CARING BEHAVIORS OF NURSING STUDENTS AND THEIR ATTITUDES TOWARD OLDER ADULTS

By

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Abstract

Caring is an emotion. It is a feeling of compassion and an understanding of the difficulties of others. Research indicates that caring behaviors and attitudes are an important part of the knowledge base for nursing students. Caring behaviors and attitudes are an important part of the knowledge base for nursing students in order to provide competent care for older adults. This descriptive cross-sectional study reports findings of caring attitudes and behaviors of nursing students using the Caring Dimensions Inventory (CDI). The purpose of this study was to examine the self-reported attitudes and caring behaviors of nursing students toward older adults.

The Caring Dimensions Inventory (R. Watson and Lea, 1997) and an investigator-developed demographic questionnaire was used for data collection. Data were collected from a group of traditional and accelerated BSN nursing students in a one-time cross-sectional research design. A sample size of 121 students participated. Scores from the CDI were computed in terms of means and standard deviations.

Three research questions were analyzed: personal characteristics of nursing students, self-reported CDI scores between students who had prior experience with older adults before entering the nursing program and those who had did not have experience. SPSS software was used to determine the distribution of variables in the sample. The demographic characteristics: age, gender, race/ethnicity, prior experience providing care to older adults, and planned career trajectory were used to describe the sample. Results of the study indicated that there were no statistically significant differences between students who had prior experience caring for older adults before

entering the nursing program and those who did not. Nursing students, however, had a high degree of caring in general, whether they were in the traditional or accelerated BSN program. Nursing students who selected nursing as a first-choice career were significantly higher in caring. An unexpected finding was that the majority of the nursing students were non-White, representing a number of different nationalities. Non-Whites scored statistically higher on caring compared to Whites. Implications for theory, education, practice, policy and research are addressed as well as recommendations for future research.

Keywords: attitudes, behaviors, caring, nursing students, older adults

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Chapter One

Introduction

Caring Behaviors of Nursing Students and their Attitudes toward Older Adults

Caring is the quintessential construct when considering the well-being of healthcare consumers in this country. In a study by Liu (2004) it was suggested that nurses should be attentive, genuine, and sincere in order for the recipient to feel the effects of their caring. Healthcare professionals are now demanding that nurses show greater caring behaviors toward their patients. One group of patients in need of caring are the older adults who reside in different environments of care, particularly in nursing homes where care can be impersonal and sometimes abusive. With the rapid growth and the ever-changing complex caring needs of older adults comes a demand for sensitive competent nursing care. Nurse educators seek creative solutions for preparing nursing students for the challenges of caring for older adults (IOM, 2010). The American Association of Colleges of Nursing (AACN) has stated that undergraduate nursing students should have certain competencies in gerontological nursing. These competencies are (1) having professional attitudes, values and expectations when giving care to older adults, (2) being guided with valid and reliable assessment instruments in the nursing practice of older adults, (3) understanding what constitutes an actual or potential mistreatment of an older adult, (4) being physically and intellectually equipped to recognize and respect the increased complexities of

caring for the older adult, and (5) being exposed to a liberal education that incorporates nursing theories and practice in the delivery of patient-centered care to older adults (2010).

The AACN also suggests certain strategies be used to increase these competencies among the undergraduate student which include but are not limited to (1) conducting student self-assessments of their attitudes, values, and life experiences regarding older adults, (2) ensuring that faculty integrate gerontological content into their core curricula, (3) use intergenerational mentoring programs to increase nursing students' exposure to healthy older adults, and (4) create clinical experiences that provide an environment rich in person-centered care as their standard practice for older adults (IOM, 2010). This includes environments of care for older adults such as hospitals, clinics, nursing homes and assisted living facilities.

There should also be a method of determining what caring means to the nursing students and their current attitudes and behaviors on caring. Perhaps a better understanding of caring for older adults might help nursing faculty modify core elements in their curricula. This effort could help to improve the overall health care of this vulnerable population.

Statement of the Problem

The purpose of this research was to examine the self-reported attitudes and caring behaviors of nursing students. The care of older adults in nursing homes and long-term care facilities is often met with negative attitudes and behaviors from healthcare professionals. With the rapid growth of elders and their ever-changing

complex care challenges, it is imperative that their needs are met with positive caring attitudes and behaviors from nurses caring for them. Perhaps a better understanding of nursing students' caring attitudes and behaviors toward older adults would help nurse educators seek creative solutions in preparing students to provide competent care. The National League for Nursing Commission for Nursing Education Accreditation (CNEA) emphasizes and promotes caring in the workplace. Caring is the first of four core values as presented by the National League of Nursing (NLN) and it is described as the fundamental segment of the nursing profession (2016). Both of these national organizations (CNEA and NLN) support including caring in nursing educational curricula; therefore, in 2008 the NLN produced a curriculum-based faculty toolkit. The National Council Licensure Examination (NCLEX) Registered Nurse test plan stated that caring is also fundamental and should be an integrated process in nursing care (2016). Caring was the major concept explored in this research. The concept of caring behaviors was operationalized using the Caring Dimensions Inventory (CDI) which has four dimensions: psychosocial, professional, technical, and personal disposition (R. Watson & Lea, 1997; Salimi, Azimpour, Mohammadzadeh, & Fesharaki, 2014) and is based on Watson's 10 carative factors. The goal of the present study was to gain a greater knowledge of how the concept of caring could help to enhance nursing students caring-related attitudes and behaviors in their practice with elders. According to the American Nurses Association's (ANA, 2015) position statement on risk and responsibility, nurses are required to care for clients in a tolerant and fair manner, giving respect to all individuals. Caregiving is

linked with attributes such as exhibiting a caring attitude toward clients. A relationship with the client where caring attitudes exist include (1) personal traits and attributes; (2) technical skills and management of care; and (3) dignity and respect in the working environment (Catlett & Lovan, 2011).

Background and Significance

One of the responses from the Centers for Medicare & Medicaid Services (CMS) was to provide nursing homes with toolkits that included a high-quality training program on person-centered care for individuals with dementia (Levinson, 2014). In the Office of Inspector General's (OIG) Strategic Plan 2014-2018, it was noted that their goal for promoting quality, safety and value would be accomplished with strategies that 1) encourage a high quality of care, 2) promote public safety and 3) maximize value by improving efficiency and effectiveness. Furthermore, as a management strategy, the department has provided one billion dollars to the Affordable Care Act (ACA) to support the Partnership for Patients Initiative to help keep patients from becoming sicker or injured while receiving care, and to help them heal without additional complications. Both CMS and OIG have partnered with the Department of Justice and the Federal Elder Justice Interagency Working Group to ensure better care for elder persons.

Experience with older adults may influence nursing students' attitudes toward providing care. Findings have indicated that students (n = 179) with fewer experiences with older adults were less likely to demonstrate a positive score in their attitudes (Holroyd, Dahlke, Fehr, Jung & Hunter; 2009). Another noteworthy finding

was that a general lack of appropriate knowledge concerning the older adult population can negatively influence students' attitudes. These researchers reported their curriculum provided students minimal opportunity for practical experiences with healthy older adults. This lack of exposure to the older population did not produce positive attitudes toward elders. After the researchers examined their existing curriculum, they decided that it was essential for their faculty development plan to include gerontological education as an important part of nursing education (Holroyd, et.al, 2009) in order to foster positive attitudes toward the care of older adults.

