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This article has been amended to include a correction in the Figure. An error was identified subsequent to its original printing (January 2013, Vol. 39, No. 1, pp. 32-41), to be acknowledged in an erratum printed in March 2013. The online article and its erratum remain the version of record.

Musical Memories



Translating Evidence-Based Gerontological Nursing Into a Children’s Picture Book

ABSTRACT

Individuals with Alzheimer’s disease (AD) are often cared for within multigenerational families. More specifically, 26% of family caregivers have children younger than 18 living with them. This article describes an innovative model for translation of an evidence-based intervention into an engaging, realistic picture book that serves as a teaching tool for children and their families. The book, *Musical Memories*, focuses on the relationship between a granddaughter and her grandmother who has AD. The story applies basic principles of the Progressively Lowered Stress Threshold model to explain the underlying cause of grandmother’s behaviors and models the evidence-based guideline “Individualized Music for Elders with Dementia” to empower the granddaughter in maintaining a relationship with her grandmother. *Musical Memories* is intended to serve as a valuable resource for families and the gerontological nurses who serve them.

This article provides background literature identifying the need for and process of translating the Progressively Lowered Stress Threshold (PLST) model (Hall & Buckwalter, 1987) and the evidence-based intervention “Individualized Music for Elders with Dementia” (Gerdner, 2007b) into a realistic picture book entitled, *Musical Memories* (Gerdner, in press). This innovative model is intended as a teaching tool for children and their families, as well as a resource for the health care providers who serve them.

INTERFACE BETWEEN CHILDREN AND INDIVIDUALS WITH DEMENTIA

Although individuals with AD are members of multigenerational families, the overwhelming majority of research has focused on the primary caregiver and the care recipient. There is need to study the impact of the individual with ADRD on the collective whole, including young grandchildren (Celdrán, Triadó, & Villar, 2010; Garwick, Detzner, & Boss, 1994). In addition, it is important to recognize that response of family

More than 5.4 million Americans have a diagnosis of Alzheimer’s disease or related dementias (ADRD), with nearly 15 million nonpaid individuals caring for them (Alzheimer’s Association, 2011a). On January 4, 2011, President Obama signed into law the National Alzheimer’s Project Act to address the mounting “Alzheimer’s crisis.” In response, the Alzheimer’s Association (2011b)

developed a document with recommendations to counter the challenges associated with AD. One recommendation involves educational efforts directed toward family caregivers. The Alzheimer’s Association (2011a) estimates that 26% of family caregivers have children younger than 18 living with them. Social worker Elizabeth Smith-Boivin declares “children as the forgotten victims of Alzheimer’s disease” (as cited in Miller, n.d., para. 3).

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members, including children, will directly or indirectly impact the older adult with AD. While there is growing recognition that individuals with dementia must be treated within the context of the family, too often the needs of grandchildren are overlooked.

Very little research has been done to explore the effects that a grandparent with dementia has on a grandchild and how the child's response affects the grandparent. To our knowledge, the first study to address this issue

was conducted by Creasey, Myers, and Epperson (1989). A primary finding revealed that grandchildren perceived poorer relationships with a grandparent who had dementia than those grandchildren whose grandparent was cognitively intact. Werner and Lowenstein (2001) expanded these efforts by exploring the meaning of grandparenthood—within the context of dementia—from the perspective of both the grandparent and grandchild. Grandparents with dementia and their corresponding

grandchildren reported talking less about important topics compared with intergenerational relations that involved a grandparent without dementia. Based on clinical experience, Hall, Buckwalter, and Crowe (1990) reported that family caregivers sought counsel for children who acted out, expressed fear and anger, and avoided the person with dementia. It is expected that the child's adverse behavioral and emotional response would negatively affect the person with dementia, given their lowered tolerance to stress (Hall & Buckwalter, 1987) and increased sensitivity to nonverbal communication expressed by others.

