Assessment of occupational therapists' attitudes and knowledge of Alzheimer's disease

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Assessment of Occupational Therapists’
Attitudes and Knowledge of Alzheimer’s Disease

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Abstract

Objective: The purpose of the current study was to examine the knowledge occupational therapists have of Alzheimer’s disease and assess attitudes practitioners have toward people with Alzheimer’s disease.

Method: A three-part questionnaire was mailed to 1000 randomly selected occupational therapists licensed to practice in the state of Ohio.

Results: A total of 304 valid questionnaires were obtained, which correlated to a 35% return rate of valid questionnaires. The questionnaires consisted of three subsections: a demographics sheet, the Alzheimer’s Disease Knowledge Test (Dieckmann, Zarit, Zarit, & Gatz, 1988), and the Attitudes toward Alzheimer’s Disease and Related Dementias Scale (Lunsman & McFadden, 2006). Participants' mean knowledge score was reported at 55% and the mean attitude score reported moderately positive attitudes at 5.5 on a scale of 1-7. It was found that participants who had higher knowledge scores also had more positive attitude scores. In addition, participants who were currently or had cared for a friend or family member with Alzheimer’s disease in the past had more positive attitude scores and higher knowledge scores than those who had not cared for a loved one with Alzheimer’s disease.

Conclusion: This study demonstrates the need for an increase in educational content regarding Alzheimer’s disease and dementia in occupational therapy curriculum so future practitioners can provide optimal care for persons with Alzheimer's disease. Finally, the outcomes strongly suggest the need for an increase in practitioner education in Alzheimer’s disease and dementia etiology, pathology, and treatment in order for current practitioners to give the highest quality of care to patients with Alzheimer’s disease.
Assessment of Occupational Therapists’ Attitudes and Knowledge of Alzheimer’s Disease

The performance skills of a person with dementia depend not only on cognitive abilities but also the individual’s motivation and the nature of the environment (Ward, 2003). The occupational therapy practitioner can help the person with Alzheimer’s disease and his or her family to identify factors that help to facilitate maximum functioning (Ward, 2003). With the occupational therapist playing such a vital role in the patient’s performance, it is important to ensure therapists have the information needed to help the patient function at a satisfactory level. Although many studies have been conducted on levels of knowledge of Alzheimer’s disease, few have been done in the field of occupational therapy. The current study’s objective was to assess the level of knowledge occupational therapy practitioners have in regard to Alzheimer’s disease. It also explored the attitudes practitioners have toward patients with Alzheimer’s disease. An overview of the disease and a literature review is included followed by a description of the current study.

Overview of Alzheimer’s Disease

Alzheimer’s disease is a form of dementia that affects over four million Americans today (Corcoran, 2001). This number accounts for 50 - 75% of all diagnosed dementias within the United States. Alzheimer’s disease is especially prevalent within the older adult community. The risk of developing this disorder increases exponentially each decade over the age of 65 (Corcoran, 2001). With the growing number of elderly persons within our community, Alzheimer’s disease is a rapidly increasing health concern. In fact, it is estimated by the Alzheimer’s Association that by the year 2050 the number of adults with Alzheimer’s disease could range from 11.5 - 16 million (Alzheimer’s Association, 2006).
Alzheimer’s disease is a tedious diagnosis to confirm. Because there is no cause for this disease other etiologies such as cardiovascular disease, Parkinson’s disease, and other causes for dementia must first be ruled out (Fraker & McKillop, 2000). Initial signs and symptoms of Alzheimer’s disease may include memory impairments, social withdrawal, apathy, and sleep disturbances (Ward, 2003). In the beginning phases of the disease family members may confuse these symptoms with depression. Although depression may be present, it could in response to his or her deteriorating cognitive state. Other symptoms may include irritability, frustration with daily tasks, and loss of emotional reactivity. Disorientation, paranoia, loss of short term memory, difficulty with verbal expression, and loss of motor abilities are characteristics of later phases of the disease.

Alzheimer’s disease lasts an average of 8-10 years, and ultimately ends in death. Patients with Alzheimer’s disease tend to tolerate physical illness poorly (Morrison, 2001). Therefore, many die due to age related illness before the disease has run its course. Those who do not die due to age related illnesses eventually progress to a vegetative state and require continuous care for the remainder of their lives (Ward, 2003).

**Occupational Therapists’ Role with Patients with Alzheimer’s Disease and Their Caregivers**

Occupational synthesis, the designing of a therapeutic occupational form, is the essence of occupational therapy (Nelson & Thomas, 2003). For a patient with Alzheimer’s disease, his or her physical and cognitive abilities depend upon the suitability of the occupational form. In order to function with the impairments that accompany Alzheimer’s disease, structure and predictability of the environment is essential.
Occupational therapists can help improve the daily life for those with Alzheimer’s disease by offering help and advice for cognitive difficulties and problematic environmental factors, and preserving quality of life.

One of the primary symptoms associated with Alzheimer’s disease is the development of multiple cognitive deficits (Fraker & McKillop, 2000). Problems such as ataxia, aphasia, agnosia, and memory loss are commonly experienced. Although these symptoms interfere with the daily functioning of a person, alterations to one’s environment can help alleviate the extent of the dysfunction. In early stages of Alzheimer’s disease, short term memory loss can be very frustrating. Occupational therapists can give guidance and education to families to help their loved one adapt to this decline. Reminders left in frequently used areas in the home can initially be helpful. For example, a list of tasks necessary to get ready in the morning could be posted in the bathroom. A tablet of paper and a pen can be left beside all telephones in the residence. A daily, preset schedule can be posted on the refrigerator. All of these helpful reminders provide consistency for the person while maintaining autonomy. As communication becomes more difficult, labels or cues can be set up and reinforced by the occupational therapist. Many times people with Alzheimer’s disease know what they want to communicate but have problems verbally producing the word or words. Providing pictures or note cards of commonly used items, questions, and expressions can help to make communication less stressful for everyone involved.

Sensory abilities can also become impaired throughout the disease process (Ward, 2003). This leaves many common environmental factors as potential hazards. By adjusting and simplifying an environment to match the reduced abilities of a person with dementia, excess disability may be minimized (Gitlen, Corcoran, Winter, Boyce, & Hauck, 2001). A common way
occupational therapists help to aid the families to reduce disabilities of their loved one is through home evaluations and modifications. By identifying risk factors in the environment at an early time, future decline may be slowed. Common modifications may involve removing potential fall hazards such as rugs and clutter from the floors. Simplifying rooms commonly used throughout the home may also reduce the amount of confusion and enhance orientation (Gitlen et al., 2001). Pain sensations can also become diminished. Removing harmful objects such as knives, matches, and guns may be advised. Cooking may need to be limited to microwave use in order to reduce the risk of burns.