Educating Baccalaureate Nurses

Research has suggested that nursing students (n=179) with fewer experiences with older adults are less likely to demonstrate positive attitudes toward them (Holroyd, Dahlke, Fehr, Jung & Hunter, 2009). Numerous researchers have posited that a general lack of knowledge among nursing students about older adults in terms of their physical, emotional, and spiritual health is not clearly evident in their critical thinking and their attitudes and behaviors (Fick & Foreman, 2000; Foreman, Wakefield, Culp & Milisen, 2001). Other researchers such as (Holroyd et.al, 2009) have written that the current curricula might not be providing students with minimal opportunities for theory-based practice experiences with healthy or sick older adults. The U. S. Department of Health and Human Services Office of Minority Health (2001), has suggested in their final report that nurses have a professional obligation to pursue new evidence-based practices, remain engaged in professional development and competency-driven care that includes culturally and linguistically appropriate

services (CLAS, 2001). These CLAS standards promote services that have the unique possibility of increasing positive health outcomes, access to care, and the quality of care that a patient receives (CLAS, 2001). Nurse educators and researchers are well positioned to nurture positive attitudes and behaviors that are grounded in caring, and that focus on the carative factors as promulgated by Watson and others. Educating baccalaureate nurses about the holistic care of older adults is emerging as a critical theme in nursing curricula, as this population continues to proliferate in number and health service needs, given the shift in demographic profiles of the nation's population (NLN, 2011).

Significance of Research for Nursing Education

This study has numerous potential contributions to make to nursing education. First, it will expand and enhance findings in current research that addresses Watson's theory of human caring when applied to older adults. Second, the findings could be used to inform nurse educators about nursing students' knowledge and beliefs about older adults. Finally, the need for nurses who have the knowledge and skill sets necessary to provide care for older adults is a major national concern (NLN, 2011). Unless there are identified programs, with Federal funding mechanisms in place to support them, there could be a shortage of nurses who are equipped to provide care that is humane, patient-centered, and that addresses the 10 carative factors (IOM, 2010; NLN, 2016).

Examining the attitudes and caring behaviors of nursing students within the context of the theory of human caring, was the focus of this research. The Caring

Dimensions Inventory was administered to baccalaureate students who are matriculating at a research-intensive university. This research could help to provide critical information about baccalaureate nursing students' attitudes and beliefs about caring for older adults.

Theoretical Framework

Jean Watson, a nurse theorist, developed the Human Caring Theory. The concept of caring was examined within the context of Watson's Human caring theory (1979). One of the grand theories of nursing is the Human Caring theory, which was promulgated in the 1970s, but remains relevant and a core element in nursing in the 21st Century (Wadsworth, 2012). Watson's theory should not be confused with Swanson's Theory of Caring which is a middle range theory (Chen & Chou, 2010). Nevertheless, this theory has been adapted in health systems across the global community, and is also used by institutions that are applying for or have received magnet status American Nurse Credentialing Center (ANCC) (2016). There are currently 441 Magnet hospitals. Virginia is home to 20 of these facilities, and two are within 30 minutes of George Mason University. At least one of the two facilities use Watson's Human Caring theory in their conceptual framework as an ethical guide to administrative and clinical practices (Watson, 2006). Watson's theory revolves around assisting the person (patient) to develop a higher gradation of harmony within the mind, body, and soul. The key elements that are designed to assist the person (patient) with attaining this higher gradation of harmony are (1) the carative factors, (2) transpersonal caring relationships, and (3) caring occasions/caring moments

(Watson, 1988; Watson, 1999). There are several approaches to nursing care as promulgated by Watson. First, the theory suggests that nurses should establish a caring relationship with patients within the context of providing care. Second, mutuality --- empathy and support--- should be evident throughout the nurse-patient interaction and should focus on the individual's health needs as well as his or her health beliefs and practices. Third, nurses should conceptualize and address patients and families as holistic and unique human beings, which includes their bodies, minds, and souls—with positive regard and dignity. Fourth, nurses are positioned to promote health, prevent illness, and provide culturally competent care through the use of science, evidence-based practice, and manifest acceptance toward patients that is unconditional. Finally, caring occasions and moments should help to transform both persons—the patient and the nurse—because they are intimately embedded in the transaction (Watson, 2009; Watson, 2002).

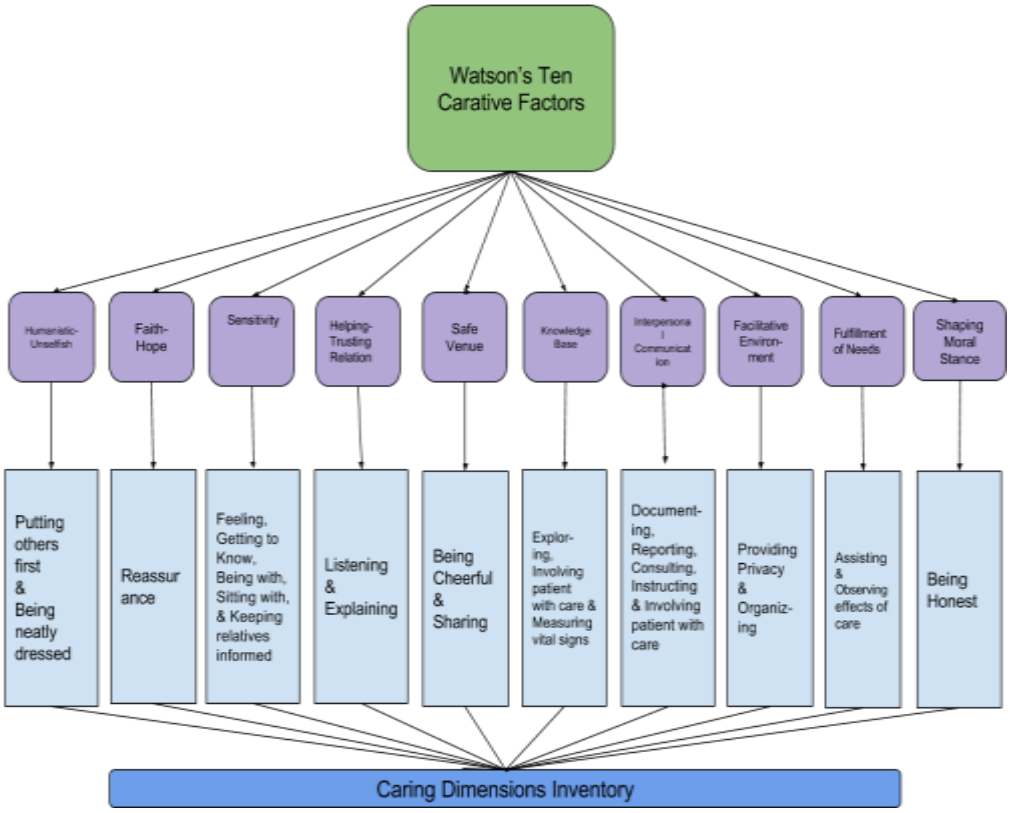
Watson's theory of caring is associated with attitudes and behaviors that are related to one's will, intention, or obligation that displays itself in his or her behavioral acts (1985). Collectively, caring is not always evidenced in the general population of nursing students.

Watson's theory characterizes the concept of carative factors needed for helping people across the life course. Watson's 10 Carative Factors include: (1) Establishing a humanistic-unselfish system of values, (2) Inspiring faith-hope to increase well-being, (3) Promoting sensitivity to self and others, (4) Building a helping-trusting, human caring relationship (5) Stimulating a safe venue for expressions of positive and

negative feelings, (6) Providing the knowledge base for problem-solving using caring decision making skills, (7) Developing effective interpersonal communication skills via teaching-learning, (8) Facilitating a supportive, protective, or corrective mental, physical, societal and spiritual environment, (9) Supporting the fulfillment of human needs, and (10) Shaping the moral stance on phenomenological dispositions (Watson, 1985). The result of this interpersonal behavior will contribute to psychological fulfillment of the client's needs. By promoting caring behaviors, the nurse contributes to a caring environment that allows the client to make choices favoring the best health outcomes at that particular time (Watson, 1985).