In Spain, Celdrán et al. (2010) studied the relationship between adolescent grandchildren and their corresponding grandparent with dementia. Grandchildren who had a close relationship with their grandparent prior to the onset of dementia were more likely to identify a decline in this relationship following the onset of dementia. Behavioral disturbances were identified as a primary reason for this decline. The investigators recommended including grandchildren in informational programs about AD and addressing issues that are most distressing to grandchildren.

Cohen and Eisdorfer (2001) pointed out that a child's response to a person with dementia will vary depending on factors such as the child's age, number of other children in the family, closeness of the relationship between child and the person with dementia, availability of other family members, and cultural background of the child. Overall, children should be encouraged to ask questions, express feelings openly (Mace & Rabins, 2006), and remain involved with the person with dementia at a level that is ap-

appropriate to the child's ability and understanding (Cohen & Eisdorfer, 2001). Picture books with stories that describe children's reactions to AD can be used to model ways for children to interact with individuals with dementia (Holland, 2005; Manthorpe, 2005).

A comprehensive review of children's literature that addresses AD was conducted using advanced search methods via WorldCat, the online catalog at the Alzheimer's Association's Green-Field Library, Amazon.com, and Google. Books were accessed from the first author's personal collection and public libraries. The majority of books provide an oversimplification of the disease and introduce the same basic content with minimal variations. A select number of children's books that have a distinctive approach to addressing AD were chosen for review in this article. The purpose was to identify the primary focus of content along with the strengths and limitations. This information was supplemented with professional reviews from literary journals as appropriate. This knowledge allows identification of gaps in the literature.

CHILDREN'S LITERATURE REVIEW

The Sunsets of Miss Olivia Wiggins (Laminack, 1998) was written by a former elementary school teacher. Laminack's biosketch on the dust cover simply states that the story was "inspired by family members." *The Sunsets of Miss Olivia Wiggins* is a sensitive story of an older woman in the advanced stages of dementia who resides in a nursing home and spends her days sitting silently with a blank stare in a wheelchair. Throughout the story, environmental stimuli (e.g., bouquet of freshly cut lilacs) elicit memories of earlier and happier times in Miss Olivia Wiggins' life. Although her facial expression does not change and she remains silent, the reader becomes privy to her inner world

through the accompanying pastel watercolor illustrations. Although touted as a children's book, Topol (1998) states it is written from an adult's perspective and asserts that the story needs a stronger "child-oriented connection" (p. 79).

Grandma's Cobwebs (Frantti, 2002) was authored by a school principal who cared for her mother after being diagnosed with AD. The book is written from the perspective of a young girl named Claire whose grandmother has AD. The story provides a realistic depiction of an older person with AD. The primary purpose is to help children cope with the variety of emotions they may experience when a family member has AD. The story addresses Claire's initial feelings of denial when learning of her grandmother's diagnosis. Claire then uses inappropriate laughter as a coping mechanism, followed by feelings of guilt. Her emotions advance to anger, followed by sadness. After accepting her grandmother's disease, Claire is able to provide the respect and reciprocity necessary to help her grandmother. An accompanying instructional guide is provided to enhance the educational value of the picture book. Unfortunately, *Grandma's Cobwebs* is no longer in print and has limited availability.

The storybook *What's Happening to Grandpa?* (Shriver, 2004) was inspired by the author's father who was diagnosed with AD. At 48 pages, the book is longer than a typical children's picture book of 32 pages. *What's Happening to Grandpa?* is the story of Kate, who is described as "sensitive and wise beyond her age" (p. 7) and her grandfather who has AD. The story helps children understand the initial signs and symptoms of AD and explains how the disease will progress over time. The story emphasizes the importance of family and helping Grandpa preserve his memories by creating a photo album with pictures spanning his life. National resources to help families af-

ected by AD are listed at the back of the book. In her review of *What's Happening to Grandpa?*, Karim (2004) indicates that the characters are too perfect to be realistic and concludes that the "purposive story isn't what works; it's the information woven into the fiction" (p. 1943) that provides its value.