Quality of life is another factor that can be preserved for a person with Alzheimer’s disease through the help of an occupational therapist. For a person with Alzheimer’s disease, this can be measured by his or her ability to participate in and enjoy daily activities and in expressions of positive affect (Albert, Castillo-Castaneda, Sano, Jacobs, Marder & Bell, 1996). If occupational therapy interventions are properly derived from assessments, they should produce a corresponding increase in the quality of life (Baum, 1995).

In a pretest-posttest study conducted by Dooley and Hinojosa (2004), the correlation between the outcomes of the Assessment of Instrumental Function (AIF) (Brinson & Marran, 1997), which assists occupational therapists in planning interventions for Alzheimer’s disease patients’ quality of life, and caregiver burden was explored. Forty men and women diagnosed with Alzheimer’s disease were given the AIF and recommendations based off this test were reviewed with the participants and their families. The Affect and Activity Limitation-Alzheimer’s Disease Assessment (AAL-AD) (Albert et al., 1996), used to objectively measure the quality of life patients with Alzheimer’s disease, was then administered. Along with the AAL-AD, the Physical Self-Maintenance Scale (PSMS) (Lawton & Brody, 1996), used to
evaluate self-care status, was given as an additional measure of quality of life. After an average of 2.33 months following the initial evaluation, the AAL-AD and PSMS were administered a second time. Scores from both tests were compared to scores obtained during the initial evaluation. Results found a positive correlation for the hypothesis supporting a relationship between interventions suggested by the AIF and an increase in quality of life in persons with Alzheimer’s disease. Researchers also found that caregivers had lower feelings of burden than those who did not receive recommendations. By incorporating the knowledge gained from this study, proper assessments and interventions by occupational therapists can be used to help improve the quality of life of persons with Alzheimer’s disease and make the caregivers' lives more manageable.

*Previous Studies of Alzheimer’s Disease Knowledge and Attitudes*

Many studies have examined the level of knowledge different members of the health care team have about Alzheimer’s disease. With this diagnosis becoming increasingly prevalent in the United States, it is imperative to have the proper information in order to properly treat a patient with Alzheimer’s disease. This passing of knowledge needs to occur on all levels from the patient’s caregiver to all members who care for a patient with Alzheimer’s disease.

Bailey’s (2000) study of student awareness of Alzheimer’s disease measured the level of knowledge of the disease in 67 undergraduate students taking one of three age-related classes at the University of California, Fullerton. Two weeks after a 10 item true/false pretest and one-hour lecture on Alzheimer’s disease, all participants were given a 10 item multiple choice test that addressed areas covered in the previous lecture. After scoring of all tests, two of the three classes showed a decline in post-test scores. This decline in post-test scores showed that information covered in the previous lecture was not retained. The outcomes of this research lead
the researcher to conclude that more extensive classes with longer class sessions and a more comprehensive review of class materials must be made available for individuals who deal with patients with Alzheimer’s disease.

The purpose of Maalouf’s (1995) study was to examine the knowledge, attitudes, and beliefs of 56 nurses caring for patients with Alzheimer’s disease. The Nursing Needs Assessment Questionnaire, which consisted of a compilation of three independent scales, was used to explore the possible correlation between knowledge, attitudes, and nursing care. The first scale, a derivative of the Alzheimer’s Disease Knowledge Test (Dieckmann, Zarit, Zarit & Gatz, 1988), assessed the level of Alzheimer’s disease knowledge healthcare providers possessed. The second scale was a 20 question test that provided information regarding attitudes of nurses toward patients with Alzheimer’s disease and the third scale assessed a subject’s ability to manage a patient Alzheimer’s disease. In a correlational analysis the authors reported that nurses with more knowledge about Alzheimer’s disease had better nursing skills as evidenced by higher scores on the knowledge test and management ability scale. Higher scores on the attitude scale were also associated with a higher level of knowledge of Alzheimer’s disease.

In research similar to the current study, occupational therapists knowledge of and interventions used with patients with Alzheimer’s disease was assessed. Participants consisted of 443 occupational therapists and occupational therapy assistants who were members of the Ohio Occupational Therapy Association. Knight (2005) used a demographic questionnaire inquiring about the participant’s age, years of education and experience with dementia related diseases. The Alzheimer’s Disease Knowledge Test (Dieckmann et al., 1988), a list of qualitative questions exploring assessments and interventions, and questions from an occupational therapy continuing education unit on Alzheimer’s disease were also used to gather data. The author
reported that participants demonstrated poor knowledge of Alzheimer’s disease with a mean test score of 62%. Also, 47% of participants were unaware that Medicare covered patients with Alzheimer’s disease, 86% could not correctly identify that the evaluation process needs to be standardized, and only 47% identified ruling out reversible disorders as a reason for an evaluation. Implications of this study call for a wide spread effort in clinical and academic areas to increase their clinicians’ and students’ knowledge of Alzheimer’s disease. Limitations discussed included a homogeneous sample and a lack of prior similar studies for comparison.

**Current Study**

An occupational therapist’s role with a patient with Alzheimer’s disease is very significant. The therapist “fashions the environment to the client’s abilities, interests, and comfort level and help maintain their dignity” (Ward, 2003, p.839). This role can be beneficial from beginning to end stages of the disease for the patient and the patient’s family. Because of the important role the therapist plays, it is imperative for the therapist to have adequate knowledge of Alzheimer’s disease. This knowledge allows the therapist to better help his or her patient with Alzheimer’s disease live a comfortable and complete life for as long as possible and provide the patient’s family with proper education, which may enhance the caregiving experience.

While some studies have been conducted throughout the medical professions in regard to knowledge and Alzheimer’s disease, very little literature was found in regard to occupational therapists. The Knight (2005) study previously discussed recommended continuing this line of research with a more heterogeneous sample. Knight also suggested looking further into underlying attitudes practitioners have toward Alzheimer’s disease to determine if attitudes correlate with the amount of knowledge one has.
The purpose of this study was to examine the amount of knowledge occupational therapists have in regard to the prevalence, etiology, symptoms, proposed cures, management of Alzheimer’s disease and assess attitudes practitioners have toward Alzheimer’s disease. Due to the small amount of literature available on this topic the current study explored the amount of Alzheimer’s disease knowledge occupational therapists had and if any relationship was present between the attitudes toward and knowledge of Alzheimer’s disease and other demographic data.

Methods

Participants

Participants solicited for this study were certified occupational therapists licensed in the state of Ohio. A database of all registered therapists within Ohio was obtained at no cost by a request made to the Ohio Occupational Therapy Board of Licensure. The database included the names and current addresses of 4168 licensed occupational therapists. A random sample was chosen by generating a random list of 1000 numbers between 1 and 4168 using Microsoft Excel. Only occupational therapists were chosen to participate in the study as there is a large difference between occupational therapists’ and occupational therapist assistants’ education and clinical practice responsibilities that could potentially effect the outcomes of this study.

