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Students' Knowledge of Alzheimer's Disease

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by

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Abstract

Preparing nursing students to care for the ever-growing aging population with memory impairment is vital. This research study aimed to determine the prevalence of knowledge of Alzheimer's disease (AD) among Baccalaureate nursing students. A descriptive correlational design was used to determine the prevalence of AD knowledge among juniors in an Adult I course and seniors in a Mental Health nursing course. A cross-sectional design was used to collect data using the Alzheimer's Disease Knowledge Scale (ADKS). A convenience sample of 63 student cohorts completed the survey. Results indicated that students were aware that AD is a form of dementia; however, students were lacking more comprehensive knowledge of this debilitating brain disease. Based on this study's findings, students' knowledge of AD could be expanded. The number of those suffering from various forms of dementia is steadily rising. Taking into consideration the continued rise of patients with dementia-related illnesses, it is imperative for nurse educators to recognize these vicissitudes. Failure to address the delivery of inadequate care has the potential to produce devastating effects in this vulnerable population. It is recommended that nurse educators incorporate nursing curricula which addresses care of the aging adult, specifically those with memory impairments as dementia has already be deemed a public health concern.

Keywords: Aging Adults, Alzheimer's disease, Caring, Dementia, Knowledge, Memory impairment, Nurse Educators, Nursing Education, Nursing Students.

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CHAPTER I

Introduction

Nursing students develop practical and conceptual knowledge with the goal of competently transitioning into the role of a professional nurse. Nurse educators play a monumental role in equipping students with vital knowledge related to the health trends and issues that are relevant to the current population. In that, nurse educators are charged with integrating curriculum and learning activities that support students' knowledge and skills. As the aging population continues to rise, the topic of caring for the aging adult is one of great significance. It is vital that students be equipped with pertinent knowledge related to the aging population; these future nurses will eventually become valuable contributors in the field of nursing who will care for the ever-progressing complexities of the aging population. At the culmination of one's education they should possess a comprehensive understanding of nursing practice; therefore, one's education should include an in-depth focus of the aging population which is relevant to current health trends and issues.

Significance

Alzheimer's disease (AD), a form of dementia, is an irreversible, regressive brain disease preventing one's ability to process, recall, and retain information. As the aging adult population increases, the topic of AD and dementia is rapidly procuring national health interest. Globally there are approximately 50 million people diagnosed with dementia related illnesses, with nearly 10 million new cases diagnosed each year (World Health Organization [WHO], 2019). At present, it is estimated that 5.8 million Americans of all ages are living with AD, 5.6 million who are 65 years or older (Alzheimer's

Association, 2019). Within the United States (U.S), "the most recent Global Burden of Disease classification system" confirms that over the course of 26 years, from 1990 to 2016, AD has escalated from the 12th to the sixth most arduous diseases, which are those associated with disability, or loss of one's healthy life (Alzheimer's Association, 2019, p. 29).

Dementia causes deterioration of the brain which inhibits one's short-term memory, blighting their ability to recall and retain necessary information. Dementia also affects one's ability to problem-solve and to process language. As the disease progresses, the devastating effects of this fatal brain disease result in an extensive decline in one's cognitive and physical functions resulting in perpetual disablement. Due to the disabilities and decreased capability to independently care for one's self, people living with dementia (PLWD) often require aid from caretakers. Curricula, as well as intensive educational opportunities that allow nursing students to conceptualize knowledge of AD and dementia in an effort to teach one how to competently and compassionately care for those with memory impairment, are vital. Therefore, it is imperative that nurse educators understand students' knowledge of AD; ascertaining this information is significant in the development and revision of nursing curricula.

Problem Statement

Although the topic of dementia in relation to nursing education has been investigated, research which explores students' knowledge of dementia is sparse. Adewuyi, Kimble, Dormire, and Sudia (2018), who are nurse educators, identified many curricular challenges in regard to integrating content that focuses on dementia care, such as: clinicals being conducted in areas where the probability of a student having an

opportunity to care for one with dementia is not likely (e.g. acute care settings) and the incorporation of geriatric simulation being a costly, undesirable expense to nursing programs. Educators felt as though these factors led to "the uniqueness of the older population—especially those with dementia" being overlooked (Adewuyi et al., 2018, p. 92). According to Kimzey, Mastel-Smith, and Alfred (2016) "limited data exist regarding nursing students' attitudes and knowledge toward people with AD, whether undergraduate education prepares students to care for this population, or the best methods to support students in learning in an innovative and interactive environment" (p. 58). Batchelor-Aselage, DiMeglio, Aaron, and Dugger (2014) conducted a review of psychiatric-mental health nursing texts, in this they discovered that "dementia and delirium, are two core content areas needed by entry-level nurses to provide competent care" (p. 389) that were lacking. Brooke et al. (2019) discovered that prior to gaining knowledge, students perceived dementia as a normal sign of aging; however, through clinical experience they gained an awareness of dementia and better understood these misconceptions. Kimzey et al. (2016) also found that various students caring for PLWD articulated adverse impressions.

Due to the capriciousness of the disease, assignments in clinical environments that allow students to adapt and learn the necessary skills of caring for one with dementia are necessary. Without such, students will remain apprehensive and unknowledgeable of this disease and its processes. Eccleston et al. (2015) suggests that "the rapid increase in the prevalence of dementia has implications for the workforce across acute, community, and aged care health care sectors, and is associated with the need for an increase in the number of skilled professionals" (p. 800) who are capable of delivering competent care.

As the population of aging adults increases, the rise of AD and other related dementias (ORDs) will follow; therefore, "schools of nursing have a unique role to play in ensuring that prelicensure nurses are prepared to provide dementia care" (Adewuyi et al., 2018, p. 88). Students, novice and experienced nurses alike, must be knowledgeable and be able to express an in-depth understanding of this disease. This includes having an awareness of one's perceptions and responses when caring for PLWD; acquiring these abilities when caring for the aging population is vital.

Purpose

The purpose of this MSN thesis was to assess nursing students' knowledge of Alzheimer's disease. According to Maharaj (2017), literature suggests that advances need to be made in nursing education to prepare future nurses with the ability to gain a better understanding of the inimitable needs of older adults, particularly those with AD and ORDs. Nurse educators and nursing students alike must remain cognizant of the aging population, especially the distinct needs of those who are memory impaired. It is imperative that nursing students receive adequate training and gain a complex understanding of how to properly care for aging adults, more explicitly, those enduring memory impairments. Likewise, educators and students must consider the various factors affecting one's awareness of dementia; factors include things such as displaying a positive approach, effectively communicating, and bestowing objective perceptions.

Continually cultivating a caring environment, especially with PLWD, will allow the student to deliver care in a person-centered method. To do so, students must first gain a practical experience as well as conceptual understanding of caring for those with AD and ORDs. Assessing students' knowledge of dementia will assist the researcher in

evaluating one's understanding, enabling the researcher to verify that there is a need for educational opportunities and instructional modalities related to the topic of dementia care in nursing education.

Research Question

In this study, the nursing students' knowledge of AD, a form of dementia, will be surveyed. The research question is: Among student nurses, how prevalent is knowledge of Alzheimer's disease?