Another resource is a 30-minute episode included in the four-part television series, *The Alzheimer's Project*. In this particular segment, "Grandpa, Do You Know Who I Am?" (Harrington, Watkin, & Shriver, 2009), children ranging in age from 5 to 15 discuss their thoughts and feelings about having a grandparent with AD. The majority of children focused their thoughts on the memory loss associated with the disease. However, some discuss their grandparents becoming "angry" for no apparent reason and having "bad moods." The segment includes one scenario showing a grandmother exhibiting the initial signs of agitation. Maria Shriver narrates the segment and emphasizes the importance of children being able to have open, honest discussions with the afflicted person and other family members. This is consistent with the message conveyed in the book she authored, *What's Happening to Grandpa?* (Shriver, 2004).

Another book warrants mentioning simply because the story addresses music in an older adult with AD. The picture book *Grandpa's Music* (Acheson, 2009) begins by Grandpa moving in with his adult son and his family. Household chores are divided between family members to ease the transition for everyone. One of Grandpa's assigned responsibilities is peeling potatoes. Grandpa has enjoyed playing the piano throughout his life and independently initiates this activity. His granddaughter, Callie, enjoys singing with Grandpa while he plays the piano. The author informs readers that Grandpa is able to continue this activity despite AD

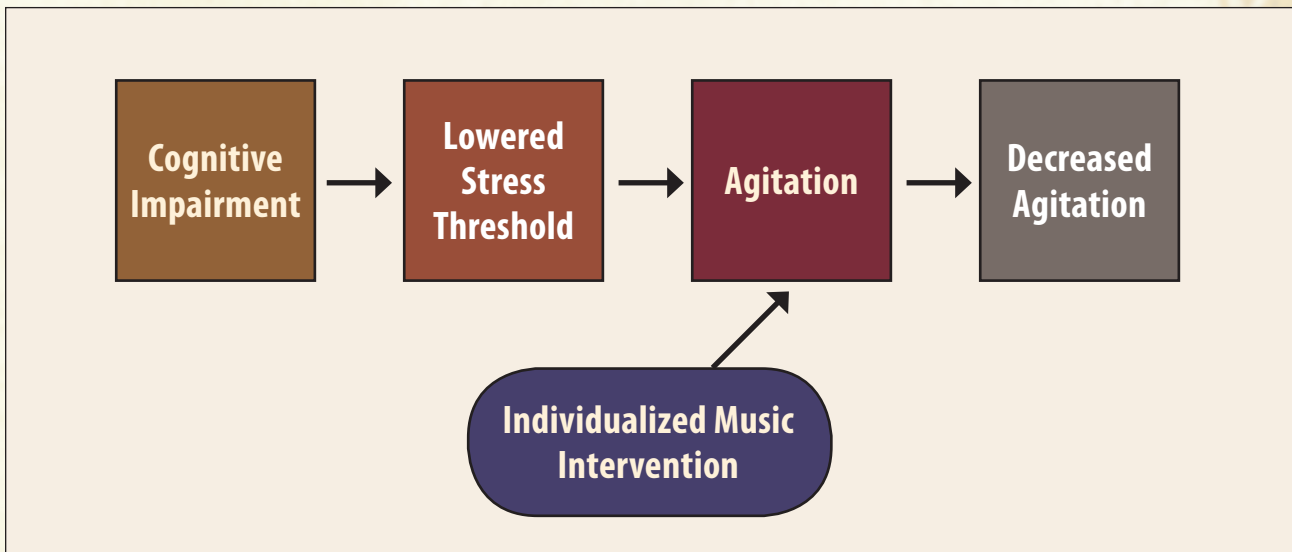


Figure. Gerdner's Middle-Range Theory of Individualized Music Intervention for Agitation. From "An Individualized Music Intervention for Agitation," by L.A. Gerdner, 1997, *Journal of the American Psychiatric Nurses Association*, 3(6), 177-184. Copyright 1997 by SAGE Journals. Reprinted with permission.

