Published in final edited form as:

J Gerontol Nurs. 2010 August ; 36(8): 22–31. doi:10.3928/00989134-20100801-02.

Practical Implications of Procedural and Emotional Religious Activity Therapy for Nursing

Alzheimer's disease is the sixth leading cause of death and the most common cause of dementia in the United States, accounting for 60-80% of all dementia cases (Alzheimer's Study Group (ASG), 2009). Alzheimer's disease has reached a crisis point with no foreseeable signs of decline in the next few decades. Currently, about 5.3 million Americans live with Alzheimer's disease (ASG, 2009) and new cases of the disease are estimated to increase by more than 50% in the next 20 years (Alzheimer's Association, 2009). Alzheimer's disease is the nation's third most expensive disease, as it costs the federal government more than 100 billion dollars per year (AGS, 2009). Given the difficulty of providing care to adults with Alzheimer's disease, this burgeoning clinical population will tax healthcare resources and increasingly burden caregivers.

One source of burden for both formal and informal caregivers is agitation and disruptive behaviors. According to Buckwalter's Progressively Lowered Threshold Model, the older adult with cognitive impairment experiences an incongruent fit between his or her cognitive abilities and the environment. When environmental demands exceed one's cognitive abilities, frustration occurs resulting in agitation and disruptive behaviors (Stolley, Koenig, & Buckwalter, 1999). Such disruptive behaviors are often observed in Alzheimer's disease and related dementias.

Many behavioral approaches attempting to mitigate agitation and disruptive behaviors use activities to distract the older adult (Cotter, Stevens, Vance, & Burgio, 2000; Madori, 2007). The idea is that if the older adult is engaged in a positive goal-directed behavior, he or she will be unable to simultaneously engage in a negative behavior (LaVigna & Donnellan, 1986). Unfortunately, given the cognitive demands required to perform many activities, the older adult with Alzheimer's disease experiences tremendous difficulty engaging in activities due to deficits in memory and attention skills. Furthermore, many activities targeting the older adult with Alzheimer's disease seem childish and thus demeaning, especially in the early and middle stages of the disease (Vance & Johns, 2002). This difficulty of finding appropriate and meaningful activities remains a pervasive problem in providing care to the older adult. Compounding this reality is the fact that meaningful activity remains an essential human requirement for both physical and psychological well being (Harmer, Orrell, 2008; Lenshyn, 2005).

Procedural and Emotional Religious Activity Therapy (PERAT) strives to provide meaningful activities to some the older adult with Alzheimer's disease by introducing select, cognitive appropriate religious or spiritual activities (Vance, 2004a), or other activities that are equally emotionally salient. The purpose of this article is to briefly describe the neurocognitive underpinnings of PERAT and demonstrate that this approach is already being applied informally in multiple settings with effective outcomes. In this discussion, the

terms *religious* and *spiritual* will be used interchangeably; though, it is recognized that important distinctions have been developed by others (for more information about this distinction, refer to Koenig, McCollough, & Larson, 2001). Guidelines and caveats for using this approach in a more formalized manner will be highlighted, along with implications for nursing practice and research.

Neurocognitive Declines in Alzheimer's Disease

Alzheimer's disease gradually destroys cognitive abilities in a sequential manner (Esiri, Lee, & Trojanowski, 2004). Figure 1 likens this process to a storm whereby the waves of Alzheimer's disease erode a beach (i.e., the brain), with the sands of certain cognitive abilities being washed away before others. In the earlier stages of Alzheimer's disease, the specific types of damage to the brain include fewer connections between the hippocampus and the prefrontal cortex and a shrinking of the hippocampus. These brain structures are responsible for several cognitive abilities including executive functioning and reasoning ability, attentional skills, short-term memory, and episodic and declarative memory (Grady, Furey, Pietrini, Horwitz, & Rapoport, 2001; Koenig, Smith, Troiani, Anderson, Moore et al., 2008; Rogers & Friedman, 2008). Deficits in episodic memory refer to problems recalling information about one's self (e.g., Who came to visit me this morning? What is my daughter's name?). Deficits in declarative memory refer to problems recalling learned information (e.g., What is the capital of Virginia? Who is the president?). These cognitive abilities are referred to as explicit or conscious memory abilities because of one's awareness involved in retrieving such information and of purposely using such cognitive abilities. These explicit memory abilities are compromised first with Alzheimer's disease due to how the disease impacts these neurological structures.

