities in the communication patterns of all the patient-caregiver dyads.

In the structural analysis, one major theme and four constituent subthemes are described for each condition. Whereas all nine patient-caregiver dyads were analyzed in developing these themes and subthemes, a set of four patient-caregiver dyads is tracked throughout this section so as to exemplify the thematic elements in the verbal communication in qualitative detail. The communication for the fourth patient-caregiver dyad is written in summary form. The singing session for this patient was not videotaped but instead recorded via note taking by the first author.

### Usual Caring Routine

Under usual morning care conditions, the major theme that characterized these sessions was that *caregivers toil to create a comprehensible situation for the patients*. Under usual conditions, patients communicated a host of behaviors—including confusion, muteness, resistance, and disruptive vocalizing—that strongly interfered with the performance of the morning care routine. As a result, caregivers had to give special attention to helping the patients accomplish the activities properly. In the sections that follow, four subthemes are exemplified by first presenting an excerpt from a caregiver-patient interaction followed by an explanatory description.

#### *Caregivers' Understanding of Confused Patients*

Patient Leif (MMSE = 4) and caregiver Anna are standing in front of a sink and mirror.

*Anna:* "So. Would you like to shave?"

*Leif:* "Yes."

*Anna:* "Here you are." She hands Leif an electric shaver.

*Leif:* "How am I supposed do it?"<sup>1</sup> He looks at himself in the mirror, and uses the shaver in such a way that the blades are not touching his face in the correct way.

*Anna:* "Hold it more like this." She helps him to hold the shaver correctly.  
*Leif:* "I see." [Humming to himself. Referring to his beard stubble.] "Oy, it is not gone." [Humming to himself and laughing.] "It doesn't work." He shaves the entire area of his beard.  
*Anna:* [Later on.] "Here, now you can have a little aftershave lotion." She hands Leif a bottle of aftershave lotion. He is humming.  
*Leif:* "Shall I put aftershave lotion first?"  
*Anna:* "Yes."  
*Leif:* "Is this good?"  
*Anna:* "Yes, that is very good." He applies lotion to the shaved part of his face. Leif, while humming, laughing, and talking incomprehensibly, continues to apply the lotion to his forehead and rub it in his eyes.  
*Anna:* "Leif, it is not so good to place it into your eyes." She takes the bottle out of Leif's left hand.  
*Leif:* "I see."

Some level of confusion was seen with all patients during the caring routine under usual conditions. Patients often performed grooming activities incorrectly. They seemed to have forgotten how to perform simple activities as well as the names and uses of everyday objects such as toiletries. Confusion was also reflected in the speech of the patients, which was often characterized by incorrect syntax. When working with confused patients, caregivers had to take special care in verbally instructing the patients how to perform activities properly as well as to name common objects being used.

#### *Caregivers' Understanding of Mute Patients*

Caregiver Doris and patient Ulla (MMSE = 0) stand in front of a sink and mirror. Doris is doing Ulla's hair.

*Doris:* "So, Ulla, I will soak your hair a bit because you slept so well that it shows in your hair." She soaks Ulla's hair with a wet washcloth.  
*Doris:* "Ulla, does it hurt?"  
*Ulla:* [Silence.] She continues to comb Ulla's hair.  
*Doris:* "Does it hurt?"  
*Ulla:* [Silence.]

Muteness or silence was part of the communication of all patients, some more than others. This created a gap in communication, making the interaction one sided. To deal with such patients, caregivers tended to narrate the activities they were performing (e.g., "I will soak your hair a bit"). This kind of narration, in addition to being an explanation of what was going on, permitted verbal communication to continue although the patient was silent. A sense of nurturing was shown by the frequent use of the patient's first name.

Questions such as "Does it hurt?" also showed a sense of concern for the patient. Such questions continued although the patient never replied.

#### *Caregivers' Understanding of Resistant Patients*

Caregiver Anna stands in front of patient Vera (MMSE = 0), who is sitting on a toilet.

*Anna:* "Vera, shall we try to brush your teeth again?"

*Vera:* "Yes, do it." Vera tries to stand up.

*Anna:* "Yes, but if you sit down and open your mouth." While holding a towel under Vera's chin, Anna moves a toothbrush toward Vera's mouth.

*Vera:* "Uv, uv, uv!" Vera purses her lips together and moves her head back.

*Anna:* "No, but I'm going to brush. Vera, open your mouth. Open your mouth. Ok." Vera lashes out at the toothbrush and towel.