Theoretical Framework

The groundwork of nursing practice is the act of caring for another, therefore, this study is guided by Jean Watson's *Theory of Human Caring*. Through this theory, Watson (2015) seeks to appraise and expand the act of authentic caring, which guides the creation and transformation of healing practices. There are four major conceptual elements: Watson's (2015) ten carative factors, also referred to as caritas processes, which is derived from Latin, meaning "to cherish and appreciate, giving special attention to, or loving" (p. 323); representing a "transpersonal caring moment"; having caring consciousness while deliberately demonstrating caring actions; and establishing "caring–healing modalities" (Watson, 2015, p. 323). In the *Theory of Human Caring*, Watson (2015) posits that one moves beyond themselves, generating an ability to enact the processes of this theory, this also allows the carer to foster an open and authentic relationship with the care recipient and allows the recipient to receive one's "heart–centered presence" (p. 323).

The ten carative factors, or caritas processes are the framework of Watson's (2015) theory, they include the "formation of a humanistic–altruistic system of values",

the "instillation of faith–hope", and cultivating "sensitivity to one's self and to others" (p. 324). Application of this theory supports the development of "a helping–trusting, human caring relationship", the promotion and acceptance of "the expression of positive and negative feelings", while also facilitating an ability to systematically use creative and caring problem-solving processes (Watson, 2015, p. 324). The caritas processes conclude with the "promotion of transpersonal teaching–learning", providing "a supportive, protective, and/or corrective mental, physical, societal, and spiritual environment", assisting with the fulfilment of human desires, and allowing "for existential–phenomenological–spiritual forces" (Watson, 2015, p. 324).

Definition of Terms

Dementia is a regressive brain disease that causes degeneration of cognitive and physical abilities; Alzheimer's disease (AD) is the most common form of dementia. Other related dementias (ORDs) include those such as cerebrovascular dementia, Lewy body dementia, and frontotemporal dementia, as well as Korsakov's disease, Huntington's disease, and Creutzfeldt-Jakob disease (CJD). People living with dementia (PLWD) are those who have been diagnosed with AD or ORDs. Physical assistance includes activities of daily living (ADLs) which include: ambulation and transfer assistance, bathing and/or grooming, dressing, toileting, and feeding. Residential aged care facilities (RACFs), are long-term care (LTC) environments, and are often the locations where aged adults living with dementia reside. The World Health Organization (WHO) is an international agency concerned with public health. ProQuest and the Cumulative Index for Nursing and Allied Health Literature (CINAHL) are reference collections used to discover and explore topics as such. Alzheimer's Disease Knowledge Scale (ADKS), Dementia Attitude Scale

(DAS), Dementia Knowledge Questionnaire (DKAT-2), Dementia Supporter Caravan text (DKT-SC), Interpersonal Reactivity Index (IRI), and the Dementia Care Content in Entry-Level Undergraduate Nursing Curricula (DCCNC) are instruments corroborated by researchers and used to assess one's knowledge, perceptions, or to research information pertaining to AD. Service-learning (SL) experiences are those that allow students to gain practical experience in delivering care to PLWD.

Summary

Those with dementia experience increased confusion, intense anxiety, difficulty in communication, mood swings, and hallucinations. Lacking knowledge and understanding of dementia affects nurses' ability to competently care for those displaying these manifestations and/or behavioral disturbances, all results of this disease. Likewise, misconstrued perceptions inhibit the nurses' ability to respond appropriately, thus restricting their ability or willingness to compassionately provide quality care. These undesirable responses affect how the care recipient receives the nurse, ultimately influencing the delivery of care. The Alzheimer's Association (2019) conveys that caregivers, which includes novice nurses, "have difficult jobs, and they may not receive the training necessary to provide dementia care" (p. 40). Lacking knowledge of dementia affects the nurses' perceptions which adversely affects their ability to provide quality, patient-centered care. The taxing duties of caring for PLWD in addition to misunderstanding the disease can also be attributed to higher rates of job dissatisfaction, all of which are important considerations in career satisfaction and retaining novice nurses in a field which continually suffers from shortages.

Nursing students must be equipped with adequate knowledge to care for those with AD and ORDs, as this presents as a substantial health concern. Nursing students must be adequately equipped with the knowledge necessary to provide competent care while also being sentient to the needs of this vulnerable population. Assessing students' knowledge of dementia will allow researchers to discover the need for, thus creating invaluable educational opportunities. These opportunities will allow educators to inform student nurses, those seeking to become professional nurses, how to properly address, approach, and care for those with dementia. Learning experiences will also help students acquire coping skills to persevere through the challenges and stresses of caring for those who are memory impaired. Caring for this vulnerable population is an arduous yet rewarding venture. Ensuring that student nurses are equipped with the knowledge and skills to properly perceive the care needs of PLWD will enable students, or future professional nurses to deliver quality, patient-centered care.

CHAPTER II

Literature Review

According to Adewuyi et al. (2018) Alzheimer's disease will become more prevalent in the United States (U.S.) "among individuals age 65 years and older", cases are "expected to increase from 5.2 million in 2016 to 13.8 million by 2050" (p. 88). Accordingly, the World Health Organization (WHO) (2019) addresses "dementia as a public health priority" (para. 10). Scerri and Scerri (2013) confer that many nursing students are ill-equipped, lacking the knowledge and skills necessary to care for this vulnerable population. A review of literature was conducted; sources used include the Cumulative Index for Nursing and Allied Health Literature (CINAHL) and ProQuest Research Library exploring the following keywords: Alzheimer's disease, dementia, knowledge, memory impairment, nursing education, and nursing students. Research revealed many disparities within nursing education related to nursing students' dementia-specific knowledge.

Literature Related to Problem Statement

Adewuyi et al. (2018) conducted a sequential explanatory mixed-methods study to determine how dementia-specific curriculum was incorporated into pre-licensure nursing programs within the U.S. Three hundred participants were asked to complete the Dementia Care Content in Entry-Level Undergraduate Nursing Curricula (DCCNC) instrument; 139 completed the survey; however, due to incomplete information, only 111 were included in the final sample. Twenty participants were asked to complete semi-structured e-mail interviews; eight agreed. The researchers found that 92.8% agreed that curricula contained dementia care subject matter. The most prominent competency

addressed was the use of effective communication when caring for people with dementia (54.7%); however, only 0.7% addressed the issues of stigma and awareness of perceptions related to caring for those with dementia. The researchers found that 54.7% of students attended clinical in hospitals, whereas 31.7% participated within mental health and long-term care facilities which were their primary sites for dementia-specific learning experiences. Researchers found that only 10.3% of participants were highly satisfied with the quality of their clinical experience. The researchers found that lecture (71.2%) was the primary instructional method, while only 4.3% incorporated the use of electronic learning presentations. Researchers found that 43.9% of participants felt that there are challenges with amalgamating dementia-specific content mainly due to curricula already being encumbered; 40.3% voiced that educators' willingness and flexibility of curriculum were the most commonly identified factors affecting the incorporation of dementia content. The researchers found that only 29.4% evaluated the effectiveness of their dementia care curriculum. Researchers also found through evaluation of learning opportunities reflected a change in student knowledge (14.4%), skills (8.6%), and attitudes (11.5%). Researchers concluded that incorporating entry-level dementia-specific material within nursing curricula presents many challenges; however, to properly educate and train pre-licensed nurses, it is vital to address the needs of this vulnerable population; healthcare depends on it.