Next in line up the beach are implicit or unconscious memory skills, sometimes referred to as procedural memory. These skills refer to the ability to unconsciously recall information such as riding a bicycle, tying one's shoe, or striking a match. Even if conscious recollection is damaged due to Alzheimer's disease, the older adult can still engage in many activities that use these rote abilities (De Vreese, Neri, Fioravanti, Belloi, & Zanetti, 2002; Klimkowicz-Mrowiec, Slowik, Krzywoszanski, Herzog-Krzywoszanska, & Szczudlik, 2008). These abilities endure because they are driven by brain structures initially spared by Alzheimer's disease; the basal ganglia and cerebellum (Poldrack & Gabrieli, 1997).

Finally, emotional memories are very resistant to Alzheimer's disease. Even though one may not consciously recall or communicate them, emotional memories are classically conditioned responses to persons and things to which attachments are formed. This phenomenon has been referred to as "implicit emotional processing" (Rosenbaum, Furey, Horwitz, & Grady, 2008). For example, this attachment is observed clearly when an older adult follows his or her familial caregiver around, sometimes to the frustration of the caregiver because he or she feels smothered by the care recipient "being under foot". This behavior is referred to as "shadowing" (Gitlin, Winter, Burke, Chernett, Dennis et al., 2008; Mace & Rabins, 1999). Even though the older adult may not recall the relationship or even be able to identify the caregiver, the emotional bond is unconsciously present. One reason for this maintenance of emotional memory is the resilience of the limbic system, the brain

structures which process emotional content and memories. This system is more resistant to Alzheimer's disease than other brain regions (Grady et al., 2001). Additionally, myelin loss that accompanies Alzheimer's disease reflects the opposite of that found in normal human development, a process called reverse ontogeny (Reisberg, Franssen, Souren, Auer, Akram et al., 2002). One of the first developmental tasks accomplished for an infant is the formation of a secure attachment to a caregiver in order to assure sustenance, warmth, and survival (Hunter & Maunder, 2001). In many ways, this attachment is observed with Alzheimer's disease.

Overall, Alzheimer's disease is a progressive disease that gradually strips away cognitive abilities sequentially. In the early stages of the disease, explicit memory skills are compromised first while implicit and emotional memory skills mostly remain. As the damage to specific brain structures progresses, the older adult is less able to rely on explicit memory skills and thus begins relying more on implicit and emotional memory skills. However, even in the middle to late stages of the disease, implicit and emotional memory skills are eventually compromised, resulting in a vegetative state, loss of reflexes such as swallowing, and eventually death (Mace & Rabins, 1999). Knowing this process and how cognitive abilities are compromised can help nurses devise ways to augment the older adult's quality of life while reducing agitation.

Religious and Spiritual Activities as Therapy

PERAT focuses on the older adult by recognizing his or her need for meaningful activities while acknowledging the cognitive limitations caused by Alzheimer's disease. One source of meaningful activity for many older adults is practicing one's spirituality and religious traditions. These traditions include reading sacred texts, meditating or praying, listening to religious music, or holding religious icons. For example, Lenshyn (2005) remarked how one older adult with Alzheimer's disease made a special connection to a bust of Jesus that was in her office. These activities provide solace, comfort, and purpose to scores of older adults. Several studies testify to the positive biopsychosocial benefits that older adults received from their religious traditions (Armstrong & Crowther, 2002; Cohen, Thomas, Williamson, 2008; Masters, Hill, Kircher, Lensegrav-Benson, & Fallon, 2004; Vance, Struzick, & Raper, 2008). In fact, many studies extol the value that spiritual activities exert in improving quality of life in older adults with Alzheimer's disease while also mitigating agitation and disruptive behaviors (Abramowitz, 1993; Beuscher & Beck, 2008; Khouzam, Smith, & Bissett, 1994; Walters, 2007).