Figure 1

Carative Factors Derived from Watson's Model



According to Watson's model, these concepts help to illustrate a segment of patient-centered care (2008). Figure 1 depicts the hypothetical response of the nursing student to the patient's environment which may include demonstrating and practicing caring behavior, being with or communicating with the patient, or building a relationship with the patient. This research will focus on Watson's 10 carative factors.

Assumptions

This study is grounded in the following assumptions: (1) Nursing students are interested in and capable of manifesting caring behaviors and attitudes toward elderly adults; (2) Nursing faculty can design curricula that embraces theoretical and practical knowledge about adult elders that creates positive attitudes; and (3) Enhanced guided clinical experiences with elders will carry over into the students' behaviors and attitudes when they are professional practicing nurses.

Research Questions

1. What are the personal characteristics (e.g. age, gender, race/ethnicity, prior experience with older adults, i.e., relationships with grandparents, and planned career trajectory) of the nursing students?
2. What are the nursing students' self-reported scores on the Caring Dimensions Inventory (CDI) questionnaire?
3. Are there differences in the Caring Dimensions Inventory between nursing students who have experience caring for older adults before they entered the nursing program when compared to those who have not had this experience?

Theoretical Definitions

The following definitions of terms is linked to this research study:

Caring: According to Watson (1985) caring is evident through having an attitude that has to become a person's will, their intention, or an obligation that is displayed through physical acts (1985).

Older adults: Persons 65 years of age and older (Kang, Moyle & Venturato, 2010).

Nursing student: A person who has elected to study the discipline of nursing in a college or university (Safadi et al., 2011).

Operational Definitions

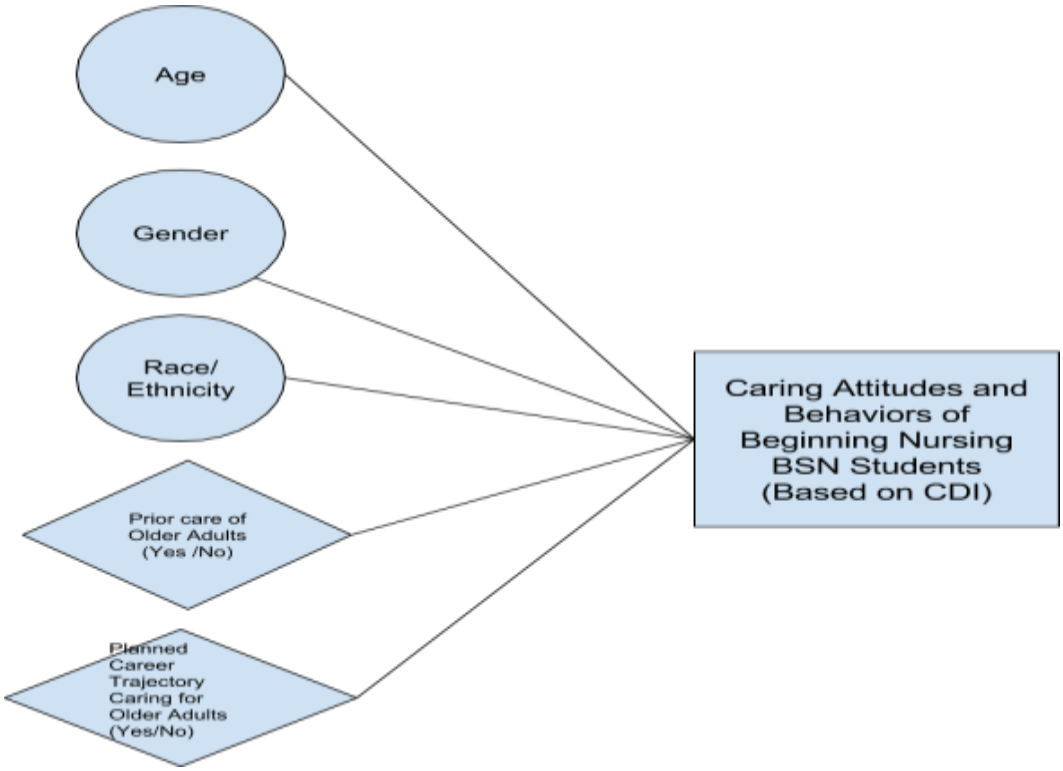
Caring: The operational definition of caring in this research will be determined by total scores on the CDI measure.

Older adults: Individuals who are 65 years of age or older who are the focus of the study but are not the subjects of this research.

Nursing students: Individuals who are enrolled in a university baccalaureate nursing program in one southern state in the nation and have volunteered to participate in this study.

Figure 2

Exploring the Caring Dimensions Inventory with BSN Students



The study model depicts dichotomous predictors of age, gender, race/ethnicity, prior care to older adults, and planned career trajectory on caring attitudes and behaviors of BSN students.

Summary

Examining the attitudes and caring behaviors of nursing students could be useful when planning a nursing curriculum with the intent of improving the overall outcome of health services that nurses provide for older adults. The outcome of a caring curriculum grounded in geriatric knowledge would increase the positive

attitudes and behaviors toward older adults that are manifested by nursing students. Caring may be the most important experience in the intervention for all humans.

Chapter Two

Literature Review

The following review of research literature addresses caring behaviors and attitudes of nursing students toward older adults, an important part of the knowledge base of nursing students. The literature review will explore the relationship between Watson's carative factors and the nursing students' attitudes as well as demographic characteristics. Hence, an understanding of caring can lead to a better connection between caring behaviors and nursing practices.

Understanding Caring

In an article by Ranheim, Karner, and Bertero (2012) the authors consolidated the caring theory of Watson and its relationship with caring practices to enhance nursing knowledge development of caring. To reach their goal the authors characterized Watson's (2008) caring in nursing as both an all-inclusive view of mankind and caring in terms of the client's values and capabilities. Transpersonal caring is a core element of Watson's human caring theory and is described in Watson's 10 carative factors as effective interpersonal communication skills via teaching-learning. The authors considered Watson's transpersonal caring in terms of how individuals have a need to depend upon and rely on each other. This is an attitude of being toward each other or being relied on and the effect that these behaviors have on the other person and on their environment (Ranheim et al, 2012).

Measuring Attitudes

With the knowledge of caring comes a need to learn more about and to practice caring attitudes. During a survey that was conducted by Koren et al., (2008), it was reported that there was a significant positive correlation between the search for gerontological knowledge, learning needs, and perceived comfort and confidence in caring for the older adult by nursing students. A cross-sectional, descriptive needs assessment survey was used to assess the students perceived learning needs and attitudes toward older adults. The sample was comprised of 200 nursing students. Koren et al., (2008) used the AGED Inventory, a 28-item 7-point semantic differential scale to measure attitudes and stereotypical beliefs of nursing students about older adults. The AGED Inventory consists of two subscales—a descriptive and an evaluative scale. The major goal for the study was to discuss the possible utilization of similar assessment approaches in other gerontology nursing programs. The results of the study indicated that the students had a relatively neutral attitude toward older adults. The students rated themselves in the areas described below and the following mean scores were reported: comfort 7.7, confidence 6.4, knowledge of gerontology 4.7, interest in learning more about caregiver support 0.69, and health issues affecting the older adult 0.66. The highest possible score was 9, which indicates the most positive attitude (Koren et al., 2008). As stated in their study, knowledge of gerontology compared with other assessed areas was low, which may affect how and if the student will work with older adults in the future.