*Vera:* "Ouch [talks incomprehensibly] and so crazy."

*Anna:* "Yes, but if you open your mouth, it will be much easier. Open your mouth." Vera purses her lips together and turns her head away from Anna.

*Vera:* "Yes, that it is for certain, but does."

*Anna:* "Ok." She forces the toothbrush into Vera's mouth. Reluctantly, Vera opens her mouth, turning her head backward.

*Vera:* "Ouch, ouch, ouch!"

*Anna:* "There you are."

*Vera:* "Mean, mean!" [Talks incomprehensibly.] "Oh, ouch, ouch, ouch, ouch!"

*Anna:* "But we have to brush your teeth, Vera."

*Vera:* "Ouch, ouch ouch!" [Talks incomprehensibly.] "Oh, ouch!"

*Anna:* [Calmingly.] "Shh! Shh! Shh!" She finishes with the tooth brushing.

*Vera:* "Why don't you do something?"

Many of the patients communicated with resistance to the caregivers' activities. This ranged from mild resistance to downright aggressiveness. Patient reactions could include turning away, pushing away, hitting, and pinching. Such instances could be accompanied by emotive vocalizations of pain and suffering as well as incomprehensible utterances or abusive comments. These were times when patients were most uncooperative. Not only did they fail to understand the caregiver's activities, but also, they actively resisted them. In such situations, the caregiver tried to do what she thought was best for the patient. As in the previous situations, she described and narrated her activities in the hopes of helping the patient understand what was going on. She used expressions such as "We have to" to reinforce the importance of the activities. She used nurturing devices such as "Shh! Shh! Shh!" to calm the patient. In addition, she constantly referred to the patient by name when talking with her.

*Caregivers' Understanding of Screaming Patients*

One patient, Rune (MMSE = 0), communicated with disruptive screaming throughout the entire care session as part of his verbal communication. He screamed "Ouch" and said threatening phrases such as "Watch it!" and "Hurry up!" Caregiver Elsa tried to ascertain if she was hurting the patient. Upon asking him if he was in pain, he said that he felt fine.

In morning care situations under usual conditions, caregivers initiated the verbal communication with the patients. In speaking with the patients, they narrated, described, and explained what was going on, what was about to happen, and the necessity of the activities to be done. Caregivers expressed a sense of cooperation by calling the patient by name and by using the pronoun *we* when inviting the patient to take part in a grooming activity. In doing so, they tacitly acknowledged the will and desires of the patient and their autonomy as decision-making individuals. When speaking, patients spoke in a limited range of styles that included monosyllables, incorrect syntax, out-of-context sentences, and incoherent speech. They often responded in ways that were incomprehensible to the caregiver, who had to guess and intuit the meanings of these statements. With some patients, the major problem was simply a failure to perform the activities correctly, whereas with others, problems of active resistance came to the fore. The caregivers toiled to make the caring situation as comprehensible as possible for the confused, silent, and/or aggressive patients despite strong obstacles to communication. Interviews with the caregivers confirmed that these video-recorded sessions were quite typical.

**Background Music**

In the second condition, the caring routine occurred in the presence of background music, as described in the Methods section. Under such circumstances, the major theme of the interaction became *the creation in cooperation of an understood context*, reflecting an increased sense of understanding and cooperation on the part of the patient compared to the "usual" situation. In the sections that follow, four subthemes are exemplified (as previously) by presenting an excerpt from a caregiver-patient interaction followed by an explanatory description.

*Increased Patient Cooperation and Understanding*

Patient Leif and caregiver Anna are standing in front of a sink and mirror.

*Anna:* 'Shave yourself.' She hands Leif an electric shaver. He looks at himself in the mirror, shaves himself, holding the blades appropriately towards his face and moving the shaver over the entire bearded area. Anna hands Leif a bottle of aftershave lotion.

*Anna:* 'Yes, a bit of shaving lotion.'

*Leif:* 'Should I have?'

*Anna:* 'Yes.'

*Leif:* 'Nothing's coming out.' Leif doesn't seem to notice that lotion is coming out continuously onto his hand.

*Anna:* 'Oh yes, it is coming out all the time.' Leif speaks incomprehensibly to himself and hums.

*Leif:* 'Yes.' He applies the lotion to the shaved area of his face only and hands the bottle to Anna.