Brooke et al. (2019) conducted an explorative hermeneutic phenomenological study to discover the societal beliefs of dementia among nursing students. One hundred eighty-one nursing students in England (n =81), Slovenia (n= 41), Philippines (n= 53), and New Zealand (n= 6) were asked to participate in 23 focus groups. The researchers

found that the focus groups conducted in England and New Zealand were ethnically diverse when compared to those carried out in Slovenia and the Philippines. The researchers found that students perceived dementia to be a normal aspect of aging prior to participating in this study; they also voiced the importance of patience when caring for and interacting with those with dementia. The researchers concluded that nurse educators should incorporate theoretical and practical experiences within nursing curricula and that student nurses should be presented with an opportunity to care for, and to fully engage and interact with people living with dementia (PLWD).

Brown and Bright (2017) conducted a retrospective, qualitative, phenomenological study to determine the experiences of undergraduate nursing students when caring for those with cognitive impairment to determine the influence on students' attitudes and the effects of participating in a service-learning (SL) experience. Forty-five baccalaureate nursing students, which included 24 juniors and 25 seniors, were enrolled in a SL course which focused on the aging adult; each participant was asked to complete an online survey and reflective journals during their SL experience. The researchers found that students initially responded as being eagerly expectant, yet anxious when caring for the aging adult; the majority presented with pessimistic views. Researchers found that after participating in the SL experience students presented with more receptive, optimistic views of this population. Researchers concluded that participation in a SL course allowed students to appreciate and better understand the significance of competently caring for the aging adult.

Eccleston et al. (2015) conducted a pre-post control intervention questionnaire to examine baseline knowledge of dementia and then to investigate whether optimal clinical

placements, those within residential aged care facilities (RACFs), improved students'
knowledge of dementia. Ninety-nine participants, 52 in the intervention group and 47 in
the control group, were asked to complete the Dementia Knowledge Questionnaire
(DKAT-2). The researchers found a significant change in both pre- and post-test
significance for both groups; however, the outcomes were lower in the control group.
Researchers concluded that a concentrated body of undergraduate nursing students
possessed inadequate knowledge of caring for those with dementia, an area that is
clinically significant.

Hvalič-Touzery et al. (2018) conducted an exploratory research study to
determine the extent of which formal undergraduate and post-graduate health programs
incorporated dementia-specific education. Participants from six countries: Czech
Republic, Portugal, Scotland, Slovenia, Spain, and Sweden were asked to complete a
structured questionnaire. The researchers found that dementia-specific content within
undergraduate and post-graduate programs was lacking. Dementia was briefly addressed
in generic content within undergraduate and post-graduate programs; however, only 50%
of undergraduate and accredited master's programs contained content which specifically
focused on dementia. Researchers concluded that institutions of higher education have
great responsibility to enrich learning environments that allow students to embrace
dementia, to become knowledgeable, and to equip them with the skills to competently
address the needs of the ever-growing aging population.

Kimzey et al. (2016) conducted a convergent mixed methods study to determine if
experiential learning influences students' knowledge of Alzheimer's disease (AD); they
also explored the students' perceptions when caring for those with AD. Ninety-four

undergraduate students at the senior level and enrolled in a Public Health course were asked to complete the Alzheimer's Disease Knowledge Scale (ADKS), Dementia Attitude Scale (DAS), and a demographics questionnaire. The researchers found that the majority of students had no previous experience of AD; only 37% considered themselves to be well-informed about AD. Researchers found that participation in clinical experiences which included practical experiences with PLWD enhanced students' knowledge and also instilled an appreciation of caring for PLWD; students who participated in online learning modules without clinical experiences as well as those who lacked any intervention did not.

Lea et al. (2014) conducted an action research study to determine whether appropriate clinical placements, within long-term RACFs, add to students' knowledge of dementia. Thirty first-year bachelor level nursing students were asked to complete pre-placement and post-placement questionnaires along with the Dementia-Knowledge Assessment Tool Version 2 (D-KAT2). Researchers found that students and nurse mentors who participated in these clinical experiences had positive learning experiences. Researchers found that 90% of students reported they felt their mentor was helpful, 93.3% friendly, and 96.6% supportive. Students (96.7%) reported they gained enjoyment from working with residents. Mentors reported that students showed increased self-assurance and proficiency when participating in these learning experiences. The researchers also found that student knowledge and understanding of dementia was significant; this is evidenced by pre and postplacement surveys which revealed an increase in the students' knowledge of dementia. Researchers concluded that students

gained in-depth knowledge and understanding of PLWD when learning experiences are conducted in RACFs.

Lowey (2018) conducted a cross-sectional mixed-methods descriptive study to determine the efficacy of a gerontological nursing course to improve comprehension, viewpoints, and awareness in caring for aging adults as compared to other students who did not participate in the course. Forty-three undergraduate student nurses in their final semester were asked to complete Palmore's facts on Aging Quiz and Kogan Attitudes Towards Older Adults Scale. The researcher found that 35% of students in the first cohort, those who did not take the geriatrics course, reported that they had previous experience working with older adults. Students (58%) in the second cohort, those who participated in the geriatrics course, acknowledge that they had previous experience working with older adults. The researcher concluded that there were no significant differences in students' comprehension or viewpoints of caring for older adults when participating in a standalone geriatrics course or not; however, limitations exist due to no baseline data being obtained.

Maharaj (2017) conducted a randomized controlled trial to determine whether instructional modalities, such as live-model simulation, influenced students' knowledge and perceptions of older adults with AD when compared to a lecture-only approach. Sixty-five baccalaureate students at the senior level were asked to complete the Alzheimer's Disease Knowledge Scale (ADKS) and the Dementia Attitude Scale (DAS). The researcher found that the simulation group developed a greater understanding of AD when compared to the control group, those who received a lecture-only approach. Based on pre- and post-test results, it showed that students who actively participated in live-

model simulation had significant improvements in their knowledge of AD. The researcher concluded that live-model simulation should be considered an effective alternative versus traditional lecture-only teaching methods, especially when addressing the subject of gerontology.

Mastel-Smith, Kimzey, and He (2019) conducted a quasi-experimental pretest-posttest study to examine the impact of students' knowledge, confidence, and attitudes towards PLWD when participating in a dementia boot camp along with clinical experiences; students were compared to those who only received the dementia boot camp intervention. One hundred undergraduate nursing students enrolled in a Psychiatric Mental Health Nursing course were asked to complete the D-KAT2, DAS, Interpersonal Reactivity Index (IRI), and Confidence in Dementia Scale. The researchers found that their hypothesis was partially supported, that is the students' participation in a dementia boot camp significantly improves one's knowledge, attitudes, and self-confidence when caring for PLWD. Researchers concluded that caring for PLWD requires specialized competencies in order for students to be prepared for and to adapt to the ongoing changes experienced by those living with dementia.