because of the "muscle memory in his fingers" (p. 3). As the disease advances, Grandpa cuts his finger while peeling potatoes and begins forgetting the words to his favorite songs. These events lead to Grandpa being placed in a nursing home. The Kirkus Review ("Grandpa's Music," 2009) of this book begins by stating, "This emotional look at a family living with Alzheimer's disappoints with its lack of depth." The review concludes, "As an educational tool about Alzheimer's, it falls flat" (p. 871). Alison Acheson has written a number of books for children and teenagers on a wide-variety of topics. Neither the book's introduction nor the author's website (<http://alisonacheson.com>) provides any background information that indicates the author has direct experience with someone with AD.

The media mentioned above focus on a variety of issues associated with helping children understand AD and how to cope emotionally with a loved one who has the disease. Despite these offerings, there remains a critical need for a book that reflects our current understanding of behaviors of individuals with dementia that have been reported to be distressing not only to children but adults alike.

CONCEPTUAL FRAMEWORK: PROGRESSIVELY LOWERED STRESS THRESHOLD MODEL

AD results in a progressive decline in memory, cognition, and functional abilities, and an increase in behavioral symptoms. Gruber-Baldini, Boustani, Sloane, and Zimmerman (2004) studied 2,078 individuals with dementia living in residential care and assisted living facilities across four states. Findings indicated that approximately 34% exhibited one or more behaviors per week. In comparison, another study estimated that community-dwelling individuals with AD exhibited agitation 67.5% of the time (Tractenberg, Weiner, & Thal, 2002). Agitation interferes with care delivery and social interaction, ultimately having a negative impact on the person's quality of life (Léger et al., 2002; Samus et al., 2005; Sloane et al., 2004).

Cognitive impairment, as found in individuals with ADRD, is a key antecedent to agitation (O'Donnell et al., 2007). As proposed in the PLST model (Hall & Buckwalter, 1987), cognitive impairment results in a decreased ability to accurately receive and process sensory stimuli, resulting in a progressive decline

in the person's stress threshold and a heightened potential for anxiety. As the disease advances, fewer stressors are required to meet and exceed the person's stress threshold, causing the person to become anxious and agitated (Hall & Buckwalter, 1987).

A variety of factors, either alone or in combination, contribute to stress in individuals with ADRD such as (a) physiological stressors (e.g., pain, discomfort, infection); (b) misleading stimuli or inappropriate stimulus levels; (c) change of environment, caregiver, or routine; (d) internal or external demands that exceed functional capacity; (e) fatigue; and (f) affective response to perceptions of loss (Hall & Buckwalter, 1987; Hall, Gerdner, Zwygart-Stauffacher, & Buckwalter, 1995). For a review of research supporting the PLST model, refer to Smith, Gerdner, Hall, and Buckwalter (2004).

INDIVIDUALIZED MUSIC

Individualized music was developed as an alternative intervention for the management of agitation in individuals with ADRD. It provides a humanistic, individualized approach to care.

Middle-Range Theory

This intervention is grounded in the Middle-Range Theory of Individualized Music for Agitation (IMIA) (Gerdner, 1997). Elements of the Middle-Range Theory include cognitive impairment, PLST, agitation, and individualized music.

As previously identified and as presented in the **Figure**, cognitive impairment is a key antecedent to agitation. IMIA incorporates the concept of lowered stress threshold as developed by Hall and Buckwalter (1987) to explain agitation.