Study Design

The research design used for this study was a survey research design. Survey research was used to systematically gather information from participants by using a three part questionnaire.
Instruments

The questionnaire consisted of three sections (see Appendix A). The first section requested personal information about the participant such as age, race, gender, degree held, and populations frequently seen in practice.

The second part of the questionnaire contained the Alzheimer’s Disease Knowledge Test. This test consisted of twenty multiple choice questions that assessed the level of knowledge of Alzheimer’s disease a practitioner possesses (Dieckmann, Zarit, Zarit, & Gatz, 1988). The test was scored by the number of correct responses a participant gives; therefore, a higher score on the Alzheimer’s Disease Knowledge Test correlated with a higher level of knowledge of Alzheimer’s disease. Studies conducted by Dieckmann, Zarit, Zarit, and Gatz (1988) showed that the test demonstrated satisfactory reliability and validity. Internal reliability was proven by alpha coefficients ranging from .71-.92 and content validity was tested by mailing potential test items to 19 authorities in the area of Alzheimer’s disease. Of the 19 copies mailed out, 10 were returned from experts from a wide range of professional fields. Items that authorities agreed upon were kept and items that brought about disagreement were eliminated or revised.

The final section of the questionnaire was the Attitudes toward Alzheimer’s Disease and Related Dementias Scale (Lunsman & McFadden, 2006). This scale was compiled of twenty statements that assessed participants’ attitudes toward Alzheimer’s disease and related dementias. The participant was asked to rate his or her agreement of each statement on a seven point Likert scale where 1 is strongly disagree and 7 is strongly agree. Scoring was conducted by adding the participant’s assigned numbers of each statement. Questions three, four, five, seven, nine and ten were reverse scored items. A higher participant score on the questionnaire
was associated with a more positive attitude toward Alzheimer’s disease. The authors of the scale reported acceptable reliability with a Cronbach’s alpha of .85.

**Procedures**

Surveys were mailed out to one thousand occupational therapists randomly chosen from the Ohio Occupational Therapy Association database. The mailing contained a cover letter (see Appendix B), the three part questionnaire, and a return envelope with postage. A reminder postcard was sent to all possible participants approximately three weeks after the initial mailing in hopes of increasing the rate of response (see Appendix C).

**Results**

**Demographics**

Three hundred and four questionnaires were completed and returned. An additional 122 surveys were returned by the post office because of outdated address information. Therefore, the number of possible participants for this study was 878, which correlates to a 35% return rate.

In this study, 281 of the 304 participants were female (92.7%) while the remaining 22 were male (7.3%). In regard to race, 97% of the participants were Caucasian, while 1.3% were African American, 1.0% were Hispanic and 0.7% were of an Asian decent. The mean number of years the participants had been working in the occupational therapy profession was 7.7 years \( (SD = 4.33, \text{ range } 2–33) \). Over half of the participants highest degree held was a bachelor’s degree (64.5%), while 34.5% and 1.0% held master’s and doctoral degrees respectively. Within each practitioner’s educational experience, 65.6% reported having a specific geriatric curriculum while 34.4% reported his or her program not having a specific geriatric component.

Practitioner populations of practice varied widely with 34.3% of participants working with pediatrics, 19.7% working in long-term care, 15.3% working in a rehab unit, 9.5% providing
outpatient care, and additional 21.2% of the participants recorded working with an unlisted population or with multiple populations. In addition, the mean percentage of time the participants worked with older adults was 49.8% ($SD = 40.25$, range 0 - 100) and the mean percentage of time working with patients with dementia was 20.9% ($SD = 23.56$, range 0 - 95).

When asked if the participant was currently caring for a friend or family member who has Alzheimer’s disease or related dementias 92.1% responded no. When asked if the participant had ever cared for a friend or family member with Alzheimer’s disease or dementia 79.1% responded no while 20.9% responded yes.

**Description of Knowledge Scores**

Data were analyzed from the second part of the survey, the Alzheimer’s Disease Knowledge Test (Dieckmann et al., 1988). Knowledge scores were calculated for the overall sample ($N = 304$). The mean knowledge score for the participants was 55%, out of a possible 20 questions ($SD = 2.57$) with a minimum of four and a maximum of 18 correct. The following paragraphs will discuss the three questions most frequently answered correctly and the three questions most frequently answered incorrectly. For a comprehensive list of the Alzheimer’s Disease Knowledge Test outcomes see Table 1.

The majority of the participants correctly identified the correct technique for caregivers to assist in self care occupations but allowing the patient to stay as independent as possible (98.3%). A large number of participants were also able to recognize the effectiveness of compensatory techniques such as note writing in early stages of Alzheimer’s disease (96.7%). Finally, 88.7% of participants also correctly identified that loss of memory is always present in a person who has Alzheimer’s disease.
Conversely, only 6.3% of participants correctly identified the research results of using lecithin as a treatment for Alzheimer’s disease. Twenty percent of the sample correctly answered the question regarding the prevalence of persons with Alzheimer’s disease in the population. Finally, only 21.9% of respondents were able to correctly identify what services Medicare will cover for a person with Alzheimer’s disease.

**Description of Attitude Scores**

Data were analyzed from the third part of the survey, the 20 question Attitudes toward Alzheimer’s Disease and Related Dementia Scale. To assess internal consistency, Cronbach’s alpha was determined. It was found by the current authors that this scale had high internal consistency ($\alpha = .85$) as Portney and Watkins (2000) reported an alpha level approaching .90 represents high internal consistency.

Attitude scores were calculated for the sample ($N = 304$). The mean scores for all 20 questions ranged from 4.19 ($SD = 1.38$) to 6.52 ($SD = .77$). In addition, the range of the scores for 15 of the 20 questions encompassed all possible responses with minimum and maximum scores of 1 and 7 respectively. The other five questions ranged from a minimum score of 2 and a maximum score of 7. The mean score for the combined 20 questions was 110.6, which correlates to an overall moderately positive attitude toward Alzheimer’s disease. For a comprehensive list of outcomes for the Attitudes toward Alzheimer’s Disease and Related Dementias Scale see Table 2.

The highest scoring statements on the scale, “every person with Alzheimer’s disease and related dementias has different needs” and “persons with Alzheimer’s disease and related dementias can feel when others are kind to them”, seem to suggest that the sample realistically identified the special needs of this population. However, the lowest scoring statements, “I do
know how to help persons with Alzheimer’s disease and related dementias” and “it is rewarding to work with persons with Alzheimer’s disease and related dementias,” suggest that the lack of knowledge and experience hinders the participants’ attitudes toward this population.

