

Population Paper

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Description and Characteristics of the Population

Alzheimer's is the most common type of dementia, and it causes problems with memory, thinking, and behavior that are severe enough to inhibit quotidian functions. Most Alzheimer's patients are 65 or older, but less than 5% of them are in their 40s or 50s. For Alzheimer's, dementia progressively worsens slowly over time (ALZ, 2014a).

It starts with no signs of mental impairment (Stage 1) and continues to a very mild cognitive decline (Stage 2), where the person experiences memory loss and forgetting familiar words or and everyday object's location. In Stage 3, the person progresses to a mild cognitive decline, where symptoms are detectable, and the person experiences problems recalling names, problems recalling information that was recently read, problems misplacing important objects, and problems planning and organizing. In Stage 4, the person will forget recent events, have greater difficulty planning events or paying bills, forget personal history, and become moody and withdrawn. In Stage 5, the person will need help with daily activities, such as recalling his or her address or telephone number, will be confused about his or her environment, and will have trouble performing easier mathematical problems (counting backwards by twos). He or she, however, will remember important details about personal history and family and will still be able to eat and use the toilet without assistance. In Stage 6, the person will need greater assistance with daily functions, such as dressing properly, distinguishing familiar from unfamiliar faces, remembering names, using the bathroom, and experiencing personality changes, such as increased paranoia and delusions. In the final stage (Stage 7), the person cannot respond to his or her environment, have a conversation, or control movement. He or she

may, however, say simple words or phrases but will need help with all of their daily functions, sitting up, and holding up his or her head. Also, he or she experiences rigid muscles, impaired swallowing, and abnormal reflexes (ALZ, 2014b).

Current Effective Treatment Strategies

Music therapy has been shown to decrease intrusive behaviors in Alzheimer's patients (Zare, Ebrahimi, & Birashk, 2010), but the patients engage differently with different interventions. Regardless of the client's stage, Alzheimer's patients participate more when the music therapist sings *a capella* than they do in any other musical activity (63% of the time). The clients also highly participate with djembe drumming (61%), keyboard (60%), and guitar and djembe (57%), but the least amount of participation is during guitar only (54%) and autoharp (54%). Without considering the different types of instruments, Alzheimer's patients participate more often in rhythm activities (83%) than they do in movement (51%) or singing (49%) activities (Cevasco, & Grant, 2006).

When giving directions, it is best to provide consistent and repetitive directions to obtain client movements. Cevasco and Grant (2003) had music therapists give Alzheimer's patients either one verbal cue paired with an immediate visual cue or continual verbal and visual cues at each iteration or rhythm change. They found that the continuous verbal and visual cues caused the participants to engage in the physical activity more. The clients also engaged more in approximate behaviors emulating the therapist than they did perfectly matching the therapist or no participating at all. They also found that clients were more likely to exercise when the music therapist played an instrument than when then therapist song or when the clients played an instrument.

Clair and Memmot (2008) provide music therapy intervention guidelines for people with dementia. For early stage dementia, they recommend exercise, depression treatments, and using the patients' skills that they have developed over the decades. For the middle stages, they state that the range of notes while singing should not be too high. They also recommend using familiar songs, such as folk songs, patriotic songs, and hymns. For late-stage dementia, they recommend using familiar songs from youth. In this stage, talking and singing to and with the client is important regardless of what they client does, as it engages the client in human contact.

Clearly the use of familiar music is essential with this population. Petr (2012) found that using familiar and preferred music reduced agitation and depression. While using the preferred music, the recommendations listed above should also be employed.

Five Possible Goals

1. Intended Therapeutic Outcome: Client will maintain gross motor skills
 - a. Treatment Objective: Client will march for at least 30 consecutive seconds
 - b. Rationale: Client needs to continue moving and walking so that mobility and self-reliance are maintained as long as possible.
2. Intended Therapeutic Outcome: Client will maintain short-term memory.
 - a. Intended Therapeutic Outcome: Client will reiterate a rhythm that the SMT previously played at least 3 out of 5 trials.
 - b. Rationale: Maintaining memory will allow the client to remember and work with information just told to the client. For example, if told to take

medications, the client needs to remember for as long as possible that it is time to take the medications.

3. Intended Therapeutic Outcome: Client will maintain language skills.
 - a. Intended Therapeutic Outcome: Client will say at least one full and coherent sentence during each session.
 - b. Rationale: Language skills are necessary to communicate any needs and desires that the client will have.
4. Intended Therapeutic Outcome: Client will increase time between agitated outbursts.
 - a. Intended Therapeutic Outcome: Client will go from being agitated every 5 min to being agitated every 10 min by June 30, 2014.
 - b. Rationale: Agitated behavior disrupts client's and the other clients' daily routines. By increasing time between outbursts, client will engage more and maintain skills for as long as possible.
5. Intended Therapeutic Outcome: Client will maintain current cognitive skills.
 - a. Intended Therapeutic Outcome: Client will play an instrument two less times per iteration. For example, if asked to play 10 times in a row in one iteration, the client will play 8 times in a row in the next iteration.
 - b. Rationale: Playing the instrument a fewer number of times per iteration shows that they client can perform simple cognitive functions, such as subtraction and counting. Maintaining these skills will allow the client to count the number of medications given.

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