Implementing PERAT

PERAT emphasizes finding spiritual and religious activities for the individual older adult that rely less on explicit memory and more on implicit and emotional memory. Thus, those religious activities that have been performed repetitively over a lifetime are ideal for use or adaptation for the adult with Alzheimer's disease. The goal is to reduce agitation and increase quality of life for the older adult and the caregiver by incorporating such familiar activities.

There are five steps to implementing PERAT (Figure 2 outlines the five steps of PERAT). Step 1: Assess the older adult's religious/spiritual background. This step can be accomplished by talking to the older adult and the family. Assessing one's spiritual and religious background entails asking family members about the types of activities the older adult was and are still engaged; the Prior Religious Involvement Inventory contains a list of questions that can be used for this purpose (Vance, 2004b). Such questions can also include "What religious/spiritual values did/does your loved one embrace?", "How important is his or her spirituality?", "What objects are of special reverence to him or her?", and "What spiritual or religious activities, however small or mundane, did/does your loved one enjoy?" The older adult with an identifiable religious/spiritual background will be ideal for PERAT. For someone without an identifiable background, the principles of PERAT may still be utilized to develop appropriate activities in other areas in which the older adult has an intimate knowledge and strong emotional attachment (e.g., former career or vocation, hobby).

Step 2: Assess the cognitive status of the older adult. The Mini-Mental State Exam (MMSE; Folstein, Folstein, & McHugh, 1975) provides a quick and inexpensive method for assessing the cognitive status of the older adult (for more information, go to www.minimental.com). A score of 24 to 18 suggests the older adult is nearing the early stages of the disease; this means that activities that use some explicit memory skills can be used (e.g., reading simple devotionals). A score of 17 to 13 suggests the older adult is approaching the middle stages of the disease; this means that activities that use explicit memory skills should not be used while activities more reliant on implicit and emotional memory skills should be used, preferably those that are done automatically without conscious thought (e.g., reciting the rosary). Finally, a score of 12 or less suggests the older adult is in the late stages of the disease; this means that activities that use only basic implicit memory skills and strong emotional memory skills should be used (e.g., grasping a religious icon). Other cognitive measures such as the Global Deterioration Scale (Reisberg, Ferris, deLeon, & Crook, 1988) can also be used to assess the cognitive status across the stages of the disease.

Step 3: Determine the older adult's cognitive abilities that can be used with activities. For example, an older adult in the early stages of the disease will have more explicit memory skills than someone in the middle or late stages of the disease. This information suggests that activities relying more on explicit memory skills can be used for the older adult in the early stages (e.g., scripture reading, listening to scriptures on tape or DVD, Bible studies). But as the disease progresses, activities relying on implicit and emotional memory abilities should be sought (i.e., holding the rosary, recitation of very well known scriptures).

Step 4: Match enjoyable activities to the older adult's cognitive ability. Through talking to the older adult and family member, nurses can document religious or spiritual activities that the older adult likes the most and are meaningful to him or her. From this, it can be determined which activities have an implicit memory component, require the least amount of mental effort, and are emotionally salient. Such activities include listening to music, holding a religious icon, or thumbing through a religious text with pictures. Furthermore, family members may be able to provide personal materials belonging to the older adult to be

used with this activity. Personal effects such as these are more likely to be emotionally salient and meaningful.