Matsuda et al. (2018) conducted a pretest posttest evidenced-based study to determine the educational advantages of a dementia training program which supports nurses and nursing students. One hundred and fifty second-year undergraduate nursing students and 72 nurses were asked to complete the Dementia Supporter Caravan text (DKT-SC) and an Awareness Questionnaire. The researchers found that the dementia training program, as evidenced by significant interactions among groups and period, produced positive educational benefits. Although nurses possessed more knowledge and

understanding of caring for PLWD when compared to nursing students, researchers concluded that nurses and nursing students alike gained an awareness of and confidence in caring for PLWD; these opportunities also further developed their understanding of dementia.

Nguyen, Jansen, Hughes, Rasmussen, and Weckmann (2015) conducted an explanatory study to determine what competencies healthcare students felt were more significant in providing respectable end-of-life care to PLWD. Ninety-four participants, 43 Medical, 26 Nursing, and 25 Pharmacy students, were asked to complete the Attitudes to Dementia and Approaches to End-of-Life care in Dementia surveys. The researchers found numerous issues; however, responses varied between each group. Researchers acknowledged these issues as: possessing a familiarity of dementia, "medication knowledge, family education, patience, empathy, compassion, understanding, communication, family involvement, respect/patient autonomy, and quality of life" (Nguyen et al., 2015, p. 60). Researchers concluded that healthcare students value different subsets; however, whether medical, nursing, or pharmacy, all must attain adept knowledge and develop practical skills that are essential to providing person-centered and meaningful end-of-life care to PLWD.

O'Connell, Guse, Greenslade, Osterreicher, and Jensen (2017) conducted a pilot study to review students' experiences with responsive behaviors of residents in a RACF. Two hundred and thirty-one second-year bachelor level nursing students were asked to complete an anonymous online questionnaire; 116 were submitted (50.2%). The researchers found that 21.6% of participants had encountered each of the 12 responsive behaviors listed in the questionnaire; 85.3% encountered residents who presented with

restlessness and agitation, 83.6% with repeated vocalizations, and 82.8% with wandering without purpose. The researchers found that students were apprehensive when residents presented with behaviors such as cacophonous vocalizations, oppositions to care, sexual impulsiveness, or violent actions. Researchers found that students' involvement varied; however, based on the residents' behavior, students were more apt to become involved. The student readily managed the following actions: agitation (66.7%), repeated vocalizations (60.7%), wandering (66.7%), and oppositions to care (67.7%). Researchers found that merely 4.3% of students felt very well-prepared and only 24.3% felt well-prepared; whereas, 60% of students reported feeling ill-prepared and 11.3% of felt not prepared at all. Researchers concluded that it is vital for students to receive adequate clinical placement, such as in a RACF, to learn and become knowledgeable of how to understand and address the needs of PLWD. The researchers also placed emphasis on providing educational opportunities within RACFs so that students might become attracted to and willing to engage in providing care to this vulnerable population.

Poreddi, Carpenter, Gandhi, Chandra, and BadaMath (2015) conducted a transversal, descriptive study to determine nursing students' knowledge and attitudes towards PLWD. One hundred and twenty-two nursing students were asked to complete the Alzheimer's Disease Knowledge Scale (ADKS) and the Attitude toward Alzheimer's and Related Dementias scale. The researchers found that nursing students have insufficient knowledge of AD and other related dementias (ORDs); however, it is possible for student knowledge to improve based on their positive attitudes towards dementia. Researchers concluded that there is great need to enhance nursing education curricula and teaching modalities which comprehensively address caring for PLWD.

Scerri and Scerri (2013) conducted a questionnaire survey to determine undergraduate nursing students' awareness and viewpoints of AD and ORDs. Two hundred and eighty Maltese nursing students were asked to complete the Alzheimer's Disease Knowledge Scale (ADKS) and the Dementia Attitude Scale (DAS). The researchers found the majority of first-year nursing students participated in clinical experiences in which they encountered PLWD; however, the educational content addressed prior to clinicals did not address caring for those with dementia. Researchers found that students often lacked significant knowledge of the risk factors of dementia and issues of caring for PLWD. Researchers concluded that there is great need to establish adequate practical and conceptual experiences for nursing students to develop the knowledge and understanding needed to care for the aging population with dementia.

Wood, Alushi, and Hammond (2017) conducted an evidenced-based research study to determine the readiness of students for the experience of communicating and respecting individuals with dementia and assessing its influence and worth and how it might be enhanced. A total of 13 participants, six physiotherapy students and seven nursing students with learning disabilities, took part in a Care Home experience and were asked to complete a 32-item Likert scale questionnaire. The researchers found that students gained positive experiences when applying their knowledge of AD while having the opportunity to interact with residents with dementia. Researchers concluded that students who lack this opportunity lack confidence and are often intimidated when caring for those with dementia; however, students who participated in this learning experience gained confidence and also improved their communication skills.

Strengths and Limitations of Literature

Studies on the topic of nursing curricula as it relates to students' knowledge, experiences, and attitudes of dementia have been explored; the majority however, has been being conducted abroad. Research suggests that there has been limited exploration of dementia as it relates to the nursing students' knowledge within the U.S. An Australian study conducted by Eccleston et al. (2015) proposes that there is limited research which addresses specific deficits and strengths related to clinical practice and the nursing students' knowledge of dementia. Likewise, a U.S. study conducted by Kimzey et al. (2016) suggests that "limited data exist regarding nursing student's attitudes and knowledge toward people with AD, whether undergraduate education prepares students to care for this population, or the best methods to support students in learning in an innovative and interactive environment" (p. 58). Nursing curricula which places emphasis on students' knowledge and attitudes of dementia and addresses the improvement of student learning experiences that will equip them to care for ever-increasing aging population with dementia is sparse. Based upon these findings, this gap in literature supports the purpose of this thesis which is to assess the undergraduate nursing students' knowledge of dementia.

Summary

Caring for the current population of aging adults, which includes numerous individuals diagnosed with dementia along with the inevitable influx in this population, requires adept knowledge and skill. Nurse educators within undergraduate nursing programs need to be cognizant of students' knowledge and understanding, as well as the needs of this vulnerable population. As evidenced by current literature, there are few

nurse educators who are equipped with adequate knowledge to teach geropsychiatric

nursing courses (Batchelor-Aselage et al., 2014). It must be noted that responses derived

from quantitative and qualitative studies exposed rich data which offered detail of

students' practical experiences, especially those given an opportunity to care for and

interact with PLWD.

To adequately equip and assess the awareness of pre-licensed nurses' knowledge

and to gain an understanding of how to holistically care for the vulnerable population of

aging adults, students' knowledge of dementia must be assessed. In doing so, nurse

educators' will be able to review nursing curricula and revise instructional methods to

better meet and enhance students' learning needs. Evaluation and amendments of nursing

curricula related to geriatric knowledge and care, specifically related to dementia, are

necessary to attend to the imminent and challenging demands in healthcare.