**Relationship between Attitudes, Knowledge and Personal Caring**

A positive Spearman’s correlation was reported between knowledge scores and attitude scores \((p < .05)\), indicating that participants with higher knowledge scores also had higher attitudes scores. The relationships between attitudes and current or past caring for a friend or family member with Alzheimer’s disease or related dementias were assessed using a 2-tailed t-test. Statistically significant differences were found in both instances. Differences were found for participants who had cared for a friend or family member with Alzheimer’s disease or related dementias in the past and attitude scores \((t = 4.13, p < .001)\). In addition, differences were found for participants who are currently caring for a friend or family member with Alzheimer’s disease or related dementias and attitude scores \((t = 2.21, p < .05)\). Both of these findings indicate that persons who have personal experiences with Alzheimer’s disease or dementia had stronger positive attitudes regarding this population.

A Spearman’s Rho identified statistically significant findings between total knowledge scores and time spent with the older adult population in practice \((rho = .128, p < .03)\), and total knowledge score and time spent with the dementia population in practice \((rho = .159, p < .01)\). These findings indicated a positive relationship, therefore participants who reported spending time with the older adult or dementia population were also likely to have higher knowledge scores. A one way ANOVA performed with total scores from the Alzheimer’s Disease Knowledge test and the subjects’ highest degree held showed no significant differences among the knowledge of practitioners \((F = .04, p > .05)\). In addition, a Spearman’s Rho showed no
statistically significant correlations between the total knowledge score and years of practitioner experience ($\rho = -0.008, p > .05$). Finally, when testing for a relationship between whether or not the participants had a geriatric curriculum and knowledge scores ($t = .72, p > .05$), and attitude scores ($t = 1.61, p > .05$), no significant differences were noted.

Discussion

Currently, only one previous study has examined occupational therapists’ knowledge of Alzheimer’s disease and no studies were found that explored occupational therapists’ attitudes toward Alzheimer’s disease. The current study evaluated the amount of knowledge occupational therapists had of Alzheimer’s disease and therapists’ attitudes toward persons with Alzheimer’s disease. Past experiences caring for persons with Alzheimer’s disease were also explored.

Knowledge of Alzheimer’s Disease and Related Dementias

The current study found that occupational therapists surveyed had poor knowledge of Alzheimer’s disease and related dementias (mean score of 58%). In a past study by Knight (2005), similar results of occupational therapists’ knowledge of Alzheimer’s disease were found as a mean score of 62% was reported. In addition, Bailey (2000) reported similar findings in a pre test – post test study. Knowledge of Alzheimer’s disease was not retained by college students taking age related classes two weeks after a lecture was given on Alzheimer’s disease as evidenced by a decline in posttest scores.

With the older adult population growing in size, so will be the number of persons who are diagnosed with dementia. The estimation that 11.5-16 million persons will have Alzheimer’s disease by the year 2050 (Alzheimer’s Association, 2007) is a key reason as to why occupational therapists need to be competent and knowledgeable regarding the diagnosis and treatment. The current study, along with findings from Knight (2005) and Bailey (2000) all support the need for
more extensive education on Alzheimer’s disease and effective treatments in occupational therapy curriculum. Frequent, educational in-services for practitioners who service this unique population are also needed to provide high quality care to patients with Alzheimer’s disease.

Knowledge in all aspects of Alzheimer’s disease proved to be lacking by occupational therapists as evidenced by incorrectly answered questions in a variety of topics related to Alzheimer’s disease and dementias. For example, 80% of participants incorrectly identified that about 5% of persons over the age of 65 were diagnosed with Alzheimer’s disease or a related dementia. Also, only 38% of participants correctly responded that a timely evaluation of a person who is suspected to have Alzheimer’s disease is important to rule out treatable reversible disorders. Of the incorrect responses, 59% responded that a timely evaluation was imperative in order to reverse symptoms or keep symptoms from worsening.

Another frequent misconception among occupational therapists shown in the current study is the average lifespan of a person with Alzheimer’s disease. Less than half of study participants, 46%, correctly identified the average life span of a person with Alzheimer’s disease as 6-12 years. Twenty-three percent underestimated the average life span and an additional 25% answered with “I don’t know.” Average lifespan, along with previously discussed basic knowledge that was unknown by at least half of participants, are a critical part of planning care and providing appropriate therapy to clients with Alzheimer’s disease and their caregivers.

A final question frequently missed was regarding what services Medicare covers for a patient with an Alzheimer’s disease diagnosis. Only 22% of participants correctly answered that Medicare will only pay for a physician’s diagnostic evaluation, while 47% believed that Medicare paid for nursing home care expenses and homecare expenses. In addition to providing services to clients, occupational therapists must be knowledgeable in how the services they
provide are reimbursed. This knowledge is not only useful to the therapist as he or she provides services to clients, but it is also important so the client can be educated and plan therapy care accordingly.

**Attitudes towards Alzheimer’s Disease and Related Dementias**

Currently, there is no known data discussing occupational therapy practitioners’ attitudes toward Alzheimer’s disease. The participants surveyed in this study were found to have moderately high attitudes toward persons with Alzheimer’s disease or a related dementia. When this information was analyzed with other data gathered from the survey several subsections were noted to be correlated with attitude scores. First, it was found that higher attitudes scores were associated with higher knowledge scores on the Alzheimer’s Disease Knowledge Test (Dieckmann, Zarit, Zarit & Gatz, 1988). By being knowledgeable regarding the disease and its progression, practitioners can in turn be more comfortable with the diagnosis and patients they care for. In addition, higher attitude scores were also correlated with persons who reported in the past or currently caring for a loved one with Alzheimer’s disease. This information can be used not only to guide future occupational therapy curriculum but to also assist practitioners in choosing continuing education materials to improve the care provided to patients with Alzheimer’s disease.

**Clinical and Educational Implications**

With the American population quickly aging and the frequency of Alzheimer’s disease being diagnosed increasing, the lack of knowledge of Alzheimer’s disease and treatment options by occupational therapists needs to be addressed. The outcomes of the current study have implications for occupational therapy practitioners as well as occupational therapy educators.
Facilities as well as occupational therapists that frequently treat older adults with Alzheimer’s disease need to take part in seeking out continuing education on Alzheimer’s disease. Taking part in specialized continuing education classes or having in-services at the facility are both options that would increase therapists’ awareness and knowledge of Alzheimer’s disease. Topics covered should include the progression of the disease, common dysfunctions associated with the diagnosis, insurance and billing, and treatment options. The Alzheimer’s Association also offers educational classes for professional caregivers of persons with Alzheimer’s disease that can be utilized by the individual practitioner or facilities who serve persons with Alzheimer’s disease.