Working with Older Adults

When King, Roberts and Bowers (2013) conducted a longitudinal mixed methods study to examine the role gerontological nursing education had on changing the nursing students' attitudes about working with older adults, the authors used the Kogan Attitudes Toward Older Adults Scale (1961) to survey a sample that included 80 students over a two-year period. The results revealed the mean attitude score for the Time 1 survey was highly positive (149.13) and the upward trend continued over the course of their studies (King et al., 2013). The study further indicated that almost all of the nursing students had positive attitudes toward the older population at the beginning of their nursing program. The nursing students were initially questioned at the beginning of their first semester junior year, again at the end of their second semester junior year, and at both the beginning of their first semester senior year and at the end of their last semester senior year. Moreover, by Time 4 almost all of the nursing students had a preference for working with persons who were 65 to 85 years of age. (King et al., 2013).

The intent of the study was to describe and explain the role nursing education played on changing attitudes and preferences for working with older adults. The students, however, believed the gerontological nursing education received from their nursing program left them feeling ill-equipped to work in a nursing home environment. A beginning registered nurse may not have been prepared to work independently or as a manager. This may have been because their curriculum was set up so that only half of their nursing students had been exposed to care for healthy older adults. The students often described clinical rotations as the influencing factor

for their preference in work sites and client populations. Such clinical rotations were said to have confirmed or challenged the students' expectations of how the experience would be and if the experience did not meet their expectation their preference would change. The students in the survey also believed this type of education dismissed myths, engaged them, and stimulated their potential to work with older adults. Finally, it was found that some students believed the nursing home environment was complex and overwhelming. It was not working with the older adult population that they disliked, rather it was working in a nursing home environment that the students disliked (King et al., 2013). Subsequently, it is essential that nursing educators find ways to increase a knowledge base for caring.

Watson's Caring Practices

In creating a knowledge base for caring, schools of nursing would need to design a study of practice that included what Watson called "Caring Practices" (1990). These caring practices are part of a revolving model which encourages knowing, being and doing in a caring relationship. Thus, the advancement of machine-like knowledge and resisting the reduction of a client to being no more than an object would be eliminated. An example of organized caring knowledge would be a curriculum grounded in Watson's carative factors, thereby producing professional nurses who have a substantial knowledge base in human caring (Watson, 1990). This type of knowledge could influence the attitudes of the new nurse and at the same time be assimilated into social guidelines for appropriate behavior.

Attitudes and Caring Behaviors

In one study the authors used a cross-sectional survey to evaluate the education of nursing students to determine their knowledge and attitudes toward older people (Lambrinou, Sourtzi, Kalokerinou & Lemonidou, 2009). Both Kogan's Old People (KOP) Scale (1961), a Likert scale that measures attitudes toward older people, and Palmore's Facts on Aging Quiz 1 (1998), a 25-item true and false quiz about the elderly, were used for the evaluation. The sample included 121 first year nursing students and 106 final year nursing students. The average age of the first-year students was 18 and the average age of final year nursing students was 23 years of age. Many of the students from both groups reported that they had lived with older family members including grandparents. The results of the KOP Scale indicated that the final year students had a higher positive subscale total score than the first-year students, 71.28 and 68.62, respectively. The KOP Scale had a Cronbach's alpha score ranging from 0.66 to 0.77 for its positive subscale. The results of the Palmore's Facts on Aging Quiz 1 showed that the mean scores were comparable for the first and final year students' knowledge about older people. The instrument's Cronbach alpha reliability score was noted to be 0.50 to 0.80 (Palmore, 1998). According to the authors, the older students, in general, had more positive attitudes toward older people. It was suggested that nursing curricula be based on these findings to assist students in producing positive attitudes toward older adults (Lambrinou et al., 2009).

Prior Experience with Older Adults

In their study, Chi, Shyu, Wang, Chuang, and Chuang (2016) reported that when grandparents were primary caregivers of nursing students as they grew up, the

nursing student's willingness to care for older adults was found to be statistically significant when compared with those whose grandparents were not the primary caregiver ($t = –2.147$, $p = .032$). Further, if nursing students had community experiences with older adults, they were significantly more caring than those who had not had this experience ($t = –4.162$, $p < .001$). Moreover, these same nursing students paid more attention to issues related to older adults ($t = –9.027$, $p < .001$). Yet, their willingness to care for older adults did not significantly vary simply because they had grandparents living with their families.

Also, when grandparents were responsible for their care during childhood, the nursing students had a significantly higher fascination in working with older adults when compared to students who were not in their study (Chi, et al, 2016). Another notable finding was how much time the student spent being with older adults during each week. Again, students' willingness to work with older adults increased with the length of time that was spent with grandparents earlier in life.

Also community experiences with older adults seem to be a predictor of students' willingness to work with older adults. The article noted that those types of experiences where the student is actively engaged in being with older adults in the community may have a bearing on students' career choices (Chi et al., 2016). Likewise, Cheng, Cheng, Tian, and Fan (2015) also reported that when the students had lived with older adults in the same household as their family, had close relationships with older family members, or had caring experiences of older adults, they too valued working with older adults. Hence, having had experiences with older

adults may impact students' first choice in working with this population.

In examining the state-of-the-evidence on nursing students' attitudes and caring behaviors toward older adults, an article that addressed this concept incorporated the Wisconsin Long-Term Care Clinical Scholars Program (LTC-CSP), a paid nursing home internship for baccalaureate nursing students. The goals were to examine how Geriatric nurse educators taught appropriate care of older adults and what motivated students to work with this population (Nolet et al, 2015).

One approach used for the successful development and implementation of the Wisconsin LTC-CSP was to create an intern curriculum. The cohort groups were comprised of participants from junior and senior college students, preceptor participants who had either an ADN or a BSN degree, and nursing home facilities that were both for profit and not-for-profit organizations. Multiple State Departments of Health Services and Workforce Development as well as nurses, ombudsmen and many others were recruited for the stakeholder advisory group. During their planning phase the PhD nurses, PhD students and one master's prepared nurse met to develop program goals and to most importantly decide on explicit educational needs for nurses taking positions in nursing homes. Only high-quality facilities were selected, as to not deter nursing students from future work in a nursing home environment (Nolet et al, 2015). The Centers for Medicare and Medicaid (CMM) created a Five Star Quality Rating System of comparison to determine a nursing home's quality. Preceptors were required to complete an online preceptor training course where they learned responsibilities and effective precepting strategies. At times, licensed

practical nurses (LPNs) were used as support preceptors when some nursing homes had low numbers of employed Registered Nurses (Nolet et al, 2015), thus showing the lack of the RN presence in the nursing home environment.

Threaded throughout their intern curriculum were six priorities: 1) Person-centered care, 2) nursing home content, 3) evidence-based practice, 4) a clear knowledge of clinical work and didactic workshops, 5) active teaching strategies which examined issues from the resident's point of view, and 6) attempts to decrease reiterating past coursework. Information on topics such as infection control, falls and pressure ulcers was not included. At the end of the program, seven out of 10 nursing students reported that they would likely take a job in a nursing home environment. One student stated he/she would not and two were undecided. A primary challenge of the program was the scope of the interns' practice. It was not always clear to the staff that interns were learners and not independent workers especially when staffing was low. After graduation, only three of the 10 students had taken a position in a nursing home. Although the interns believed their experiences had prepared them to care for older adults and to work in nursing homes, the state-of-the-evidence suggests working in a long-term care environment remains unappealing to many nursing students (Nolet et al, 2015). Evidence-based interventions such as these may shape the nursing student's attitude toward working with older adults. Additionally, this gives the nurse educator an opportunity to learn from what worked and change what did not work that could influence attitudes.