When the waltz 'Hälsa dom därhemma' ('Greet Them at Home') was played in the background during the caring situation, there was an increase in the patient's ability to understand the grooming activities at hand and the caregiver's verbal messages; consequently, the sense of cooperation also increased. As a result, the caregiver decreased the number of verbal explanations and warnings that she usually used in these caring sessions. This was an apparent influence of background music on the caregiver: Music reduced the necessity for verbal instructing on the part of the caregiver while simultaneously increasing the sense of understanding by the patient. The patient seemed able to perform the activities such as shaving and applying lotion correctly and with little assistance.

#### *Silent Patients' Ability to Express Their Wills and Opinions*

Caregiver Doris and patient Ulla are standing in front of a sink and mirror. Doris is doing Ulla's hair.

*Doris:* 'Now we will start fixing your hair. We will soak it a bit because it shows signs of how well you slept.' She soaks Ulla's hair.

*Doris:* [While combing Ulla's hair.] 'Your curls have a mind of their own.'

*Ulla:* 'Oh no.'

*Doris:* 'Do you think it's ok?'

*Ulla:* 'No, I must have a hair cut.' She looks at herself in the mirror.

*Doris:* 'Should we cut it? We can't do that now, you know.'

When the waltz 'Den gamla dansbanan' ('The Old Dance Pavilion') was played in the background, a usually mute or silent patient became more talkative. When the patient responded verbally, there was more of a sense of true dialogue between patient and caregiver, as exemplified here in the discussion about the patient's hairstyle. The patient also communicated increased

awareness of herself, both in recognizing her image in the mirror and in presenting her opinion about her appearance.

#### *Decreased Resistance by Patients*

Patient Vera is sitting on a toilet. Caregiver Anna stands in front of her holding a toothbrush in her hand.

*Anna:* "Shall we brush your teeth, Vera?"

*Vera:* "Yes."

*Anna:* "Open your mouth." Vera opens her mouth. Anna moves the toothbrush into Vera's mouth and brushes her teeth.

*Vera:* "Yes, yes, ah, ah, ah."

*Anna:* "The upper teeth too."

*Vera:* "It is so easy!"

*Anna:* "Vera, Vera, open your mouth, open your mouth."

*Vera:* "Uh, uh, uh!" [Blowing air out of her mouth.]

*Anna:* "No, don't do that."

*Vera:* "Ouch, ouch, I think so."

*Anna:* "Good." She finishes the tooth brushing. [Later on.] Vera stands in front of a sink looking at herself in the mirror. Anna stands just next to her. "Who is that? Is that Vera?"

*Vera:* "Yes." She opens her mouth, shows her teeth, and looks at a hole, a missing tooth, in the upper row.

*Anna:* "Yes. Shall we try to put the tooth in too?" She leaves the bathroom and comes back with Vera's denture. Anna puts it in place. For the first time in 2 weeks, Vera allows a caregiver to do that.

When the tango "Capri" was played in the background, patient resistance and aggression diminished greatly. Hitting, pinching, shoving, and pushing away decreased or nearly ceased. Here again, the caregiver narrated the activities she was performing, but this time, the patient was mostly compliant in allowing her to do them. In addition, background music seemed to increase the self-awareness of the patient.

#### *Decreased Disruptive Screaming by Patients*

When listening to the waltzes "Ungmö'n på Käringön" ("The Maid at Old Woman Island"), "Med en enkel tulipan" ("With a Plain Tulip"), "Hälsa dom därhemma" ("Greet Them at Home"), and "En sjöman älskar havets våg" ("A Sailor Loves the Sea's Wave"), patient Rune, who communicated with screaming when conducting the morning care session in the usual way, also screamed in the same manner during the whole caring session when background music was played. The screaming, however, was diminished. As before, Rune said that he was not experiencing pain.

New dimensions were seen in the communication between patient and caregiver when background music was played. Patients seemed to have an enhanced sense of understanding of themselves, their surroundings, and the activities being performed either on them or by them. The verbal communication increased in clarity and mutuality. Caregivers decreased the amount of verbal instruction and narration and yet patients seemed to communicate with enhanced cooperation.

### Caregiver Singing

In the third condition, the caring routine occurred while the caregiver sang to and/or with the patient. Under such circumstances, the major theme of the interaction between the caregiver and patient was *musical mutuality in a comprehensible context*, reflecting an increased sense of competence and mutual understanding that characterized these sessions. Patients communicated with a wider and deeper understanding of the situation. In the sections that follow, four subthemes are exemplified as previously.