CHAPTER III

Methodology

Understanding nursing students' level of knowledge of dementia is imperative; a lack of knowledge and understanding of dementia and the effects of this disease affects student nurses' ability to care for PLWD. Therefore, this thesis project aims to assess nursing students' knowledge of Alzheimer's disease and other related dementias in an effort to identify knowledge gaps in those who will eventually provide direct care to this vulnerable population. Due to the scarcity of research within the U.S. which ascertains the students' knowledge of dementia, data will be collected from undergraduate nursing students in a University setting within the U.S. This chapter will present an overview of the design, setting, sample, methods, and ethical considerations to protect human subjects, instrument, data collection procedure, and data analysis procedure used in research study.

Research Design

A descriptive correlational design was used for this study with a purpose of determining the prevalence of AD knowledge among junior and senior level nursing students. A cross-sectional design was used to collect data using the Alzheimer's Disease Knowledge Scale (ADKS) (Carpenter, Balsis, Otilingam, Hanson, & Gatz, 2009).

Setting

This study took place at a private University in the southeast region of the United States. This institution receives accreditation by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award baccalaureate, masters and doctorate degrees. Nursing students attending this institution earn a Bachelor of Science

in nursing degree, a program which is accredited by the Accreditation Commission for Education in Nursing and approved by the North Carolina Board of Nursing. Students who attend this University gain valuable experience at local hospitals which help prepare them for a variety of nursing related careers, in areas such as: Cardiac care, Case management, Emergency care, Intensive care, Labor and Delivery, Medical/Surgical nursing, Pediatrics, Public Health/Community Health nursing, Radiology & Interventional nursing, Sports Medicine, and Veterans Affairs nursing.

Sample

Data was collected in an academic setting using a convenience sample of junior and senior level student cohorts in the fall of 2019. The ADKS was administered to junior level students enrolled in an Adult I course and to senior level students enrolled in a Mental Health Nursing course. Out of the 67 students, juniors (n = 48) and seniors (n = 19), 63 students completed the ADKS.

Protection of Human Subjects

This study was submitted to an Institutional Review Board (IRB) for approval. No anticipated risks were identified in this study. Consent from study participants was obtained prior to administering the survey (Appendix A). Participants were advised of their right to withdraw from the study without penalty; participants were informed that they could withdraw from the study during or at any time prior to the submission of their survey. The anonymity of each participant was protected; names nor identifiers were collected or linked to the data. To further protect the anonymity of each study participant, the researcher was not involved in the data collection process. Once completed, students returned their survey to a designated collection site within the classroom. Surveys were

returned to the researcher by the professor. The collected data and results will be retained

by the researcher's educational institution for three years after completion of the study

and then destroyed.

Instruments

To assess students' knowledge of AD, study participants were asked to complete

the Alzheimer's Disease Knowledge Scale (ADKS) (Carpenter et al., 2009) (Appendix

B). Permission to use this instrument was obtained from Dr. Brian Carpenter, author of

the ADKS (Appendix C). The ADKS contains 30 true/false items and will take

participants approximately 5 – 10 minutes to complete. According to Carpenter et al.

(2009) "the ADKS is best thought of as a scale of overall AD knowledge" (p. 9).

Students' scores will be calculated by tallying each of the 30 true or false answers; the

higher the score (maximum of 30), the more knowledge the student possesses of AD.

Carpenter et al. (2009) confirms that the ADKS is an adequate instrument to

assess students' knowledge of AD. Questions in this scale address "risk factors,

assessment and diagnosis, symptoms, course, life impact, caregiving, and treatment and

management" of AD. (Carpenter et al., 2009, p. 1). Carpenter et al. (2009) conducted "an

analysis of the scale's psychometric properties" which suggests that the ADKS has

adequate reliability (test – retest correlation = .81, $p < .001$; internal consistency

reliability, $\alpha = .71$) "and validity (content, predictive, concurrent, and convergent)" (p. 9).

Data Collection Procedure

Permission to conduct this study was granted by the University's Department of

Nursing Program Director. Prior to dissemination of the ADKS, the researcher addressed

informed consent procedures and the student's rights to withdraw within each classroom,

juniors in Adult I and seniors in Mental Health Nursing. After the fact, the ADKS questionnaire was administered by the nursing professor in each course to those who voluntarily agree to participate in this study. After completing the survey, students returned surveys to a collection site within the classroom.

Data Analysis

Descriptive statistics were used to analyze data. The Statistical Package for the Social Sciences (SPSS) software was utilized to further evaluate the data collected.

The Statistical Package for the Social Sciences 21 (SPSS) software was used to analyze descriptive statistics from the data collected. The researcher entered and analyzed data collected from the ADKS. Results were tallied based on junior level students enrolled in an Adult I course, and senior level students enrolled in a Mental Health Nursing course.

CHAPTER IV

Results

The purpose of this MSN thesis was to assess nursing students' knowledge of

Alzheimer's disease (AD). The ADKS was used to assess the general knowledge of AD

among junior and senior level nursing students. Students' scores were calculated by

tallying each of the 30 true or false answers; 30 being the maximum score possible

indicating the level of knowledge of AD the student has attained.

Sample Characteristics

Sixty-three junior and senior level students enrolled in a Bachelor of Science in

nursing program participated in this study. Forty-six juniors enrolled in an Adult I

course, and 17 seniors enrolled in a Mental Health Nursing course completed the ADKS.

Two juniors and two seniors chose not to complete the survey.

Major Findings

The average score for juniors (n = 46) was 21 (sd = 3.01) and the average score

for seniors (n = 17) was 23 (sd = 3.56). Most juniors answered 20 questions correctly

whereas most seniors answered 25 questions correctly. The lowest score for juniors was

15, the highest score was 21. The lowest score for seniors was 17, the highest score was

28. Descriptive statistics are reflected in Table 1.

Table 1

Descriptive Statistics for ADKS Scores

	Juniors (n = 46)	Seniors (n=17)
Mean	21	23
Mode	20	25
Min	15	17
Max	21	28
Standard Deviation	3.01	3.56

Students' ADKS scores revealed variations in levels of AD knowledge; group differences were expected. Results indicated that the prevalence of knowledge of Alzheimer's disease among nursing students diverse.

Summary

Sixty-three students served as participants in this study. Differences in knowledge level between junior and senior students were found.

CHAPTER V

Discussion

This research study aimed to assess nursing students' knowledge of Alzheimer's

disease (AD) in an effort to determine the prevalence of AD knowledge, and to identify

knowledge gaps in those who will eventually provide direct care to the ever-growing

aging population.

Implication of Findings

This study was comprised of 46 juniors and 17 senior level nursing students and

identified knowledge of AD using the Alzheimer's and Dementia Knowledge Scale

(ADKS) survey. Results from this survey indicated that 100% of seniors understood that

AD is one type of dementia; however, only 80% of juniors were cognizant of this fact.

Nevertheless, knowledge disparities were noted among junior and senior level nursing

students within this study. Forty-six percent of juniors and 24% of seniors lacked

knowledge that the development of AD can occur as early as 30 years of age. Eleven

percent of juniors and 18% of seniors believed that prescription drugs are available and

can prevent the development of AD. Likewise, 11% of juniors and 18% of seniors

believed that AD is a curable disease; similarly, 15% of juniors and 6% of seniors

believed that in rare cases, patients with AD have recovered from their disease.