The current study also offers implications for occupational therapy academic programs. First, this study brings light to a weakness in the educational curriculum. As previously discussed, Bailey (2000) concluded that academic programs need an in-depth, comprehensive curriculum in topics of Alzheimer’s disease in order for students to retain the information. With current practitioners’ Alzheimer’s disease knowledge scores averaging below 60%, more time needs to be allotted in occupational therapy curriculum to discuss care of patients with Alzheimer’s disease. In addition, the current study implies that a fieldwork component of caring for a person with Alzheimer’s disease would be of benefit regarding the student’s perceived attitude toward a person with Alzheimer’s disease, as study participants who are caring or had cared for a person with Alzheimer’s disease in the past had higher attitude and knowledge scores than participants who had not. A fieldwork component in occupational therapy curriculum would not only expose the student to situations that may increase his or her attitude toward Alzheimer’s disease but it would also develop the student’s knowledge base for providing care for a patient with dementia.
Limitations

The most significant limitation of the current study lies with the participant population. Occupational therapists registered with the state of Ohio were the only population solicited to be participants in the current study. This limitation not only decreases the number of potential participants available for the study, but it also decreases the variability of the subject pool due to all participants being from a small geographical location. In addition, the subject pool was not diverse as 92.7% of respondents were females and 97% described their race as Caucasian.

With any survey research, it is difficult to assess if the information received is the true knowledge of the participant. While the survey directions ask the participant not to use any outside sources, the researcher cannot insure that all information is an accurate portrayal of the therapist’s knowledge.

Another limitation noted throughout the research process is the use of an outdated assessment. The Alzheimer’s Disease Knowledge Test was developed in 1988 and questions regarding population composition and research topics have become outdated over time. A final limitation to the current study is a lack of similar studies for comparison. Although similar data is available using other medical disciplines, direct comparison can not be done due to differences in practitioners’ educations and experiences.

Future Research

Future research focusing on occupational therapists’ knowledge and attitudes toward Alzheimer’s disease and related dementias could include participants from a more diverse subject pool. National data collection would not only diversify the data but it would also allow the findings to be better generalized to the population of occupational therapists. A new knowledge scale would also be beneficial to future research as the current scale used has several
questions that no longer apply to current knowledge of Alzheimer’s disease and related
dementias. A final future research recommendation would be to further explore the relationship
of attitudes toward Alzheimer’s disease and past caring for someone with Alzheimer’s disease.
Further exploring this area and looking at the components of caring for someone that lead to a
change in attitude can help educators as well as practitioners provide better services to their
clientele.

Conclusion

The outcomes of the current study demonstrate occupational therapists poor knowledge
of Alzheimer’s disease. Areas of particular concern include general knowledge of the
progression of Alzheimer’s disease, the impact of the disease in the general population, Medicare
payment, and treatment options. This study has also displayed a relationship between higher
attitude scores and caring for someone with Alzheimer’s disease currently or in the past. Both
components, knowledge and attitudes, provided implications for educators to re-evaluate
curriculum, practitioners to consider continuing education on the topic of Alzheimer’s disease, as
well as employers, in order to increase the quality of services provided to those they serve.
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Appendix A

Occupational Therapists’ Attitudes and Knowledge of Alzheimer’s Disease Questionnaire

Part A: Please answer the following questions regarding your demographics and therapy practice:

1. What is your gender? _____ Female _____ Male

2. What is your race?
   ___ Hispanic           ___ Caucasian
   ___ African-American   ___ Asian-American
   ___ Other (please specify)

3. How many years have you been in the occupational therapy field? _________

4. What is your highest level of occupational therapy education completed?
   ___ Associate’s degree   ___ Master’s degree
   ___ Bachelor’s degree   ___ Doctoral degree

5. What population is your main area of practice?
   ___ Outpatient          ___ Long Term Care
   ___ Pediatrics          ___ Rehabilitation   ___ Other (please specify)

6. What percentage of your time do you work with older adults? ___________

7. What percentage of your time do you work with patients with dementia? __________

8. Do you currently care for a family member or friend who has Alzheimer’s disease or a related dementia?
   _____ Yes       _____ No

9. Have you, in the past, cared for a family member or friend who had Alzheimer’s disease or a related dementia?
   _____ Yes       _____ No

10. Did your occupational therapy program, per your recollection, have a specific geriatric curriculum?
     _____ Yes       _____ No
Part B: Please answer the following questions to the best of your ability, without the use of reference material. Please circle the letter that corresponds with your answer.

1. The percentage of people over 65+ who have severe dementia caused by Alzheimer’s disease or a related disorder is estimated to be
   A. less than 2%.
   B. about 5%.
   C. about 10%.
   D. 20-25%.
   E. I don’t know.

2. The prevalence of Alzheimer’s disease in the general population of the United States is expected to
   A. decrease slightly.
   B. remain approximately the same.
   C. increase in proportion to the number of people over 65.
   D. nearly triple by the year 2000.
   E. I don’t know.

3. The cause of Alzheimer’s disease is
   A. old age.
   B. hardening of the arteries.
   C. senility.
   D. unknown.
   E. I don’t know.

4. Preliminary research concerning the role of heredity in Alzheimer’s disease suggests that
   A. persons with a close relative with Alzheimer’s disease have an increased risk of becoming afflicted.
   B. Alzheimer’s disease is always transmitted genetically.
   C. Alzheimer’s disease is only inherited if both parents are carriers of the disease.
   D. Alzheimer’s disease is never inherited.
   E. I don’t know.

5. Larger than normal amounts of aluminum have been found in the brains of some people with Alzheimer’s disease. Studies investigating the role of aluminum in causing Alzheimer’s disease
   A. have determined that it is the major cause.
   B. have established that it plays a role in the onset of the disease.
   C. are inconclusive.
   D. have proven that it is not a cause.
   E. I don’t know.
6. A person suspected of having Alzheimer’s disease should be evaluated as soon as possible because
   A. prompt treatment of Alzheimer’s disease may prevent worsening of symptoms.
   B. prompt treatment of Alzheimer’s disease may reverse symptoms.
   C. it is important to rule out and treat reversible disorders.
   D. it is best to institutionalize and Alzheimer’s disease patient early in the course of the disease.
   E. I don’t know.

7. Which of the following procedures is required to confirm that symptoms are due to Alzheimer’s disease?
   A. Mental status testing
   B. Autopsy
   C. CT scan
   D. Blood test
   E. I don’t know.

8. Which of the following conditions sometimes resembles Alzheimer’s disease?
   A. Depression
   B. Delirium
   C. Stroke
   D. All of the above
   E. I don’t know.

9. Which of the following is always present in Alzheimer’s disease?
   A. Loss of memory
   B. Loss of memory, incontinence
   C. Loss of memory, incontinence, hallucinations
   D. None of the above.
   E. I don’t know.

10. Although the rate of progression of Alzheimer’s disease is variable, the average life expectancy after onset is
    A. 6 months-1 year.
    B. 1-5 years.
    C. 6-12 years.
    D. 15-20 years.
    E. I don’t know.