As an intervention for agitation, individualized music is conceptually defined as music that has been integrated into the person's life and is based on personal preference (Gerdner, 1992). The intervention involves carefully selected music based on the person's preference prior to the onset of cognitive impairment. Gerdner (1997) theorized that music may be used as a means of communicating even in the advanced stages of AD/DRD, when the person has an impaired ability to understand verbal language and has a decreased ability to appropriately interpret internal and external environmental stimuli. It is further theorized that the presentation of individualized music will provide an opportunity to stimulate remote memory. This changes the person's focus of attention and provides an interpretable stimulus, overriding stimuli in the environment that is meaningless or confusing. The elicitation of memories associated with positive feelings will have a soothing effect on the person with dementia, which in turn will prevent or alleviate agitation (Gerdner, 1997).

The subtle cues of cumulative stress are often overlooked, advancing to agitated behaviors that occur with increased frequency and intensity (Hall & Buckwalter, 1987; Gerdner, Buckwalter, & Hall, 2005). Therefore, individualized music should be implemented prior to the peak level of agitation, ideally when

the person first begins exhibiting signs of anxiety, to prevent or diminish the advanced stages of agitated behaviors (Gerdner, 1997).

Evidence-Based Protocol

An evidence-based protocol for the implementation of individualized music has been developed and refined over time. This guideline was originally published in 1996, with the fifth and most recent version published in 2007 (Gerdner, 2007b). An expanding body of research providing empirical support for the effectiveness of individualized music has been conducted in the United States, Canada, Great Britain, France, Sweden, Norway, Japan, and Taiwan (Gallagher, 2011; Gerdner, 2000, 2005; GERIA, n.d.; Guehin et al., 2009; Janelli, Kanski, & Wu, 2002; Park & Specht, 2009; Ragneskog, Asplund, Kihlgren, & Norberg, 2001; Sung, Chang, & Abbey, 2006, 2008; Sung, Chang, & Lee, 2010; Suzuki et al., 2004; Thomas, Heitman, & Alexander, 1997). Although the majority of research has tested the intervention in long-term care (LTC) facilities, a growing number of studies are testing the intervention in other environments (e.g., home care, hospice care).

The protocol includes two versions. The first was specifically written for professional health care providers. This protocol identifies risk factors for agitation, assessment criteria, a detailed description of the intervention, and criteria for evaluation of patient outcomes, and process factors. An evidence grade schema is used to assign a specific rating, based on the strength and type of evidence, for each recommendation within the guideline. To facilitate accessibility, an abridged and updated version of the protocol was published in the *Journal of Gerontological Nursing* (Gerdner, 2010).

Following instruction, family members may also implement indi-

vidualized music. Consequently, a companion consumer version was added to the evidence-based protocol in 2001 and updated in 2007 (Gerdner, 2007a). The consumer version provides a simplified format, tailored for family caregivers.

The protocol includes the Assessment of Personal Music Preference Questionnaire (APMPQ), developed in 2000 by Linda A. Gerdner, Jane Hartsock, and Kathleen C. Buckwalter (available in Gerdner [2007b]), developed and tested to assist in the selection of individualized music. Questions explore the meaning of music in the person's life and identify preferred song titles. Because musical selections are often closely aligned with specific performers, this also becomes an important part of the assessment process. When cognitive impairment prevents the person from identifying or expressing these preferences, an alternate version of the questionnaire is available for completion by a close family member. The alternate version of the APMPQ has been successfully used by family members of residents living in LTC facilities (Gerdner, 2005) and those who care for an older adult at home (Park & Specht, 2009).

The expected effect of individualized music is dependent on the identification and implementation of music based on the patient's specific musical preferences. A positive correlation is expected between the degree of significance that music had in the person's life prior to the onset of dementia and effectiveness of the intervention. Individualized music may not be suitable for everyone. For example, it may not be appropriate for a person who did not have an appreciation for music prior to the onset of cognitive impairment (Gerdner, 2007b).