#### *Increased Patient Competence*

Patient Leif and caregiver Anna are standing in front of the sink and mirror.

*Anna:* [Singing.] "Waving at a man."

*Leif:* [Singing.] "Waving." She hands Leif an electric shaver.

*Anna:* [Singing.] "Come, you happy sailor."

*Leif:* [Singing.] "Do you . . ." [Hums.]

*Anna:* [Singing.] "You will get my red rose." Leif holds the shaver in his hands.

*Leif:* "What shall I do?" Holding the shaver correctly, he shaves himself completely.

*Anna:* [Singing.] "I am beautiful/You are young/Sing from your heart." [During the singing session, no aftershave was put on.]

When singing the 1922 Swedish song "Flickan i Havana" ("The Girl in Havana"), the caregiver excluded all information pertaining to the activities and objects at hand and yet the patient performed the activities correctly, understanding the identity and use of the objects for shaving. Thus, even in the absence of overt instruction, the patient had an understanding of how to perform the activity.

#### *Implicit Understanding Without Words*

Caregiver Doris and patient Ulla are standing in front of a sink and mirror.

*Doris:* ‘Oh yes, good. Is it ok? Shall we comb your hair, Ulla?’ [Singing.] ‘A sugar baker is living in the town/He bakes cookies all day long/He bakes big ones/He bakes small ones/He bakes some with sugar on them.’ She combs Ulla’s hair. Ulla tunes in and starts joining in the singing. [Singing together.] ‘He bakes big ones/He bakes small ones/He bakes some with sugar on them.’ Doris soaks Ulla’s hair.

*Doris:* ‘Have you been baking cookies, Ulla?’

*Ulla:* ‘Yes.’

*Doris:* ‘Have you done that? Can you bake cookies?’

*Ulla:* ‘Yes, I have done that.’

*Doris:* ‘Yes, perhaps you and I can do it some day, now that we are so good at singing the song, I mean.’ She finishes the combing.

*Doris:* [Several minutes later, at the end of the morning session.] ‘Are we ready now? Shall we go and eat?’ Ulla looks at herself in the mirror, looks down at the sink, picks up the comb lying on the side of the sink, looks at herself in the mirror, and starts combing her hair.

*Doris:* ‘Do you want to comb your hair? You have to look elegant when you are going out. Is everything ok? Is everything all right? Shall we leave now?’ Ulla puts the comb back down next to the sink.

When singing the 1892 Swedish children’s song ‘Sockerbagaren’ (‘The Sugar Baker’), a previously mute patient sang along with the caregiver. When the caregiver sang, the patient implicitly understood the intentions and the meaning of the tasks and responded by singing along. When the song text was over, the caregiver talked about the content of the text, which happened to be an everyday household activity. The patient responded by talking about her own experience. In addition, when the patient was about to leave the bathroom, she picked up the comb on her own initiative to fix her hair.

#### *Elimination of Patient Resistance*

Patient Vera sits on a toilet. Caregiver Anna stands in front of her.

*Anna:* [Singing.] ‘The flowers smell from the pasture and many other places.’ She moves the toothbrush in the direction of Vera’s mouth. Vera opens her mouth and allows Anna to brush her teeth.

*Vera:* ‘Soon.’

*Anna:* [Singing.] ‘And in the middle of the thrush’s evening concert, many cheerful laughs are heard.’

*Vera:* ‘Yes, I know that.’

*Anna:* [Singing.] ‘Lovely is the summer night.’

*Vera:* ‘Ouch.’ Anna finishes brushing Vera’s teeth.

*Anna:* [Somewhat later in the session. Singing.] ‘The moon scatters silver in the thicket.’

*Vera:* ‘Oh, yes.’ Anna dries Vera’s mouth with a towel.

*Anna:* [Singing.] "Never will I forget the time . . ." Anna presents the denture to Vera.  
*Vera:* "No."  
*Anna:* [Singing.] ". . . in Svinnsta Rock."  
*Vera:* "Yes, boo, boo."  
*Anna:* "Open your mouth. Open your mouth."  
*Vera:* "No, no. Not as become as those." Vera pulls back.  
*Anna:* "Open your mouth, and I will put it in."  
*Vera:* "No."  
*Anna:* "Ok."  
*Vera:* "I think."  
*Anna:* "Open your mouth. Ok." Vera opens her mouth.  
*Vera:* "Ouch."  
*Anna:* "Good, now it is done." Anna puts the denture in place in Vera's mouth.  
*Vera:* "Ouch, ouch! It is so terrible."  
*Anna:* "It's ok now."  
*Vera:* "Is it?"