The Ability to Care

In research by Ma, Li, Zhu, Bai, and Song (2013), their aim was to provide a view into the caring ability of baccalaureate nursing students. To complete their objectives, the authors needed to explore the role that learning played on clinical practice in the development of students' caring ability. Their descriptive, cross-sectional, quantitative, and qualitative sequential mixed-methods design included completing a survey and participating in two focus group interviews. In the first phase (the quantitative study), 598 nursing students completed and returned the questionnaires. In phase 2 (the qualitative study), 16 nursing students from higher level courses who had also been included in phase 1 were interviewed. The students in phase 2 were selected to demonstrate a flexible technique for gathering data which gave the interviewer more insight into the thoughts and experiences of the nursing student. Interview participants' body language, facial expressions, interactions in the group, as well as their tone were recorded in an effort to gather more contextual information (Ma et al., 2013).

The Caring Ability Inventory (CAI), an instrument that measures a person's ability to care in a relationship with another person, was employed in the first phases. The CAI has a 7-point Likert scale using 37 items to measure; knowing, alternating rhythm, patience, honesty, trust, humility, hope and courage as noted by 1 = strongly disagree to 7 = strongly agree. The Cronbach's alpha reliability score for the total CAI was 0.86 and for the subscales of knowing, courage and patience, it was 0.79, 0.77 and 0.72, respectively. The statistical significance of the CAI score was noted by a p-value of < 0.05. The students' overall CAI mean score was 189.34 with a

standard deviation (SD) of 18.70. The mean scores and SD for the subscales of knowing, courage and patience were 72.25 SD 9.07, 59.06 SD 9.15 and 58.03 SD 6.70, respectively (Ma et al., 2013).

To further explore the findings of the quantitative study, as it related to clinical practice learning, the authors conducted two focus group interviews. During the interviews the nursing students were asked to 1) discuss the role that clinical practice learning had on building their caring ability and 2) elaborate on how clinical practice learning promoted or obstructed the development of their caring ability. The results of phase 1 showed caring declined slightly during a clinical assignment experience. The Preclinical knowing mean score was 73.46 and 71.45 during the clinical experience. The Pre-clinical patience means score was 59.26 and 57.21 during the clinical experience. Students, however, believed their clinical practice to be absolutely necessary, and an effective means of learning about caring by observing seasoned nurses as they care for patients in a way that utilizes nursing theory with practice (Ma et al., 2013).

In phase 2 the participants explained the following ways the clinical experience promoted caring ability: 1) by improving students' willingness and motivation to care, 2) by observing other nurses and internalizing caring, and 3) by learning about caring from positive role models. On the other hand, the same participants explained the obstructive factors that decreased their caring ability such as 1) when the environment was perceived as task-oriented, 2) when role models were not positive, and 3) when theory to support clinical practice did not prepare them for real world

experiences. Therefore, it was found that students benefit from an education that includes examples of real world experiences, caring practices, and strategy development in professional dilemmas. All recommendations were believed to promote caring ability (Ma et al., 2013).

A Caring Curriculum

Drawing from a curriculum that has already been designed on caring, the evidence demonstrates how real world experience and caring practices might increase medical students' positive attitudes. Some medical schools have begun to change their curricula to address the growing population of older adults by increasing the content of gerontological education. Nursing faculty have begun to consider such essential curriculum changes to increase positive attitudes toward caring for older adults.

In a study by Tong et al., (2014), the authors used a curriculum intervention that included first-year training in an assisted living facility (ALF) where medical students with supervision from a faculty member were paired with a resident. Geriatric content and small group leadership in the practice of geriatric assessment skills were incorporated into lectures. A total of 109 medical students were in their first-year medical course. Of those students, 96 completed the pre-intervention survey and 93 completed the post-intervention survey. Some of the goals of the new curriculum were to: (1) develop medical students who have a positive attitude toward caring for older adults, (2) have those medical students acquire a greater knowledge of the aging process including the medical needs of older adults, and (3) give medical

students an appreciation of how repeated observational visits and social interactive relationships affect the care of older adults (Tong et al., 2014).

To assess the degree to which the goals were obtained, a quantitative and qualitative analysis were conducted. The quantitative analysis used an anonymous, online pre-and post-ALF program survey that included seven close-ended questions on a five-point Likert scale. Additionally, a second set of two open-ended questions were used to gauge to what extent the medical students enjoyed the program and what changes they believed the program needed in the qualitative analysis. The information was coded by more than one author. An inter-rater reliability analysis was performed on the data using a Kappa statistic. To that end, a Kappa = 0.82 was determined to be the initial agreement among the raters. Given that the curriculum development, implementation, and evaluation process did not meet the Federal definition of human subjects' research nor was a formal IRB review required, there was no need for informed consent (Tong et al., 2014).

The results of the survey showed 92.5% of the students had a positive attitude toward caring for older adults after the intervention whereas only 80.2% of the medical students had a positive attitude during the pre-intervention survey. Furthermore, 89.2% post- and only 38.5% pre-intervention medical students felt they had a greater knowledge of the aging process in terms of the needs of older adults. Yet, their strong appreciation of how repeated observational visits and social interactive relationships affected the care of the older adult had not changed much as indicated by 88.5% pre- and 90.4% post-intervention analysis. The intervention

which began in 2004 has since been effectively integrated into their required curriculum. Over time the students' input has led to independent student visits, more activities such as blood pressure screenings and an overall improvement of skills such as medical interviews, physical exams, and time management (Tong et al., 2014). Creating a curriculum based on caring may be a relevant nursing intervention that would achieve the desired outcome of improving the health and well-being of older adults. Using the Caring Dimensions Inventory would be an effective method of measuring the desired effects in terms of what constitutes caring from a nursing student's standpoint.

Caring Nurse-Patient Interaction Scale

The Caring Nurse-Patient Interaction (CNPI) Short Scale is an instrument that can be used to measure the fundamental aspects to nursing (Cossette, Cote, Pepin, Ricard & D'Aoust, 2006). In their article on the development of a 23-item short version of the caring nurse-patient interaction scale, the authors had as their goal to reflect on the four domains of what constitutes caring in nursing. Those four domains were humanistic care relational care, clinical care and comforting care. Although the Short Scale has similar components as those in Watson's human caring theory, three of Watson's 10 carative factors (sensitivity, the helping relationship, and expression of emotions) have been eliminated. Therefore, the main focus of the CNPI Short Scale is that of problem-solving and spirituality (Cossette et al., 2006). A 70-item CNPI Long Scale was initially created to analyze attitudes and behaviors associated with the 10 carative factors of Watson; however, the length of the scale was believed

to be problematic and most of the subscales were moderately to highly correlated. The CNPI Long Scale proved to be verifiable by observation rather than theory and not dependent on the carative factors (Cossette et al., 2006).

Positive Social Interaction

The National Council Licensure Examination (NCLEX) has as one of its goals that beginning nurses have competencies in assessment of client needs as well as caring. Therefore, it is imperative that the nursing student receives an education grounded in Watson's fulfillment of human caring. In theory, the need for affection is a need that can be fulfilled for the longest length of time, as it depends less on physical resources. Basic physical and social needs are equally important to the overall fulfillment of older adults. Social Well-being of Nursing Home Residents (SWON), a scale to measure the positive social intentions that both the resident and the caregiver have toward each other, was developed by the authors for use in their study (Gerritsen, Steverink, Frijters, Ooms & Ribbe, 2010). The purpose of the study was to create the SWON scale as a psychometric observational measure to test the theoretical specifics of behavioral confirmation, status and, the fulfilment of the need for affection. In their study, the nursing researchers established inter-rater reliability and test-retest reliability with a sample size of 306 residents. An estimation of the inter-rater reliability was moderate for two items concerning affection--both behavioral confirmation and social well-being. A moderate inter-rater score would be expected to fall between 0.41- 0.60; however, these researchers reported scores from 0.43 to 0.54. The estimated test-retest reliability scores were moderate to substantial

for all items tested with Kappa ranging from 0.53 - 0.79. The inter-rater intraclass correlation coefficient (ICC) scores were again moderate for all areas at 0.52 - 0.55. The test-retest ICC, however, showed substantial scores with 0.74 -0.83 for all items, whereas 0.81 - 1.0 was an almost perfect score (Gerritsen et al., 2010).