FAMILY PARTICIPATION

Family members, including children, play a key role in assisting in the selection of preferred song titles

and musical performers when cognitive impairment prevents the care recipient from doing so. For example, in one study, an adult grandson provided the recording *Music of Faith and Inspiration* from his grandmother's personal music library as her preferred selection (Gerdner, 1992). As a child, he had fond memories of listening to this recording on Sunday afternoons with his grandmother.

Studies support that following instruction, family members can effectively implement individualized music as a means of reducing agitation in individuals with dementia who live in a LTC facility (Gerdner, 2005) or a home care setting (Park & Specht, 2009). As research evolves, methods and outcome measures are beginning to capture a more global response to the intervention (Gerdner, 2012). Anecdotal notes and qualitative interviews with professional and family caregivers also indicate that individualized music promotes positive affect, expressed satisfaction, and meaningful interaction with others, thereby supporting personhood and quality of life (Gerdner, 2005).

PICTURE BOOKS

Picture books are a "complex, carefully planned work of art that creates a satisfying interplay between text and pictures to tell a story" (Horning, 1997, p. 120). The creators strive for a masterful combination of text and illustrations, to establish unity. Together the text and art create meaning that is greater than either alone (Galda & Cullinan, 2006).

A number of scholars have used their expertise to author picture books as a teaching tool for children. For example, in 1999, primatologist and animal advocate Dr. Jane Goodall authored *Dr. White*, the story of a small white dog whose unconditional love serves as a catalyst for healing a hospitalized child. This book is equally as endearing and informative to adults as to children. Simi-

larly, Gerdner's first picture book, *Grandfather's Story Cloth* (Gerdner & Langford, 2008), is a bilingual (English/Hmong) book for Hmong American children and their parents to promote awareness and understanding about AD.

MUSICAL MEMORIES

There are different genres of picture books. *Musical Memories* (Gerdner, in press) is a realistic fiction picture book. This genre "portrays the real world in all of its dimensions" (Galda & Cullinan, 2006, p. 188). *Musical Memories* is targeted for children ages 8 to 12; however, the underlying message of understanding and compassion transcends to individuals of all ages. The story is about Gabrielle and her grandmother who has AD. It provides an honest and respectful depiction of an older person with AD, to promote understanding and compassion. The story is unique in that it reflects the current knowledge and understanding of AD, going beyond the issue of short-term memory loss to address antecedents of anxiety progressing to agitation as reflected in the PLST model and applying basic principles of the evidence-based guideline for individualized music. Simply stated, *Musical Memories* promotes a problem-solving approach that models the use of a simple intergenerational activity (listening to music) to empower a granddaughter in maintaining a relationship with her grandmother. More specifically, the music serves as a catalyst to unveil Grandmother's personhood, promote communication, elicit positive memories, reduce anxiety, and alleviate agitation.

Musical Memories is illustrated by Maureen Taylor Gearino. She used watercolor paintings to complement, extend, and highlight the book. Watercolor is a popular medium because it allows diverse expression of the desired moods reflected in the storyline (Horning, 1997).

Overview of Musical Memories

The story begins by introducing Gabrielle's interest in ballet and music. This is presented, in part, to parallel Grandmother's love of music and dance. As the story progresses, a number of Grandmother's behaviors become distressing to Gabrielle. Understanding the underlying cause of these behaviors can help family members respond in a helpful and appropriate way.

For example, Mother and Grandmother accompany Gabrielle to the ballet *Cinderella*. Grandmother enjoys the ballet but becomes tired and fatigued toward the end of the performance. Following the ballet, the trio is forced to weave their way through a pushing crowd of people. Mother gets the car while Gabrielle and Grandmother wait outside where the night air is filled with noise and the blinding glare of car headlights. The excessive and confusing levels of environmental stimuli, in combination with Grandmother's growing level of fatigue, cause her to become anxious and confused. As a result, Grandmother attempts to get into the wrong car as it pulls to the curb to pick up the people waiting behind them. Gabrielle intervenes and awaits her mother's arrival. Mother's car provides a quiet milieu in contrast to the overwhelming stimuli outside the theater.