When the caregiver sang the 1928 Swedish sing-along song "Dansen den går uppå Svinnsta Skär" ("Dancing at Svinnsta Rock"), the patient, who usually responded with aggression and resistance, cooperated, showing no overt signs of aggressiveness. During the singing, the patient understood the actions taking place and how to cooperate in the tasks. In addition, she seemed to recognize and understand the text being sung, as demonstrated by her responses: "Yes, I know that" and "Oh, yes." When being sung to, patients frequently made comments at the ends of sung lines, thereby communicating cognitive sharpness.

#### *Enhanced Cooperation Without Disruptive Screaming*

Patient Rune, who communicated with screaming during the two previous morning care sessions, ceased screaming and uttering threatening sentences while being sung the 1845 Swedish drinking song "Helan går" ("Bottoms Up").

When analyzing the themes and the subthemes that characterized the sessions when the caregivers sang for or together with the patients, the similarity among the patients was most striking. The dimensions of the communication seemed to be understood in a wordless fashion. Narrations of the actions taking place and descriptions of the objects being used ceased almost entirely. Heard instead were the sounds of singing voices. Several of the patients joined caregivers in the singing of at least parts of the songs, demonstrating a capacity that seemed to be preserved despite many other deficits in the dementia disease. When being sung to, the patients said they enjoyed it.

In addition, song texts often led to reminiscences about patients' personal and home lives. This had not only a cognitive influence on the patient but also an interpersonal influence on the patient-caregiver dyad. When the caregiver sang for or together with the patient, a kind of musical mutuality emerged in their interactions that was nearly absent in the control condition and present, but to a lesser degree, with background music.

An overview of the themes and subthemes of the three conditions is shown in Table 2.

### **Interpretation of the Whole**

The meaning of the verbal communication in this study could be interpreted as the caregiver using words to create a comprehensible world for the patient. When the caring routine was done in the usual way, the caregiver toiled with words and actions to create an interpretable situation for the patient, who seemed generally confused and inattentive. This communication was not generally successful, and the patient usually failed to understand or to comply with the caregiver's instructions. When background music was played, the patient seemed to communicate an increased understanding of what was going on, and this was reflected in verbal statements, including an ability to express his or her will and desires. In addition, the patient seemed to communicate enhanced cooperation in the performance of the caring activities. Finally, with caregiver singing, a wider and deepened degree of mutuality was seen in the interaction between patient and caregiver. Cooperation seemed to occur in the wordless fashion as the patient and caregiver joined together in a type of musical mutuality.

## **DISCUSSION**

This study confirmed the results of a large number of research studies and personal observations demonstrating that people with dementia communicate with debilitating verbal impairments, memory problems, emotional disturbances, and compliance problems. This was the basic profile we saw in the "usual" morning care situation with all our patients. The study also confirmed observations in the music therapy and nursing literatures pointing to the positive influence of background music on patient communication, mood, and compliance. Background music has been employed in numerous studies and has been shown to have important effects on decreasing aggressive and agitated behavior (Clark, Lipe, & Bilbrey, 1998; Gerdner & Swanson,

**TABLE 2: Overview of the Conditions, Themes, and Subthemes Formulated From an Analysis of Morning Care Sessions**

<i>Conditions</i>	<i>Normal Caring</i>	<i>Background Music</i>	<i>Caregiver Singing</i>
Themes	Caregivers toil to create a comprehensible situation for the patients	The creation in cooperation of an understood context	Musical mutuality in a comprehensive context
Subthemes	Caregivers' understanding of confused patients	Increased patient cooperation and understanding	Increased patient competence
	Caregivers' understanding of mute patients	Silent patients' ability to express their wills and opinions	Implicit understanding without words
	Caregivers' understanding of resistant patients	Decreased resistance by patients	Elimination of patient resistance
	Caregivers' understanding of screaming patients	Decreased disruptive screaming by patients	Enhanced cooperation without disruptive screaming