After the 10 affection items on the SWON scale had been tapered down to three, a scale was formed with a Cronbach's alpha score of 0.77. A scaled down version of the behavioral confirmation items revealed a Cronbach's alpha reliability score of 0.82. The overall social well-being Cronbach alpha score for all three dimensions of social well-being was 0.74. The SWON scale may be used to assist faculty in focusing on specific aspects of social well-being needed by older adults, to examine the different dimensions of need, and to identify areas for improvement. Moreover, a measure of the nursing students' positive social intentions toward the older adult would confirm the need for and direct future changes in a nursing curricula. Once these needs are fulfilled, older adults would be able to enjoy greater overall positive social well-being (Gerritsen et al., 2010).

The results of Penphase, Oakley, Ternes, and Driscoll's (2013) research study revealed that students who are interested in nursing as a career were more empathetic than other students whether male or female. Research findings such as these are important because of the patient-centered care nursing students provide as they interact with the patients. Thus, an empathetic relationship is the foundation of patient-centered care (Penphase et al., 2013). Older adults just as other patients are

the focus of nursing care, and they depend on the nurse to provide empathetic and humanistic nursing care (Cliff, 2012).

Caring Dimensions Inventory

Akansel, Watson, Aydin, and Ozdemir's (2012) objective was to validate a Turkish version of the Caring Dimensions Inventory. The authors sampled 266 nursing students in their descriptive study to determine how nursing students perceived caring in nursing. A higher score on the CDI indicates more professional and technical characteristics of nursing are observed as caring (R. Watson and Lea, 1997); whereas, a lower score indicates that psychosocial qualities are perceived as caring. The Cronbach's alpha score was > 0.7 with a $p < 0.05$. The nursing students' ranged in ages was from 17 to 30 years of age (mean = 21.01, SD = 1.89). The results of the study indicated that almost all of the nursing students (n = 220, 82.7%) described the nursing profession as an area of nursing that they enjoyed. According to their study, being technically competent with a clinical procedure was a decidedly validated item. The authors, however, believed that psychological care and communication were important issues to stress during nursing education. By incorporating these issues, the nursing students' viewpoints toward nursing care may become not only concerned about technical competence but also about offering psychological care while giving information to the recipient (Akansel et al., 2012). Although the CDI does not specifically address caring of older adults, it is believed to be appropriate for the present study. As in Watson's carative factors, the nurse demonstrates caring by offering assistance in facilitating a supportive, protective,

societal, and spiritual environment (Watson, 1985). Spiritual involvement and social support are examples of the most important personal resources the elderly client possesses.

Race/Ethnicity and the Caring Dimensions Inventory

In the past, a primary limitation of the CDI is that it has not had widespread use from a cultural diversity perspective in terms of the nursing profession. The present study therefore was seeking to expand current knowledge development and to fill the gap as related to race/ethnicity by broadening nurses' exposure to the CDI (R. Watson, & Lea, 1997).

Age, Race/Ethnicity and Shaping Attitudes and Behaviors

Another intervention to improve nursing students' positive self-reported attitudes toward older people was developed by Rodgers and Gilmour (2011). In their effort to compare the self-reported attitudes of nursing students from three counties toward older people, they asked students to create an introductory nursing paper. The nursing paper was an integration of fundamental and gerontology theory to promote personal autonomy of older adults. In addition to writing the paper, the nursing students were placed in a clinical area to enhance their knowledge and skills in the care of older adults. Nursing students from Ireland and New Zealand were offered 92 hours of supportive clinical placement, whereas a nursing school in the state of Michigan offered 90 hours of supportive clinical placement (Rodgers & Gilmour, 2011).

In this study, the authors used a pre- and post-test survey during the student's' first semester of nursing school. The questionnaires were completed upon orientation and again after the completion of the nursing paper at the end of the first semester. Each of the two males and 54 females in the program, whose ages ranged from 18 to 53 years old, agreed to participate in the study. The instrument utilized was the KOP as well as a demographic questionnaire. The reliability coefficients of the KOP ranged from .66 to .85. According to Kogan (1961), the validity of the KOP was acceptable. The reliability and validity of the scale was again tested in 2009 by Yen et al. with an overall Cronbach alpha coefficient of .73 for the negative scale and .65 for the positive scale. Results of Roger and Gilmour's (2011) study showed reliability coefficients of .92 for the positive scale and .88 for the negative scale.

The primary limitation of the study was the lack of statistical power due to the small sample size of 56. The study examined only a small aspect of what might potentially influence nursing students' attitudes toward the older population. As this was not their intent, Rodgers and Gilmour did not test the association between attitude scores and characteristics such as age and religious backgrounds, nor did they study past experiences with older adults. Nevertheless, the study was important because it suggested that older people encounter ageism and also that education on aging designed to develop a comprehensive knowledge base can influence attitude shifts. Preceptors and educators may also find this helpful when role-modeling positive attitudes and behaviors toward older adults in terms of their students (Rodgers & Gilmour, 2011). The benefits of caring can be enhanced if the student is

allowed to practice these skills in the clinical area, thus giving their caring ability a chance to develop as well as for the students to increase their awareness of the concept.

Although the majority of nursing students had worked with older adults before the program, the results of the pre-and posttest showed a positive change with a higher post-test score (median = 176.50) versus the pre-test score (median = 164.00) ($z = 6.52$, $p < 0.0005$, r (effect size) = 0.62). Overall, there was a statistically significant positive change in the students' self-reported attitudes toward older persons. The positive shift in the self-reported attitudes toward older people was believed to be the result of an integration of theory and the clinical paper. These results support the fact that education about elders might shape attitudes when knowledge is integrated with positive clinical experiences (Rodgers & Gilmour, 2011).

Age, Race/Ethnicity, and Practical Knowledge

How do nursing faculty embrace practical knowledge to stimulate a caring environment? Many nursing programs have produced online opportunities to educate their students, which may create an increased need for facilitating and shaping caring attitudes and behaviors. In a pilot study of a RN to BSN program conducted by Mann (2014), it was suggested that nursing students believed that when their instructors displayed caring behaviors, their success in the classroom was enhanced. Mann (2014) used a cross-sectional design in a descriptive study to collect data on (*n*=100) RN to BSN students who were at least 18 years of age and who had taken a minimum

of two online nursing courses. This quantitative study took place in the Southeast at one of the many Historically Black Colleges and Universities (HBCUs) where participants were 41.6% African-American and 39.5% Caucasian. The remaining 18.9% students were 6.3% Native American, 6.3% other race/ethnicity, 4.2% Hispanic, and 2.1% Asian. The surveys were returned by 48 (48%) of the participants (Mann, 2014).

The results of the survey questions were as follows: (1) 100% agreed that an instructor can create a caring learning environment in an online setting; and (2) 95.8% believed that the presence of a caring online classroom would increase their success in the course. These results reinforced earlier studies by Gabbert (2007), Sitzman and Leners (2006), and Sitman (2010), shedding light on the value of caring behaviors and how they may impact students' nursing practice (Mann, 2014).