Furthermore, only 65% of juniors and 53% of seniors were aware that the average life

expectancy after symptoms present is six to 12 years.

Understanding of the physical abilities and care needs of those with AD were

other misunderstood factors. Only 17% of juniors and 12% of seniors understood that

increasing daytime activity is a means to avoid nocturnal disruptions and decrease

agitation. Students also lacked adept awareness fall risks int hose with AD. Only 80% of juniors and 82% of seniors agreed that as a person with AD regresses their risk of falling is considerable. Eighty-nine percent of juniors and 59% of seniors agreed that a person with AD would eventually need 24-hour supervision. However, 41% of juniors and 24% of seniors believed that for the most part people with AD live in long-term care settings; this statement is false.

Eighty percent of juniors and 76% of seniors understood to some extent that genetic factors account for the development of AD; however, one's lifestyle choices are also a contributing risk factor in developing AD. It was apparent that several students were unaware of how one's medical history, along with daily life choices directly relate to the development of AD. Both juniors and seniors were least knowledgeable in regard to cardiovascular disease increasing one's risk of developing AD. Results indicated that 74% of juniors and 47% of seniors were unaware that a diagnosis of hyperlipidemia has the potential to increase one's risk of developing AD; likewise, 74% of juniors and 41% seniors were unaware that a diagnosis of hypertension has the same effects. Additionally, only 76% of both juniors and seniors agreed that inadequate nutrition can worsen the symptoms of AD. These figures are considerable in the fact that understanding and acknowledging one's medical history and nutritional status are significant when providing direct care. Recognizing this information reveals competence and fosters the student nurse's ability to deliver patient-centered care.

In relation to symptoms of AD, 46% of juniors and 29% of seniors believed that tremors of the hands or arms is a common symptom in people with AD; however, this not a common symptom in people with AD. Likewise, 24% of juniors and 29% of seniors

were unaware that paranoia is a common symptom of AD; for instance, the belief that others are stealing one's things. Understanding the symptoms of AD will allow the student to care for their patients and appreciate the value of patient-centered care for those with AD.

Today, mental health issues are another apparent concern. Another poorly recognized mental health issue in those with AD is depression. Results revealed that 70% of juniors and 71% of seniors understood that those with AD are unusually predisposed to depression; however, only 33% of juniors and 65% of seniors understood that symptoms of severe depression could be mistaken for symptoms of AD. Thirteen percent of juniors and 12% of seniors were unaware that people who suffer from early stage AD can benefit from psychotherapy for depression and anxiety. It is especially important to recognize the symptoms of depression for those who are unaware or are unable to adequately voice their concerns. Likewise, it is important to educate those dealing with anxiety and depression that it is beneficial to seek help.

Thirty percent of juniors and 18% of seniors were unaware that AD affects one's short term versus their long-term memory. Students believed that people with AD mostly remember recent events rather than experiences which occurred in their past. It was not considered that having difficulty with simple tasks, such as handling money or paying bills is commonly manifested in the early stages of AD; only of 50% juniors and of 65% seniors understood this fact. Additionally, an abrupt onset of memory lapse and confusion was inadequately understood. Findings revealed that 20% of juniors and 12% of seniors believed that an acute, or sudden onset of confusion and memory lapse are likely due to AD. Knowledge deficits of memory impairment also exist, as only 15% of juniors and

6% of seniors believe that it is possible to recover from AD, a chronic incapacitating

disease. Conditions such as delirium or amnesia should be considered, as these present

with onset. Other conditions such as acute illness, i.e., urinary tract infections (UTIs), as

well as drug toxicity, head injuries, a cerebrovascular accident (CVA), substance use, or

a severe emotional event are known to cause a sudden lapse of memory or sudden onset

of confusion. Implications from these results are that nurse educators have a duty to assist

students in understanding the importance of identifying conditions or factors of AD as

well as differentiating those that may cause sudden onset of confusion and memory lapse;

conditions presenting with sudden onset may be treatable. Therefore, it is important for

nurse educators to convey to students that it is not likely for AD to present with sudden

onset as it is a progressive and chronic disease.

Fifty percent of juniors and 35% of seniors believed mental exercise to be a

precluding factor in the development of AD. Thirty nine percent of juniors and 12% of

seniors also considered the use of reminder notes to be a maladaptive coping strategy for

those with AD, as they believed that this approach furthers one's cognitive decline.

Likewise, although small, there were still 4% of juniors and 18% of seniors who believed

that it would be safe to allow one with AD to continue driving, as long as they had a

companion present. Taking these things into consideration, students must understand and

be cognizant of the fact that encouraging the use of reminder notes is a productive

strategy and that it does not contribute to one's decline. It is also important to educate one

to consider that when diagnosed with AD, one's functional abilities decrease as their

disease progresses. It is vital that nurses are aware of the importance of educating those

with AD as well as their family members that independence in is necessary; however,

completing daily activities and participating in ordinary tasks, such as operating a motor vehicle, may become unsafe as the disease progresses.

Many students lacked an in-depth understanding of effective communication techniques with those who suffer from memory impairment. Only 76% of juniors and 82% of seniors agreed that if a person with AD were to become agitated, further examination might reveal other health problems that caused the agitation. Results also revealed that 47% of seniors believed that it is helpful to remind patients with AD that they are repeating themselves; however, 80% of juniors considered this statement to be false. This indicates that students are unaware that a lapse in short term memory inhibits one from remembering facts or details; reminding one that they are repeating themselves is unconstructive. One hundred percent of seniors and 96% of juniors understood that people with AD do best with simple instructions, and that instructions should be given one step at a time; however, 35% of juniors and 18% of seniors felt they should complete the task if one with AD presents with difficulty while caring for themselves. This revealed a lack of knowledge of the importance of avoiding precipitous interventions; instead, the student nurse should sustain one's independence which will enable the aging adult, especially those with AD, to continue caring for themselves, no matter how great or small the task, for as long as possible.

Providing patient-centered compassionate care also relates to the student nurse's ability to inform and educate patients about their care. Only 63% of juniors and 76% of seniors felt that one with AD was still capable of making informed decisions about their own care. Students must be knowledgeable and understand that a diagnosis of AD does not automatically render one as useless and does not make them incapable of making

informed decisions. It is important to make sound judgements and to involve patients with AD in their care for the duration of competence; revoking this right impedes the care delivered to the patient and their family.

These findings in this study support the inferences of Scerri and Scerri (2013) who conferred that many nursing students are ill-equipped, lacking the knowledge and skills necessary to care for the vulnerable aging population. Eccleston et al. (2015) also concluded that a concentrated body of undergraduate nursing students possessed inadequate knowledge of caring for those with dementia, an area that is clinically significant; results from this study conveyed similar details.