Step 5: Monitor and reassess whether the older adult can perform and enjoy the activity. This step can be done by simply noting how engaged the older adult is in performing the activity (e.g., How much time does the older adult spend with the activity? Is the older adult less agitated before, during, and after being engaged in the activity? Is the older adult able to perform the activity?). Much of this monitoring can be documented through a behavioral diary which keeps track of this information and identifies which activity the older adult seems to enjoy the most or is useful in distracting the older adult when he or she begins to become agitated. As is common with activities for the older adult with Alzheimer's disease, an activity can hold someone's attention for 10 to 20 minutes one day and the next day it does not. Results may vary by individual or even time of day when the older adult may be more aware due to fluctuations in diurnal rhythms (Vance, 2003). Therefore, it is important to have optional activities available in case the first activity does not capture and maintain the attention of the older adult. Also, the level of engagement may vary. For example, the older adult may hold and recite the rosary one day; the next day, he or she may simply hold it and stare blankly in the distance. Yet, this minimal and passive engagement with the rosary may still be comforting at some level even though active engagement is not observed. If at some point the cognitive demands of some activities exceed the older adult's cognitive abilities, it will be essential to reassess the progression of the disease, thus necessitating the need to repeat steps 2 through 5.

Evidence and Examples from the Literature

This approach has already been informally introduced in homes, adult day cares, and nursing home settings; however, PERAT represents a more formal approach with guidelines for using such activities for the older adult with Alzheimer's disease (Vance, 2004a, 2004b). Such approaches are also evident in the literature. Abramowitz (1993) introduced morning prayer to mentally impaired Jewish elders from four adult daycare centers in Israel. Morning prayer consisted of a cantor reciting familiar prayers during a 10 to 15 minute period. Abramowitz remarked that the elders seemed to be comforted by this activity, even if they could not consciously recall the prayer. Similarly, in a daycare for older adults with Alzheimer's disease, Jennings and Vance (2002) introduced a 30-minute music appreciation class once a week for four consecutive weeks to adults in the early and middle stages. Music was specifically chosen to be familiar songs of either a religious or patriotic theme. Nursing assistants familiar with the adults rated their agitation before and after participating in this class; analysis revealed a significant reduction in agitation.

In a nursing home setting, Gerdner (2005) also used music, some of which was spiritual in nature. However, she individualized the music therapy to each older adult based upon an assessment of their past music preference. A reduction in agitation was also observed.

Khouzam and colleagues (1994) documented agitation in two cases of World War II veterans with advanced dementia living in the nursing home. In both cases, by knowing the older adult's belief system and life as a veteran during the war, they used Bible verses that held deep meaning for these veterans. So when either older adult experienced a period of

agitation, the nursing staff repeated the Bible verses. Typically, these men became calmer as a result. Nursing staff referred to this as “Bible Beliefs Therapy” because of its effectiveness.

Walters (2007) tested whether 24 women with middle stage dementia in a nursing home could experience pleasure and alertness to multi-sensory ministry. Three types of ministry visitation were examined. The first type was the traditional ministry visit consisting of ten minutes of extemporaneous speaking about the life of Jesus. The second type consisted of talking about the life of Jesus while providing tactile cues such as a gold coin, a wooden cross, wheat stalks, a bottle of frankincense, and a large pearl. The third type consisted of a 26-page multi-sensory book about the life of Jesus. This book had very large print, pictures, and sensory elements associated with it such as a strip of cedar wood or sheep wool. All visitations lasted approximately ten minutes, during which the Observed Emotion Rating Scale (Lawton, Van Haisma, Perkinson, & Ruckdeschel, 1999) was used to measure how long participants expressed pleasure and engagement. Compared to the traditional visitation type, participants were found to enjoy and engage in the multi-sensory book visitation significantly more, followed by the multi-sensory object visitation.