Age, Gender, Race/Ethnicity, and Caring Behaviors

In another study, the goal of the researchers was to determine whether a statistical relationship existed between the nursing students' caring behaviors and the impact that the instructor had on those perceptions (Labrague, McEnroe-Petitte, Papathanasiou, Edet & Arulappan, 2015). The descriptive, non-experimental design included a sample size of $n = 586$ participants from four different countries. The mean age of the participants was 22.32 years with 527 (89.93%) females and 59 (10.07%) males who took part in the study. A recount of the nursing students' birth country revealed that 137 (23.38%) were from Greece, 130 (22.18%) from India, 223 (38.05%) from Nigeria, and 96 (16.38%) from the Philippines. In this study, first

year nursing students were excluded because they had limited exposure to clinical areas and patient encounters (Labrague et al., 2015).

Interviews were conducted using two standardized questionnaires: the Nursing Students' Perception of Instructor Caring (NSPIC) and the Caring Behavior Inventory (CBI). Although the CBI (Wolf, 1986) was created to examine the client's perceptions of nurses' caring behaviors, it was used in a different capacity in this study and only the results of the CBI will be discussed here. Watson's ten carative factors are the foundation of the CBI instrument which contains 24 items based on a 6-point Likert scale where 1 = never and 6 = always. Utilization of the CBI was restricted to a self-reporting questionnaire as a method to capture the caring behaviors of the nursing students. The CBI is a construct consisting of four subscales that establish a premise of caring. The subscales are as follows: 1) assurance of human presence, 2) knowledge and skills, 3) respectfulness, and 4) positive connectedness. Scoring of the CBI was obtained using a possible range between 24 and 144 where the higher scores represent positive perceptions of the students' own caring behavior. Internal consistency or reliability of the CBI was considered to be moderate to high with a Cronbach alpha score of 0.65-0.80 (Wu, Larrabee, & Putnam, 2006). This was also true for the test-retest reliability. The final alpha coefficient for their study was 0.92. The CBI was translated into the various languages, discussed by experts in the country of origin, and monitored against the original language over the course of the study to maintain its content validity. Furthermore, all data were scrutinized for high

quality to ensure that the information obtained represented the primary objectives of the study while being systematically collected (Labrague et al., 2015).

The results of the study revealed a total mean score of 4.785 with a standard deviation of 0.844. All areas had scores showing a moderate belief in the student's own caring behaviors with a little less in the area of positive connectedness and were reported as follows: assurance of human presence 4.796, knowledge and skills 4.713, respectfulness 4.764, and positive connectedness 4.541. The aim of nursing education is to prepare a student with a caring science viewpoint in mind so that ultimately the nurse can grow into a caring professional. Quality clinical areas and a curriculum based on ethics of caring are paramount to the learning environment. A limitation of the study is that it did not give an account of a cause and effect; however, it did set a precedent for offering valuable nursing implications (Labrague et al., 2015). In similar studies, it was suggested that the retention of nursing students may have been influenced by caring factors, which may have led to the student achieving success when completing a clinical placement (Clark, 2008; McEnroe-Petitte, 2011; McManemy, 2002; Sutherland, Hamilton & Goodman, 2007).

Summary

Caring behaviors and attitudes are an important part of the knowledge base of nursing students. Knowledge, learning needs, comfort, and confidence in caring for older adults are perceived as abilities that nursing students need (Koren et al., 2008). Enhancing the nursing student’s understanding of caring was the goal of Ranheim et al., (2012) study.

The King et al., (2013) study indicated that nursing students believed the gerontological nursing education they received from their nursing program left them feeling ill-equipped to work in a nursing home environment. Lambrinou et al., (2009) suggested that nursing curricula should use findings from students with more working experience with an older population to assist them in progressing in a way that would stimulate positive attitudes toward older adults because these students were found to display more positive attitudes.

Still, the problem of shaping the attitudes and behaviors of nursing students persists. Rodgers et al., (2011) developed a nursing course where the students used an introductory paper to integrate fundamental and gerontology theory to promote personal autonomy with older adults. Besides writing the paper, the nursing students were placed in a facility for aged persons for clinical training. Their results supported how education about older populations shaped attitudes when knowledge was integrated with positive clinical experiences (Rodgers et al, 2011).

Akansel et al., (2012) believed that although skill and task competence was important, psychological care and communication deserved merit as critical issues to stress during the nursing education to represent competent nursing care. As Liu suggested earlier, the nurse should be attentive, genuine, and sincere in order for the recipient to feel the effects of their caring (Liu, 2004). Having a greater knowledge of the aging process and the needs of older adults has also been shown to increase a positive attitude toward caring for older adults (Tong et al., 2014). Ma et al., (2013) found that including examples of real world experiences and a knowledge base rich in

critical thinking, as well as ethical and professional dilemmas may promote caring ability. Therefore, developing a caring curriculum for nurses which measures professional caring behaviors and allows students to learn and apply caring skills is important.

In Mann's (2014) study, it was suggested that nursing students believed that when their instructors displayed caring behaviors it increased their success in the classroom. The aim of nursing education is to prepare a student with a caring science viewpoint in mind so that the nurse can grow into a caring professional. Quality clinical areas and a curricula based on the ethics of caring are paramount to the learning environment (Labrague et al., 2015). In similar studies, it was suggested that the retention of nursing students may have been influenced by caring factors, which may have led to the student achieving success when completing a clinical placement (Clark, 2008; McEnroe-Petitte, 2011; McManemy, 2002; Sutherland, Hamilton, & Goodman, 2007).

This chapter has addressed what is known about the major variables in the present study. Essentially, the results of the study may fill a gap in nursing knowledge in terms of what is known about age, gender, race/ethnicity, prior care of older adults, and planned career trajectory as related to BSN nursing students' attitudes and caring behaviors. Measures of attitudes and caring behaviors have also been discussed, including the Caring Dimensions Inventory which will be used in this research. Current knowledge of students' attitudes and caring behaviors could be modified in a way that leads to an increase in positive outcomes of the older adult through changes

in nursing curricula. Ultimately the findings of this study may therefore help in designing curricula for the care of older adults.

Chapter Three

Methods

This chapter presents the research questions, research design, participants, data collection, and data analysis procedures. The research questions that will guided the study are:

1. What are the personal characteristics (e.g. age, gender, race/ethnicity, prior experience with older adults, i.e., relationships with grandparents, and planned career trajectory of the nursing students?
2. What are the nursing students' self-reported scores on the Caring Dimensions Inventory (CDI) questionnaire?
3. Are there differences in the scores on the Caring Dimensions Inventory between nursing students who have experience caring for older adults before they entered the nursing program when compared to those who have not had this experience?

Research Design

A descriptive cross-sectional research design was used in this study. Data were collected at one time point.

Setting

The project site was the campus of a school of nursing in the southeastern part of the United States. George Mason University School of Nursing (GMU) was the site approved by both GMU and Case Western Reserve University's (CWRU)) Institutional Review Board (IRB). The college is set in a suburban town just west of

the large metropolitan area of Washington, D.C. The total number of 22,000 students currently enrolled at George Mason University is comprised of 44.8% White; 18.5% Asian; 12% Hispanic/Latino; 10% Black or African-American; 5.1% Race/Ethnicity Unknown; 4.6% Non-Resident Alien; 4.4% Two or More Races; 0.4% Native Hawaiian/Pacific Islander; 0.2% American Indian or Alaskan Native suggesting a somewhat racially diverse student body at GMU.

Sample

The target population of nursing students for the present research was comprised of a convenience sample that includes the 70 first-year juniors who are enrolled in the traditional 2-year BSN Program as well as the 51 accelerated second degree (1-year) BSN students who are enrolled in George Mason University during the current academic year 2016-2017. The rationale for selection of this particular group of students was because they would not have had any clinical experience in caring for older adults. Senior nursing students were excluded from this study because it is assumed that they may have encountered care of older adults in their junior year. Racial/ethnic diversity was expected among the nursing students who participate in the study.