Application to Theoretical/Conceptual Framework

Nursing practice is comprised of endless opportunities to authentically care for another; therefore, Jean Watson's *Theory of Human Caring* was appropriate for this study. Gaining knowledge and a better understanding of AD will allow the student to expand their actions enabling them to authentically care. Although one may face challenges when caring for one with AD, the student nurse who applies knowledge of this theory is able to apply Watson's (2015) four major conceptual elements. Application of this theory allows the student "to cherish and appreciate," give exceptional kindness to, and love the patient with AD (Watson, 2015, p. 323). The student also learns to represent a "transpersonal caring moment" and to be conscious of the care they provide, to deliberately demonstrate caring actions, and to establish "caring–healing modalities" (Watson, 2015, p. 323). By authentically caring for one with AD, the student becomes vulnerable and fosters a genuine relationship with their patient; this allows the patient with AD to receive one's "heart–centered presence" (Watson, 2015, p. 323).

When applying this theory, it is vital to provide "a supportive, protective, and/or corrective mental, physical, societal, and spiritual environment", assisting with the fulfilment of human desires, and to embrace "existential–phenomenological–spiritual forces" (Watson, 2015, p. 324). Caring for one with AD requires that the student nurse form "a humanistic–altruistic system of values", instill faith–hope in their patient as well as their acts of caring, and cultivate a "sensitivity to one's self and to others" (Watson, 2015, p. 324). In doing so, the student develops "a helping–trusting, human caring relationship" with their patient allowing them to provide competent and compassionate patient-centered care (Watson, 2015, p. 324).

Limitations

This study included some limitations. First, the study's participants included a convenience sample of nursing students enrolled in a BSN program at a single private University in the southeast region of the United States. All data was collected at the beginning of the semester using only the ADKS survey. Lastly, not all participants responded to the survey.

Implications for Nursing

According to the World Health Organization (WHO) (2019) there are currently 50 million people diagnosed with dementia-related illnesses, and nearly 10 million new cases diagnosed each year. Subsequently, AD is the sixth leading cause of death (Alzheimer's Association, 2019). Caring for the current and escalating population of aging adults, which includes a multitude of individuals diagnosed with AD and other related dementias (ORDs), requires adept knowledge and skill. Nurse educators within

undergraduate nursing programs need to be cognizant of students' knowledge and understanding, as well as the needs of this ever-increasing vulnerable population.

AD is a subject that must be encompassed in the curriculum during one's educational journey. As a result, it is of vital importance that educators understand the significance of nursing students developing adept knowledge and skills which allow them to competently care for those with memory impairing diseases. AD is an arduous task, the complexities of caring for those with memory impairment requires concerted effort; therefore, it is essential that nurse educators be prepared to teach students the knowledge and skills needed to care for the ever-increasing population of aging adults.

Recommendations

The WHO (2019) addresses "dementia as a public health priority" (para. 10); therefore, caring for the current population of aging adults, which includes numerous individuals diagnosed with AD and ORDs requires adept knowledge and skill. It is apparent that nursing students possess knowledge of AD; however, this study as well as other recent studies convey that students are inadequately equipped with knowledge, skills, and attitudes to adequately address the needs of the ever-increasing aging population. Consequently, further studies which investigate educational content related to the aging adult with dementia, the depth of nurse educators and student knowledge of AD, as well as qualitative perspectives of educators' and students' knowledge of AD are vital.

Conclusion

Based upon these findings, a gap in literature supports the purpose of this study which is to assess the undergraduate nursing students' knowledge of dementia. This study

reveals that students' knowledge of AD could be expanded. A continued rise in patients with dementia-related illnesses reiterates that nurse educators will soon be confronted with the challenges of incorporating specific curriculum which addresses students' knowledge when caring for the older adult. Incorporating content which places a unique emphasis on AD and ORDs. In order to effectively address the needs of the increasing population of aging adults, it is imperative for nurse educators to understand the necessity of incorporating dementia specific content. Improvement of student learning experiences which equip nursing students with the knowledge and skills needed to care for an ever-increasing aging population with AD and ORDs is vital.

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Appendix A

Informed Consent

Title of Study: Students' Knowledge of Alzheimer's Disease

Researcher: D'Anna Helms, BSN, RN

Purpose:
The purpose of this MSN thesis is to assess nursing students' knowledge of Alzheimer's disease.

Procedure:

You are being asked to complete the Alzheimer's Disease Knowledge Scale (ADKS). The survey contains 30 true/false statements. Once you have completed the survey, place it in the envelope at the front of the classroom. If you choose not to participate, you may also place a blank survey in the envelope or you may discard the survey.

Time Required:
It is anticipated that this study will require approximately 5-10 minutes of your time.

Voluntary Participation:
Participation in this study is voluntary. You have the right to withdraw from the study at any time without penalty. You also have the right to refuse to answer any question(s) for any reason without penalty. This survey is unrelated to your course work and participation or lack of participation in the survey will not affect your course grade.

Confidentiality:
Surveys should be completed anonymously. Please do not include your name or any other identifiers on your survey. To further protect your anonymity, the primary investigator will not be involved in the data collection process. Surveys will be distributed and returned to the primary investigator by the course professor. The collected data and results will be retained by the Hunt School of Nursing for three years after completion of the study and then destroyed.

Risks:
There are no anticipated risks in this study.

Benefits:
There are no direct benefits associated with participation in this study. This study may help us to understand nursing students' knowledge of Alzheimer's and allow researchers to discover the need for educational opportunities to better understand this disease. These discoveries may help educators apprise student nurses, those seeking to become professional nurses, how to properly address, approach, and care for those with Alzheimer's.

Payment:
You will receive no payment for participating in the study.

Right to Withdraw From the Study:
Your data will be anonymous which means that your name will not be collected or linked to the data; however, you have the right to withdraw from the study at any time without penalty.

How to Withdraw From the Study:
If you wish to withdraw from the study, please discard your survey or submit a blank survey to the envelope at the front of the classroom. Once surveys have been collected, surveys cannot be removed due to the de-identified state of the surveys.

If you have questions about the study, contact the following individuals:

D'Anna Helms, BSN, RN
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If the research design of the study necessitates that its full scope is not explained prior to participation, it will be explained to you after completion of the study. If you have concerns about your rights or how you are being treated, or if you have questions, want more information, or have suggestions, please contact the IRB Institutional Administrator listed below.

Dr. Sydney K. Brown
IRB Institutional Administrator
Gardner-Webb University

Boiling Springs, NC 28017
Telephone: 704-406-3019
Email: skbrown@gardner-webb.edu

Voluntary Consent by Participant:
I have read the information in this consent form and fully understand the contents of this document. I have had a chance to ask any questions concerning this study and they have been answered for me. By submitting this survey, I am voluntarily agreeing to participate in this study.

Appendix B

Alzheimer's Disease Knowledge Scale

Below are some statements about Alzheimer's disease. Please read each statement carefully and circle whether you think the statement is True or False. If you aren't sure of the right answer, make your best guess. It's important to circle an answer for every statement, even if you're not completely sure of the answer.

True   False   1.   People with Alzheimer's disease are particularly prone to depression.

True   False   2.   It has been scientifically proven that mental exercise can prevent a person from getting Alzheimer's disease.

True   False   3.   After symptoms of Alzheimer's disease appear, the average life expectancy is 6 to 12 years.