Grandmother's episode of confusion is very upsetting to Gabrielle, who retreats to her room when they finally arrive back home. This sets the scene for Mother to comfort Gabrielle and explain Grandmother's dementia.

The following day, Mother comes up with an idea. She and Gabrielle go upstairs to the attic to retrieve Grandmother's record player and record albums. Upon reaching the top step, Gabrielle sees a movement from the corner of her eye. She turns her head and sees "someone" staring in at her from the darkened corner. On closer examination, Mother helps Gabrielle realize that

KEYPOINTS

Gerdner, L.A., & Buckwalter, K.C. (2013). *Musical Memories: Translating Evidence-Based Gerontological Nursing Into a Children's Picture Book*. *Journal of Gerontological Nursing*, 39(1), 32-41.

- 1 *Musical Memories*, a realistic picture book, addresses antecedents of anxiety progressing to agitation as reflected in the Progressively Lowered Stress Threshold model and applies basic principles of the evidence-based guideline "Individualized Music for Elders with Dementia."
- 2 A key factor for the successful use of individualized music is identification of specific music selections, including both song titles and performers, that will stimulate remote memory and elicit positive feelings to prevent or alleviate agitation.
- 3 Individualized music serves as a catalyst to unveil personhood, promote communication, elicit positive memories, reduce anxiety, and alleviate agitation.
- 4 Understanding the underlying cause of anxiety and agitation can help family members respond in a helpful and appropriate way.

she is seeing her own reflection on the surface of a dusty mirror. This experience helps Gabrielle understand the very real feelings associated with the misinterpretation of environmental stimuli. This becomes valuable in understanding Grandmother's behavior later in the story.

Grandmother's record player, her favorite records, and her scrapbook are brought down from the attic. Mother shows Gabrielle how to use the record player. Throughout the story, music is used as an intergenerational activity to stimulate Grandmother's remote memories. Grandmother responds to the music by humming, singing, and dancing. The music also serves as a stimulus for reminiscing and sharing stories with Gabrielle. These stories promote communication, understanding, and a meaningful relationship between Gabrielle and Grandmother.

Toward the end of the story, Grandmother gets up in the middle of the night to go to the bathroom. She subsequently misinterprets the bathroom light for sunlight and thinks that it is morning. She goes downstairs to prepare breakfast. While in the kitchen, Grandmother

misinterprets her own reflection on the darkened windowpane for a potential intruder staring at her. Her shouts awaken the family. Mother and Gabrielle stay with her while Father goes downstairs to investigate. Select illustrations serve to expand on the written words. Most notably is the illustration of Father scanning the kitchen for clues of Grandmother's allegation of an intruder. Close examination of the accompanying illustration reveals Father's reflection on the glass window. After insuring that the house is secured, Father returns upstairs and attempts to reassure Grandmother that she and the family are safe. When Father remarks that the kitchen curtains were open, Gabrielle remembers her experience in the attic and applies her problem-solving skills. Gabrielle suggests that Grandmother may have seen her own reflection on the window, Grandmother remarks as usual, "Gabrielle, don't be silly." Attempts by Mother and Father to reason with Grandmother are to no avail and only served to deepen Grandmother's convictions, causing Grandmother's anxiety to escalate.

The story emphasizes the im-

portance of supporting preserved abilities in the person with dementia. For example, although those with AD may have impaired short-term memory, their long-term memory often remains intact well into the advanced stages of the disease. *Musical Memories* demonstrates the value of stimulating long-term memory with recorded preferred music. Grandmother especially enjoyed music sung by Frank Sinatra. This stimulated positive memories from an earlier time in her life. For example, hearing the song "Our Love is Here to Stay" (Gershwin & Gershwin, 1938) elicited memories of the night she became engaged and danced with her fiancé.