1993; Goddaer & Abraham, 1994; Hoeffler, Rader, McKenzie, Lavelle, & Stewart, 1997; Ragneskog & Kihlgren, 1997), increasing food intake during meals (Ragneskog, Bråne, Karlsson, & Kihlgren, 1996), improving nighttime sleep (Lindenmuth, Patel, & Chang, 1992), reducing disruptive vocalizations (Casby & Holm, 1994), increasing cognitive capabilities (Lord & Garner, 1993; Prickett & Moore, 1991), increasing bathing cooperation (Clark et al., 1998; Hoeffler et al., 1997; Thomas, Heitman, & Alexander, 1997), and improving mood and social interaction (Lord & Garner, 1993). Therefore, the results of our study using background music are in accord with much previous research. Unlike previous studies of the effects of background music, however, this study was the first to analyze the interaction between patient and caregiver. In doing so, it revealed an influence on the caregivers, namely, that they decreased their verbal narrations and descriptions because they intuitively knew that the patients were understanding their communications.

What was additionally new about the study was that it was the first analysis of caregiver singing during caring activities. The results showed a positive influence on verbal communication, one that mirrored yet went well beyond that of background music and one that enhanced the verbal communication into implicit communication. We can summarize the main finding of this study by saying that caregiver singing produced a paradoxical effect: Whereas caregivers in the normal caring condition used extensive verbal narration and explanation of their activities with patients and saw only minimal compliance, singing greatly diminished the necessity for caregiver instruction and increased patient understanding and cooperation. It is important to note that the lyrics of the songs the caregivers sang were not about the caregiving activities at hand but merely dealt with common folk themes such as nature, love, and play. In no way were the caregivers singing the instructions they had spoken in the no-singing condition. Several of the caregivers, in fact, hummed the music and therefore did not use words at all. The results of this study provide encouraging support for the use of active music making by caregivers working with dementia patients. In a previous theoretical article, we devised the general concept "music-therapeutic caregiving" to refer to the employment of active music making by caregivers with patients during the course of their caregiving activities (Brown et al., 2001).

At the same time, we need to point out the limitations of this study and of the use of active music making in clinical care. Because this is the first study to look at the influence of background music and singing on verbal communication in dementia care, future studies will be needed to confirm the quali-

tative picture obtained here. We were struck by the overall uniformity of the results obtained with singing, but it will be important to see if similar results are found in different patients and in different settings. Notably, all of the patients in this study came from a (Swedish) background with a strong tradition of folk music and folk singing. It will be important to investigate what effect background music and singing have on people who do not have this type of strong connection to communal music making in their early years.

Video recording was used as the data collection method in this study because of its ability to capture, as accurately and comprehensively possible, the complex nature of the communication phenomena under investigation. One advantage of this approach is the investigator's ability to view and analyze the same material repeatedly (Latvala, Vuokila-Oikkonen, & Jahonen, 2000; Spiers, Costantino, & Faucett, 2000). We can, however, imagine two types of potential disadvantages of this method. First, some people (patients and caregivers alike) may not want to have their image and interactions videotaped, although this type of resistance probably diminishes as people become acclimated to the presence of the researcher and video camera in the room. In our particular case, one patient had to be excluded from the study because she did not want to be filmed. Second, video recording may have an influence on the communication between participants. For example, the presence of an external observer (i.e., the researcher) may place caregivers on their "best behavior" and thus enhance the results. Although it is very difficult to gauge what effect video recording had on the caregivers in our study, our interviews with the caregivers after the morning care sessions confirmed that communication with the patients during the no-music sessions was no different than when no video recording was done.

Qualitative methods were used in the study. Such methods are interpretative and therefore may be influenced by the investigator's preconceptions. As we were investigating singing for the first time in this study, however, we had limited expectations about its influence. If anything, we were quite surprised by the observed positive outcomes.

These results suggest that background music and singing are useful interventions for late-stage dementia patients. It is too early to know what other types of patient populations may be usefully served by this type of intervention, although we suspect that all types of cognitively impaired patients might benefit from it (Brown et al., 2001). We saw positive outcomes for singing with all nine of our patients, but it is unquestionably the case that singing will not be for everyone, or at least not in all situations. There may be times when singing is more of a disturbance than a comfort for a patient. Be that as it may, singing seems to be among the most functional and universal

means of communicating with dementia patients. Individualized singing might, in fact, be the supreme gesture of personal involvement that we know of in dementia care.<sup>2</sup>

### NOTES

1. Every attempt has been made to convey, as literally as possible, the agrammatical aspects of patient speech in translating these dialogues from Swedish to English. This has been accomplished through collaboration between the first author (a native Swedish speaker) and the second author (a native English speaker).

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