True   False   4.   When a person with Alzheimer's disease becomes agitated, a medical examination might reveal other health problems that caused the agitation.

True   False   5.   People with Alzheimer's disease do best with simple, instructions given one step at a time.

True   False   6.   When people with Alzheimer's disease begin to have difficulty taking care of themselves, caregivers should take over right away.

True   False   7.   If a person with Alzheimer's disease becomes alert and agitated at night, a good strategy is to try to make sure that the person gets plenty of physical activity during the day.

True   False   8.   In rare cases, people have recovered from Alzheimer's disease.

True   False   9.   People whose Alzheimer's disease is not yet severe can benefit from psychotherapy for depression and anxiety.

True   False   10.   If trouble with memory and confused thinking appears suddenly, it is likely due to Alzheimer's disease.

True   False   11.   Most people with Alzheimer's disease live in nursing homes.

True   False   12.   Poor nutrition can make the symptoms of Alzheimer's disease worse.

True   False   13.   People in their 30s can have Alzheimer's disease.

True   False   14.   A person with Alzheimer's disease becomes increasingly likely to fall down as the disease gets worse.

(questions continue)

True	False	15.	When people with Alzheimer's disease repeat the same question or story several times, it is helpful to remind them that they are repeating themselves.
True	False	16.	Once people have Alzheimer's disease, they are no longer capable of making informed decisions about their own care.
True	False	17.	Eventually, a person with Alzheimer's disease will need 24-hour supervision.
True	False	18.	Having high cholesterol may increase a person's risk of developing Alzheimer's disease.
True	False	19.	Tremor or shaking of the hands or arms is a common symptom in people with Alzheimer's disease.
True	False	20.	Symptoms of severe depression can be mistaken for symptoms of Alzheimer's disease.
True	False	21.	Alzheimer's disease is one type of dementia.
True	False	22.	Trouble handling money or paying bills is a common early symptom of Alzheimer's disease.
True	False	23.	One symptom that can occur with Alzheimer's disease is believing that other people are stealing one's things.
True	False	24.	When a person has Alzheimer's disease, using reminder notes is a crutch that can contribute to decline.
True	False	25.	Prescription drugs that prevent Alzheimer's disease are available.
True	False	26.	Having high blood pressure may increase a person's risk of developing Alzheimer's disease.
True	False	27.	Genes can only partially account for the development of Alzheimer's disease.
True	False	28.	It is safe for people with Alzheimer's disease to drive, as long as they have a companion in the car at all times.
True	False	29.	Alzheimer's disease cannot be cured.
True	False	30.	Most people with Alzheimer's disease remember recent events better than things that happened in the past.

Source. Carpenter, B.D., Balsis, S., Otilingam, P.G., Hanson, P.K., & Gatz, M. (in press). The Alzheimer's Disease Knowledge Scale: Development and psychometric properties. *The Gerontologist*.

Alzheimer's Disease Knowledge Scale

Below are some statements about Alzheimer's disease. Please read each statement carefully and circle whether you think the statement is True or False. If you aren't sure of the right answer, make your best guess. It's important to circle an answer for every statement, even if you're not completely sure of the answer.

[True]	False	1.	People with Alzheimer's disease are particularly prone to depression.
True	[False]	2.	It has been scientifically proven that mental exercise can prevent a person from getting Alzheimer's disease.
[True]	False	3.	After symptoms of Alzheimer's disease appear, the average life expectancy is 6 to 12 years.
[True]	False	4.	When a person with Alzheimer's disease becomes agitated, a medical examination might reveal other health problems that caused the agitation.
[True]	False	5.	People with Alzheimer's disease do best with simple, instructions given one step at a time.
True	[False]	6.	When people with Alzheimer's disease begin to have difficulty taking care of themselves, caregivers should take over right away.
[True]	False	7.	If a person with Alzheimer's disease becomes alert and agitated at night, a good strategy is to try to make sure that the person gets plenty of physical activity during the day.
True	[False]	8.	In rare cases, people have recovered from Alzheimer's disease.
[True]	False	9.	People whose Alzheimer's disease is not yet severe can benefit from psychotherapy for depression and anxiety.
True	[False]	10.	If trouble with memory and confused thinking appears suddenly, it is likely due to Alzheimer's disease.
True	[False]	11.	Most people with Alzheimer's disease live in nursing homes.
[True]	False	12.	Poor nutrition can make the symptoms of Alzheimer's disease worse.
[True]	False	13.	People in their 30s can have Alzheimer's disease.
[True]	False	14.	A person with Alzheimer's disease becomes increasingly likely to fall down as the disease gets worse.

(questions continue)

True   [False]   15. When people with Alzheimer's disease repeat the same question or story several times, it is helpful to remind them that they are repeating themselves.

True   [False]   16. Once people have Alzheimer's disease, they are no longer capable of making informed decisions about their own care.

[True]   False   17. Eventually, a person with Alzheimer's disease will need 24-hour supervision.

[True]   False   18. Having high cholesterol may increase a person's risk of developing Alzheimer's disease.

True   [False]   19. Tremor or shaking of the hands or arms is a common symptom in people with Alzheimer's disease.

[True]   False   20. Symptoms of severe depression can be mistaken for symptoms of Alzheimer's disease.

[True]   False   21. Alzheimer's disease is one type of dementia.

[True]   False   22. Trouble handling money or paying bills is a common early symptom of Alzheimer's disease.

[True]   False   23. One symptom that can occur with Alzheimer's disease is believing that other people are stealing one's things.

True   [False]   24. When a person has Alzheimer's disease, using reminder notes is a crutch that can contribute to decline.

True   [False]   25. Prescription drugs that prevent Alzheimer's disease are available.

[True]   False   26. Having high blood pressure may increase a person's risk of developing Alzheimer's disease.

[True]   False   27. Genes can only partially account for the development of Alzheimer's disease.

True   [False]   28. It is safe for people with Alzheimer's disease to drive, as long as they have a companion in the car at all times.

[True]   False   29. Alzheimer's disease cannot be cured.

True   [False]   30. Most people with Alzheimer's disease remember recent events better than things that happened in the past.

Source. Carpenter, B.D., Balsis, S., Otilingam, P.G., Hanson, P.K., & Gatz, M. (in press). The Alzheimer's Disease Knowledge Scale: Development and psychometric properties. *The Gerontologist.*

Appendix C
Permission to Use ADKS

Fwd: Permission Request: Alzheimer's Disease Knowledge Scale (ADKS)

D'Anna Helms
Tracy Arnold
Wednesday, May 29, 2019 at 9:52 AM
Show Details

← You replied to this message on 5/29/19, 11:01 AM.

From: Carpenter, Brian
Sent: Wednesday, May 29, 9:36 AM
Subject: Re: Permission Request: Alzheimer's Disease Knowledge Scale (ADKS)
To: D'Anna Helms

Dear D'Anna,

Thank you for your interest in the ADKS. You have our permission to use the scale in your interesting project, and at the link below you'll find additional information about the scale.

http://pages.wustl.edu/geropsychology/adks

Please let me know if you have any questions, and good luck with your work.

Regards,
Brian

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