11. Most researchers investigating the use of lecithin as a treatment for Alzheimer’s disease have concluded that it
    A. reverses symptoms.
    B. prevents further decline.
    C. reverses symptoms and prevents further decline.
    D. has no effect on the disease.
    E. I don’t know.
12. Which of the following statements describes reactions Alzheimer’s disease patients may have to their illness?
   A. They are unaware of their symptoms.
   B. They are depressed.
   C. They deny their symptoms.
   D. All of the above.
   E. I don’t know.

13. Sometimes Alzheimer’s disease patients wander away from home. Caregivers can best manage this problem by
   A. reasoning with the patient about the potential dangers of wandering.
   B. sharing feelings of concern with the patient in a calm and reassuring manner.
   C. making use of practical solutions such as locked doors.
   D. remaining with the patient at all times to prevent the behavior.
   E. I don’t know.

14. Which statement is true concerning treatment of Alzheimer’s disease patients who are depressed?
   A. It is usually useless to treat them for depression because feelings of sadness and inadequacy are part of the disease process.
   B. Treatments of depression may be effective in alleviating depressive symptoms.
   C. Anti-depressant medication should not be prescribed.
   D. Proper medication may alleviate symptoms of depression and prevent further intellectual decline.
   E. I don’t know.

15. What is the role of nutrition in Alzheimer’s disease?
   A. Proper nutrition can prevent Alzheimer’s disease.
   B. Proper nutrition can reverse the symptoms of Alzheimer’s disease.
   C. Poor nutrition can make the symptoms of Alzheimer’s disease worse.
   D. Nutrition plays no role in Alzheimer’s disease.
   E. I don’t know.

16. What is the effect of orienting information (i.e., reminders of the date and the place) on Alzheimer’s disease patients?
   A. It produces permanent gains in memory.
   B. It will slow down the course of the disease.
   C. It increases confusion in approximately 50% of patients.
   D. It has no lasting effect on the memory of patients.
   E. I don’t know.
17. People sometimes write notes to themselves as reminders. How effective is this technique for Alzheimer’s disease patients?
   A. It can never be used because reading and comprehension are too severely impaired.
   B. It may be useful for the mildly demented patient.
   C. It is a crutch which may contribute to further decline.
   D. It may produce permanent gains in memory.
   E. I don’t know.

18. When an Alzheimer’s disease patient begins to have difficulty performing self-care activities, many mental health professionals recommend that the caregiver
   A. allow the patient to perform the activities regardless of the outcome.
   B. assist with the activities so that the patient can remain as independent as possible.
   C. take over the activities right away to prevent accidents.
   D. make plans to have the patient moved to a nursing home.
   E. I don’t know.

19. Medicare will pay for which of the following for Alzheimer’s disease patients?
   A. A physician’s diagnostic evaluation of the patient.
   B. Nursing home care experiences.
   C. Homecare expenses.
   D. All of the above.
   E. I don’t know.

20. Which of the following is a primary function of the Alzheimer’s disease and Related Disorders Association (ADRA)?
   A. Conducting research.
   B. Providing medical advice.
   C. Family support and education.
   D. Providing day care for Alzheimer’s disease patients.
   E. I don’t know.
Part C: Please circle the number that best corresponds with your agreement to each statement below.

1. I feel confident around people with Alzheimer’s Disease and related dementias.
   1 2 3 4 5 6 7
   Strongly Disagree
   Agree

2. I am comfortable touching people with Alzheimer’s Disease and related dementias.
   1 2 3 4 5 6 7
   Strongly Disagree
   Agree

3. I feel uncomfortable being around people with Alzheimer’s Disease and related dementias.
   1 2 3 4 5 6 7
   Strongly Disagree
   Agree

4. I am not very familiar with Alzheimer’s Disease and related dementias.
   1 2 3 4 5 6 7
   Strongly Disagree
   Agree

5. I would avoid an agitated person with Alzheimer’s Disease and related dementias.
   1 2 3 4 5 6 7
   Strongly Disagree
   Agree

6. I feel relaxed around people with Alzheimer’s Disease and related dementias.
   1 2 3 4 5 6 7
   Strongly Disagree
   Agree

7. I feel frustrated because I do not know how to help people with Alzheimer’s Disease and related dementias.
   1 2 3 4 5 6 7
   Strongly Disagree
   Agree
8. It is rewarding to work with people who have Alzheimer’s Disease and related dementias.

   1 2 3 4 5 6 7
   Strongly    Strongly
   Disagree    Agree

9. I cannot imagine caring for someone with Alzheimer’s Disease and related dementias.

   1 2 3 4 5 6 7
   Strongly    Strongly
   Disagree    Agree

10. I am afraid of people with Alzheimer’s Disease and related dementias.

    1 2 3 4 5 6 7
    Strongly    Strongly
    Disagree    Agree

11. I admire the coping skills of people with Alzheimer’s Disease and related dementias.

    1 2 3 4 5 6 7
    Strongly    Strongly
    Disagree    Agree

12. People with Alzheimer’s Disease and related dementias can be creative.

    1 2 3 4 5 6 7
    Strongly    Strongly
    Disagree    Agree

13. Every person with Alzheimer’s Disease and related dementias has different needs.

    1 2 3 4 5 6 7
    Strongly    Strongly
    Disagree    Agree

14. People with Alzheimer’s Disease and related dementias like to have familiar things nearby.

    1 2 3 4 5 6 7
    Strongly    Strongly
    Disagree    Agree
15. It is important to know the past history of people with Alzheimer’s Disease and related dementias.

1 2 3 4 5 6 7
Strongly Disagree

16. It is possible to enjoy interacting with people with Alzheimer’s Disease and related dementias.

1 2 3 4 5 6 7
Strongly Disagree

17. People with Alzheimer’s Disease and related dementias can enjoy life.

1 2 3 4 5 6 7
Strongly Disagree

18. People with Alzheimer’s Disease and related dementias can feel when others are kind to them.

1 2 3 4 5 6 7
Strongly Disagree

19. We can do a lot now to improve the lives of people with Alzheimer’s Disease and related dementias.

1 2 3 4 5 6 7
Strongly Disagree

20. Difficult behaviors may be a form of communication for people with Alzheimer’s Disease and related dementias.

1 2 3 4 5 6 7
Strongly Disagree

Your participation in this survey is greatly appreciated! Please place the completed questionnaire in the postage paid envelope that was provided in this mailing. If you have any questions, please contact Barbara Kopp Miller at 419-383-4289 or Andrea Sensel at asensel@meduohio.edu.
Dear Participant,

As a student at The University of Toledo Occupational Therapy Doctoral Program, I am conducting a research study to assess occupational therapy practitioners’ awareness of Alzheimer’s disease. You were selected to participate in this study based on your registration with the State of Ohio Occupational Therapy Board of Licensure. Information gathered in this survey is for research purposes only.

The following questionnaire will take approximately 15-20 minutes of your time to complete. Your participation in this study will provide valuable information concerning our profession’s attitudes and knowledge of Alzheimer’s disease.