In a particularly interesting study, Carnes (2001) developed a “spiritual environment” for adults with dementia in a nursing home setting. This spiritual environment consisted of decorating an alcove or recess with votive candles, a wall hanging with a generic religious symbol such as a labyrinth, and soft playing spiritual music such as chants or hymns. It was found that as older adults wandered into this area, they would sit and calm themselves. With the introduction of this environment, it was found that the level of agitation in these older adults decreased significantly. Even though they may not have been conscious of the effects of this environment, unconsciously it may inspire a sense of awe, calmness, and reverence that helps mitigate anxiety that these older adults were experiencing.

Many of these interventions have incorporated music as an activity, whether of a religious or secular nature. Regardless, appreciation of music appears to be spared with the advancement of Alzheimer’s disease. Götell, Brown, and Ekman (2002) examined the effects of caregivers singing and humming on older adults with Alzheimer’s disease during bathing. Researchers found that older adults responded much better (i.e., without agitation) during bathing when caregivers sang or hummed compared to just having music playing in the background or just giving verbal instructions while bathing. Perhaps songs of a religious or spiritual nature for the older adult with Alzheimer’s disease may also be effective in helping with such care activities.

Implications for Nursing Practice and Research

With nurses being on the frontline of dementia care, this formalized approach represents a way to reduce caregiver burden and increase quality of life for the older adult with Alzheimer’s disease. Yet, there are a few caveats to be considered. First, many older adults do not have a discernable religious background. Others may have changed or abandoned their belief system. Therefore, introducing this approach without talking to the older adult and family would be inappropriate and unethical. Second, although PERAT is meant to

reduce agitation and improve quality of life, some religious activities may act as an antecedent for evoking restlessness or confusion. For example, listening to a stern, vociferous, and enthusiastic sermon may provoke one into an agitated state. Third, other dementias where emotional processing is damaged early in the course of the disease, such as Huntington's disease, hinders the use of this approach. Thus, nursing research will be needed to refine PERAT in order to determine what dementia populations (e.g., vascular, Lewy-body, Parkinson's) this works best. In addition, PERAT has not been tested specifically in reducing agitation or increasing quality of life; however, the principles of PERAT have been and continue to be used in gerontological settings as demonstrated in the literature provided. The purpose of formalizing this approach is that PERAT offers specific guidelines generated from the gerontological literature and merged with evidence from the neurocognitive literature, in identifying idiosyncratic activities that meet the cognitive abilities of the older adult with Alzheimer's disease while attempting to provide meaningful engagement for him or her. This formal approach can be evaluated in a number of ways. For example, a pre-post two-group design could be used to determine if PERAT is better than standard activity therapy in reducing agitation levels as well as increasing the amounts of time spent in activity and observable enjoyment from engaging in these activities. It can also be compared to other activity therapies, such as Montessori activity therapy (Vance & Johns, 2002; Vance & Porter, 2000), to determine its effectiveness.

Conclusion

The older adult with Alzheimer's disease suffers from frustration in performing activities that are too cognitively demanding for them. Yet, the need to engage in meaningful activities is a part of human nature. PERAT represents an approach to utilizing existing cognitive abilities and finding meaningful activities, in this case repetitive and familiar spiritual and religious activities, to fulfill this need. Although this approach is not for everyone living with Alzheimer's disease, the neurocognitive principles that PERAT uses makes this approach adaptable for those with no identifiable spiritual or religious background by finding other activities that may be emotionally salient for them. PERAT also represents a more formalized approach for locating and developing activities that can be used to assist the caregiver in providing better quality care to the older adult. For more information on how to assess one's spiritual background and a listing of such activities from all of the major world religions, please see Vance (2004a, 2004b) where such additional details are provided.

Acknowledgement

Work on this paper was supported by Grant # K01 AG022474-01A1 to Yvonne D. Eaves from the National Institute on Aging/National Institutes of Health.

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Figure 1.
Neurocognitive Decline in Alzheimer's Disease Compared to Beach Erosion.

Step 1: Assess the Older Adult's Religious/Spiritual Background

Figure 2.
Flowchart of Implementing PERAT.