Gabrielle enjoys listening to music with Grandmother after school. The music stimulates Grandmother to reminisce about her life. This process promotes Grandmother's identity and a meaningful relationship with Gabrielle.

Listening to favorite music can also be used to reduce anxiety and agitation. When Grandmother becomes frightened in the story, Gabrielle and her mother stay with her to make sure that she feels safe. Using a soft, gentle voice is appropriate in trying to calm Grandmother, but Mother and Father's efforts to explain or reason with Grandmother about her misperception only increased her agitation. Music serves as a meaningful diversion that elicits positive memories and has a soothing effect to gradually reduce Grandmother's anxiety and agitation.

Musical Memories is based on a culmination of clinical and research evidence. This knowledge is translated into an age-appropriate story that is engaging and empowering to the child. The book is intended to help children cope with the challenging behaviors associated with AD and to provide a new model of support to assist in promoting a positive relationship with a person diagnosed with AD. Author notes that directly relate to and build on

the contents presented in the story strengthen its educational value.

Unlike many of the currently available books, *Musical Memories* provides a distinctive and timely contribution for children and families. It is also intended as an important resource for health care professionals and teachers who serve them.

CLINICAL NURSING IMPLICATIONS

The National Alzheimer's Project Act stimulated the Alzheimer's Association to identify needs that must be addressed related to the current and future "Alzheimer's crisis." Included in this document (Alzheimer's Association, 2011b) is a lack of public awareness regarding AD and its symptoms. *Musical Memories* provides one means of promoting public

The Alzheimer's Association (2011b) also noted the importance of evidence-based interventions for care of individuals with dementia. This is consistent with the growing awareness that evidence-based findings need to be translated into clinical practice through guidelines and protocols. There is a further need to apply evidence-based guidelines into teaching tools for members of the lay community. *Musical Memories* is an innovative example of how an evidence-based protocol can be translated into an educational tool for children and their parents.

Musical Memories models the use of an intergenerational activity that accesses preserved abilities and may be used to stimulate reminiscence, thus promoting communication and understanding. Research findings

and behavioral challenges associated with AD.

Musical Memories is intended to serve as a valuable resource to families, educators, and health care professionals. Inclusion of this book in public, university, school, and patient libraries located in hospitals and health clinics will promote family accessibility.

CONCLUSION

This article was based on the need to develop more effective, evidence-based, intergenerational interventions for families living with dementia. A review of children's literature in this area was presented and a new picture book, *Musical Memories*, described. Individualized music was set forth as one successful strategy to decrease agitation in individuals with dementia. In keeping with recent recommendations of the Alzheimer's Association, an evidence-based protocol that incorporates the PLST model to explain agitation is available for use by consumers as well as health professionals and serves as the basis for *Musical Memories*.

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Musical Memories models the use of an intergenerational activity that accesses preserved abilities and may be used to stimulate reminiscence, thus promoting communication and understanding.

awareness about AD. The conceptually grounded story extends beyond impairment of short-term memory to include the secondary symptoms and behaviors associated with the disease such as anxiety and agitation.

A premise of the PLST model is that all behaviors have meaning (Gerdner et al., 2005; Hall & Buckwalter, 1987; Hall et al., 1995). This is the first children's book to explore the underlying cause of behaviors exhibited by a person with AD. Facilitating a child's understanding of the behavioral and psychological symptoms associated with dementia helps to "foster continuing intergenerational relationships" (McCrea, 1993, p. 3).

support the benefits of intergenerational activities for individuals with dementia. An exploratory study conducted by Jarrott and Bruno (2003) found that during intergenerational activities with children (ages 6 weeks to 5 years), individuals with dementia showed both positive affect and increased participatory behaviors.

Another objective of the Alzheimer's Association (2011a) is to promote home care while preserving abilities and independence of the person with dementia. *Musical Memories* takes place primarily within a home setting that strives to promote Grandmother's independence while addressing safety issues

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