Your participation in this study is strictly voluntary and anonymous. Should you choose to complete this survey, your response will remain confidential. Please do not place your name anywhere on this survey. Participation is acknowledged by your return of the enclosed questionnaire and implies your consent. Please follow the instructions printed above each section and do not use outside reference material to complete the questions. If you chose not to answer a particular question, please leave the question blank or circle the item “I don’t know”.

Please return the completed survey by December 1, 2006 in the self-addressed, postage paid envelope provided. Questions regarding this survey or its content can be directed to Andrea Sensel at asensel@meduohio.edu or Barbara Kopp Miller at (419)383- 4289.

Thank you for your time and participation in this survey.

Sincerely,

Barbara Kopp Miller, Ph.D., Research Advisor
Andrea Sensel, Student Investigator
Dear Survey Participant,

Approximately two weeks ago you should have received a survey in the mail regarding occupational therapists’ attitudes and knowledge of Alzheimer’s disease. This card is just a reminder that if you would like to participate in this study the completed survey must be returned in the self-addressed, postage paid envelope provided by December 1, 2006. Your contribution to this study will be greatly appreciated and will help us to understand the current attitudes and knowledge base occupational therapists have of Alzheimer’s disease. If you have already completed and returned the survey, thank you for your time. Questions regarding this survey can be directed to Andrea Sensel at asensel@meduohio.edu or Barbara Kopp Miller at (419) 383-4289.

Thank you again for your time and participation.

Andrea J. Sensel OTD Student
Barbara Kopp Miller, PhD, Research Advisor
Table 1

*Alzheimer’s Disease Knowledge Test Outcomes*

<table>
<thead>
<tr>
<th>Question</th>
<th>% Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The percentage of people over 65+ who have severe dementia caused by Alzheimer’s disease or a related disorder is estimated to be</td>
<td></td>
</tr>
<tr>
<td>A. less than 2%.</td>
<td>5.6</td>
</tr>
<tr>
<td>B. about 5%.</td>
<td>20.1*</td>
</tr>
<tr>
<td>C. about 10%.</td>
<td>32.6</td>
</tr>
<tr>
<td>D. 20-25%.</td>
<td>25.0</td>
</tr>
<tr>
<td>E. I don’t know.</td>
<td>16.1</td>
</tr>
<tr>
<td>2. The prevalence of Alzheimer’s disease in the general population of the United States is expected to</td>
<td></td>
</tr>
<tr>
<td>A. decrease slightly.</td>
<td>0.0</td>
</tr>
<tr>
<td>B. remain approximately the same.</td>
<td>3.3</td>
</tr>
<tr>
<td>C. increase in proportion to the number of people over 65.</td>
<td>75.3*</td>
</tr>
<tr>
<td>D. nearly triple by the year 2000.</td>
<td>4.9</td>
</tr>
<tr>
<td>E. I don’t know.</td>
<td>15.5</td>
</tr>
<tr>
<td>3. The cause of Alzheimer’s disease is</td>
<td></td>
</tr>
<tr>
<td>A. old age.</td>
<td>1.0</td>
</tr>
<tr>
<td>B. hardening of the arteries.</td>
<td>7.6</td>
</tr>
<tr>
<td>C. senility.</td>
<td>1.0</td>
</tr>
<tr>
<td>D. unknown.</td>
<td>85.9*</td>
</tr>
<tr>
<td>E. I don’t know.</td>
<td>4.3</td>
</tr>
<tr>
<td>4. Preliminary research concerning the role of heredity in Alzheimer’s disease suggests that</td>
<td></td>
</tr>
<tr>
<td>A. persons with a close relative with Alzheimer’s disease have an increased risk of becoming afflicted.</td>
<td>82.6*</td>
</tr>
<tr>
<td>B. Alzheimer’s disease is always transmitted genetically.</td>
<td>0.0</td>
</tr>
<tr>
<td>C. Alzheimer’s disease is only inherited if both parents are carriers of the disease.</td>
<td>1.0</td>
</tr>
<tr>
<td>D. Alzheimer’s disease is never inherited.</td>
<td>4.9</td>
</tr>
<tr>
<td>E. I don’t know.</td>
<td>11.2</td>
</tr>
<tr>
<td>5. Larger than normal amounts of aluminum have been found in the brains of some people with Alzheimer’s disease. Studies investigating the role of aluminum in causing Alzheimer’s disease</td>
<td></td>
</tr>
<tr>
<td>A. have determined that it is the major cause.</td>
<td>0.3</td>
</tr>
<tr>
<td>B. have established that it plays a role in the onset of the disease.</td>
<td>20.4</td>
</tr>
<tr>
<td>C. are inconclusive.</td>
<td>45.4*</td>
</tr>
<tr>
<td>D. have proven that it is not a cause.</td>
<td>2.3</td>
</tr>
<tr>
<td>E. I don’t know.</td>
<td>31.3</td>
</tr>
</tbody>
</table>
6. A person suspected of having Alzheimer’s disease should be evaluated as soon as possible because
   A. prompt treatment of Alzheimer’s disease may prevent worsening of symptoms.  A. 58.1
   B. prompt treatment of Alzheimer’s disease may reverse symptoms.  B. 0.7
   C. it is important to rule out and treat reversible disorders.  C. 38.3*
   D. it is best to institutionalize and Alzheimer’s disease patient early in the course of the disease.  D. 0.0
   E. I don’t know.  E. 3.3

7. Which of the following procedures is required to confirm that symptoms are due to Alzheimer’s disease?
   A. Mental status testing  A. 14.3
   B. Autopsy  B. 54.1*
   C. CT scan  C. 22.4
   D. Blood test  D. 0.0
   E. I don’t know.  E. 8.2

8. Which of the following conditions sometimes resembles Alzheimer’s disease?
   A. Depression  A. 10.9
   B. Delirium  B. 15.5
   C. Stroke  C. 3.9
   D. All of the above  D. 64.1*
   E. I don’t know.  E. 5.9

9. Which of the following is always present in Alzheimer’s disease?
   A. Loss of memory  A. 88.2*
   B. Loss of memory, incontinence  B. 2.6
   C. Loss of memory, incontinence, hallucinations  C. 4.6
   D. None of the above.  D. 1.0
   E. I don’t know.  E. 2.6

10. Although the rate of progression of Alzheimer’s disease is variable, the average life expectancy after onset is
   A. 6 months-1 year.  A. 0.0
   B. 1-5 years.  B. 23.4
   C. 6-12 years.  C. 46.4*
   D. 15-20 years.  D. 4.9
   E. I don’t know.  E. 25.3

11. Most researchers investigating the use of lecithin as a treatment for Alzheimer’s disease have concluded that it
   A. reverses symptoms.  A. 0.3
   B. prevents further decline.  B. 16.1
   C. reverses symptoms and prevents further decline.  C. 0.3
   D. has no effect on the disease.  D. 5.9*
   E. I don’t know.  E. 77.0
12. Which of the following statements describes reactions Alzheimer’s disease patients may have to their illness?
   A. They are unaware of their symptoms.  
   B. They are depressed.  
   C. They deny their symptoms.  
   D. All of the above.  
   E. I don’t know.
   A. 5.6
   B. 2.0
   C. 5.3
   D. 84.2*
   E. 3.0

13. Sometimes Alzheimer’s disease patients wander away from home. Caregivers can best manage this problem by
   A. reasoning with the patient about the potential dangers of wandering.
   B. sharing feelings of concern with the patient in a calm and reassuring manner.
   C. making use of practical solutions such as locked doors.
   D. remaining with the patient at all times to prevent the behavior.
   E. I don’t know.
   A. 0.0
   B. 7.3
   C. 71.4*
   D. 20.5
   E. 0.3

14. Which statement is true concerning treatment of Alzheimer’s disease patients who are depressed?
   A. It is usually useless to treat them for depression because feelings of sadness and inadequacy are part of the disease process.
   B. Treatments of depression may be effective in alleviating depressive symptoms.
   C. Anti-depressant medication should not be prescribed.
   D. Proper medication may alleviate symptoms of depression and prevent further intellectual decline.
   E. I don’t know.
   A. 0.0
   B. 54.3*
   C. 0.3
   D. 27.0
   E. 18.4

15. What is the role of nutrition in Alzheimer’s disease?
   A. Proper nutrition can prevent Alzheimer’s disease.
   B. Proper nutrition can reverse the symptoms of Alzheimer’s disease.
   C. Poor nutrition can make the symptoms of Alzheimer’s disease worse.
   D. Nutrition plays no role in Alzheimer’s disease.
   E. I don’t know.
   A. 1.6
   B. 1.3
   C. 71.7*
   D. 4.9
   E. 20.1

16. What is the effect of orienting information (i.e., reminders of the date and the place) on Alzheimer’s disease patients?
   A. It produces permanent gains in memory.
   B. It will slow down the course of the disease.
   C. It increases confusion in approximately 50% of patients.
   D. It has no lasting effect on the memory of patients.
   E. I don’t know.
   A. 1.0
   B. 22.7
   C. 8.9
   D. 40.1*
   E. 26.0
17. People sometimes write notes to themselves as reminders. How effective is this technique for Alzheimer’s disease patients?
   A. It can never be used because reading and comprehension are too severely impaired.  A. 0.3
   B. It may be useful for the mildly demented patient.  B. 96.4*
   C. It is a crutch which may contribute to further decline.  C. 0.3
   D. It may produce permanent gains in memory.  D. 0.7
   E. I don’t know.  E. 2.3

18. When an Alzheimer’s disease patient begins to have difficulty performing self-care activities, many mental health professionals recommend that the caregiver
   A. allow the patient to perform the activities regardless of the outcome.  A. 1.0
   B. assist with the activities so that the patient can remain as independent as possible.  B. 97.7*
   C. take over the activities right away to prevent accidents.  C. 0.0
   D. make plans to have the patient moved to a nursing home.  D. 0.0
   E. I don’t know.  E. .07

19. Medicare will pay for which of the following for Alzheimer’s disease patients?
   A. A physician’s diagnostic evaluation of the patient.  A. 21.7*
   B. Nursing home care experiences.  B. 2.0
   C. Homecare expenses.  C. 1.0
   D. All of the above.  D. 44.4
   E. I don’t know.  E. 30.6

20. Which of the following is a primary function of the Alzheimer’s disease and Related Disorders Association (ADRA)?
   A. Conducting research.  A. 21.1
   B. Providing medical advice.  B. 0.3
   C. Family support and education.  C. 29.6*
   D. Providing day care for Alzheimer’s disease patients.  D. 0.7
   E. I don’t know.  E. 48.0
### Table 2

**Attitudes Toward Alzheimer’s Disease and Related Dementias Outcomes**

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean (SD) (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Score Code</strong></td>
<td></td>
</tr>
<tr>
<td>1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neutral,</td>
<td></td>
</tr>
<tr>
<td>5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree</td>
<td></td>
</tr>
<tr>
<td><strong>1. I feel confident around people with Alzheimer’s Disease and related</strong></td>
<td>4.6 (1.34) (1-7)</td>
</tr>
<tr>
<td>dementias</td>
<td></td>
</tr>
<tr>
<td><strong>2. I am comfortable touching people with Alzheimer’s Disease and related</strong></td>
<td>5.8 (1.27) (1-7)</td>
</tr>
<tr>
<td>dementias</td>
<td></td>
</tr>
<tr>
<td><strong>3. I feel uncomfortable being around people with Alzheimer’s Disease</strong></td>
<td>5.7 (1.43) (1-7)</td>
</tr>
<tr>
<td>and related dementias.</td>
<td></td>
</tr>
<tr>
<td><strong>4. I am not very familiar with Alzheimer’s Disease and related</strong></td>
<td>4.8 (1.51) (1-7)</td>
</tr>
<tr>
<td>dementias</td>
<td></td>
</tr>
<tr>
<td><strong>5. I would avoid an agitated person with Alzheimer’s Disease and related</strong></td>
<td>4.9 (1.45) (1-7)</td>
</tr>
<tr>
<td>dementias</td>
<td></td>
</tr>
<tr>
<td><strong>6. I feel relaxed around people with Alzheimer’s Disease and related</strong></td>
<td>4.6 (1.39) (1-7)</td>
</tr>
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<td></td>
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<tr>
<td><strong>7. I feel frustrated because I do not know how to help people with</strong></td>
<td>4.4 (1.48) (1-7)</td>
</tr>
<tr>
<td>Alzheimer’s Disease and related dementias.</td>
<td></td>
</tr>
<tr>
<td>8. It is rewarding to work with people who have Alzheimer’s Disease and related dementias.</td>
<td>4.2 (1.38) (1-7)</td>
</tr>
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<td><strong>9. I cannot imagine caring for someone with Alzheimer’s Disease and related dementias.</strong></td>
<td>5.1 (1.51) (1-7)</td>
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<td><strong>10. I am afraid of people with Alzheimer’s Disease and related</strong></td>
<td>6.4 (0.99) (1-7)</td>
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<td>dementias</td>
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<tr>
<td><strong>11. I admire the coping skills of people with Alzheimer’s Disease and related dementias.</strong></td>
<td>4.8 (1.35) (1-7)</td>
</tr>
<tr>
<td><strong>12. People with Alzheimer’s Disease and related dementias can be</strong></td>
<td>5.2 (1.30) (1-7)</td>
</tr>
<tr>
<td>creative.</td>
<td></td>
</tr>
<tr>
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<td>Every person with Alzheimer’s Disease and related dementias has different needs.</td>
</tr>
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<td>---</td>
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<td>15.</td>
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