Design

This descriptive study reported findings of caring attitudes and behaviors as it relates to older adults using the Caring Dimensions Inventory (R. Watson and Lea, 1997) (Appendix E) and an investigator-developed demographic questionnaire (Appendix D) for data collection. Data were collected from a group of nursing

students in this one-time cross-sectional study. The instruments and the questionnaires were distributed to the students in the presence of the primary investigator and the nursing faculty in charge of the class. The scores from the CDI were computed in terms of means and standard deviations.

Eligibility

All 70 traditional (2-year) juniors enrolled in the BSN program for the 2016-2017 academic year at GMU were invited to participate in the study as well as the 51 nursing students enrolled in the accelerated 2nd degree (1 year) BSN program at GMU during the 2016-2017 academic year. Seniors enrolled at GMU were excluded from study.

Power Analysis

A priori power analysis was done for all research questions. The largest estimated number of subjects from the power analysis to ensure adequate power is 128. This number was derived from the G*Power tool after the following parameters were inputted using a medium effect size of .50, a significance criterion alpha of 0.05, and a specification for power (beta) of .80 which yielded a total sample size of 128. The actual power will be 0.8014596 and is considered to be an adequate amount of power at .80 using a two-tailed statistical *t*-test. The priori power analysis was completed using the *t*-test and the estimated mean difference between two groups.

Descriptive statistics were computed using the SPSS software to determine the distribution of variables in the sample. Data were then analyzed by using a parametric statistical *t*-test to gauge the difference between the mean CDI scores of nursing

students with and without experience in caring for older adults. The sample size of 128 participants was needed in order for the CDI to demonstrate sufficient power to detect a statistical difference.

The demographic characteristics: students' age, gender, race/ethnicity, prior experience providing care to older adults, and planned career trajectory were used to describe the sample. The control variables included differences between the nursing students who have had experience with caring for older adults and those who have not had this experience. The dependent variable was the Caring Dimensions Inventory.

Measures

The decision was made to measure the construct of caring using the Caring Dimensions Inventory (CDI) created by R. Watson & Lea, (1997) which is a 25-item operationalized account of nursing actions. The BSN students indicated their agreement using a five-point Likert scale on what statements constituted caring to them. The instrument was used to measure students' attitudes and caring behaviors as defined in Watson's ten carative factors.

Permission was granted to use the Caring Dimension Inventory (Appendix F). Scoring instructions for the 25-item Likert-type scale comprised summation of the 25-items for one total score for each study participant (R. Watson & Lea, 1997). Reliability based on N=1,452 nurses and nursing students was reported as Cronbach's alpha = .91. Validity was determined based on Mokken Scaling and Spearman's correlation of age as well as Kruskal-Wallis one-way ANOVA for males versus females ($p < .05$) for age and sex differences in perceptions of caring.

Demographic Questionnaire

The demographic data were obtained from an investigator-developed demographic questionnaire (Appendix D). The format of the questionnaire incorporated yes/no, fill in the blank, five-point Likert scale, and circle your response to the following questions:

1). What nursing specialty do you plan to work in once you graduate from nursing school? The student provided their first, second and third choice of preferred work specialty. 2). Have you had any experience caring for older adults before nursing school? 3). Are you currently employed in direct care of older adults? 4). Do you have older adults living in your home? 5). How many months of experience with older adults via work or family do you have? 6). Was nursing your first choice of study?

Because the Caring Dimension Inventory (CDI) (Appendix E) does not specifically address caring behaviors and attitudes toward older adults, the following questions were added to the investigator-developed demographic questionnaire to explore the association between caring and older adults in this research study: (1) Have you ever lived with grandparents? (2) Did/do you have a close relationship with your grandparents? (3) How much contact have you had with older adults 65 years of age and older, e. g., as a candy striper, as a volunteer in your church or other organization, etc.? (4) If you had a choice of a patient assignment, please circle your first preference: children, adolescents, young adults, middle-aged adults, or older adults.

Dependent Variables

The dependent variable is the score on the research measure (e. g., the CDI) that measures the psychosocial, technical and professional dimensions of nursing students' caring behaviors. A total score will be used that is comprised of summing the 25-item questionnaire. The Caring Dimensions Inventory questionnaire will measure nursing students' self-reported attitudes and caring behaviors. This instrument has a reported internal consistency or a Cronbach's alpha score of 0.91 (R. Watson & Lea, 1977).

Independent- Variables

The independent variables in the study include age, gender, race/ethnicity, prior experience caring for older adults, and planned career trajectory.

Procedures

Recruitment

The faculty, staff and nursing students in the two classes (juniors and accelerated students) were advised that there would be a need to interrupt their regular class time for approximately 30 to 45 minutes in order to conduct the survey and complete the questionnaire. In actuality, the students completed the survey in approximately 20 minutes. A similar method was successfully used by Cossette, Cara, Ricard & Pepin (2005) in which the research study was accepted by the Dean of the faculty of nursing and was approved by the University's IRB prior to data collection. The professors agreed to release the nursing students during one hour of regular class time in order to respond to the questionnaire. Similar to a previous

study, the nursing students were approached at the beginning of the class to explain the purpose of the study, the nature of their participation, the ethical considerations of confidentiality and anonymity, as well as the voluntary nature of their involvement (Cossette, et al., 2005). Some students declined participation, although they remained in the room they did not accept the questionnaire. The students at GMU were recruited as volunteers to participate in this study once faculty member distributed the E-mail advertisement to two nursing classes that had received prior approval from CWRU IRB. The advertisement informed the participants that their involvement was solely "at will" and would not incur good favor, better grades, recommendations, or the like, or that failure to participate would negatively affect their relationship with the faculty (K. Borror, personal communication, October. 1, 2015). The advertisement was approved by the IRB Board at both GMU and CWRU.

Data Collection

The research proposal was shared with the Dean of GMU's School of Nursing. Subsequently, a letter of approval from GMU's Dean of the Nursing School accompanied the application to obtain Institutional Review Board (IRB) approval from Case Western Reserve University. An email was sent to GMU's Dean of the Nursing once IRB approval had been obtained from CWRU. Anonymity was assured by not collecting identifying information such as names or identification numbers. There were no anticipated risks from participation. A descriptive design was used to generate statistical information on the nursing students who were surveyed.

Data Management

All data were collected in a covered box. The questionnaires were then compiled and stored in a locked container until destroyed to maintain confidentiality. The files were also stored on a password protected computer accessible by the primary investigator and the chair of the committee. The data will be destroyed after five years. The questionnaires were numbered consecutively to keep track of their sequence. The students were informed that they should not put their names on the forms. A code book was created based on the investigator-developed demographic questionnaire and the CDI (Appendix D).

Data Analysis Plan:

A descriptive research design was used in this research study. Bivariate analysis was conducted on each of the predictor variables (i. e., age is a continuous variable), whereas gender, race/ethnicity, and prior experience in caring for an older adult (yes or no), planned career trajectory in the care of older adults (yes or no) were dichotomous variables. BSN students from George Mason University were used for the study, and the age ranged from 18 to 60. The race/ethnicity was predominantly Non-White.

Use of t-tests to examine the relationship of each predictor (independent variable) with the dependent variable (caring attitudes and behaviors of BSN students) was conducted. Finally, a determination was made as to whether ordinary least squares (OLS) or linear least squares is a method for estimating the unknown parameters in a linear regression model, with the goal of minimizing the differences

between the observed responses in some arbitrary dataset and the responses predicted by the linear approximation of the data.

Research questions one and two are both descriptive in nature and were answered in the following ways:

1. Each nursing student was asked to provide answers concerning their personal characteristics (e.g. age, race/ethnicity, years of experience providing care to older adults, and planned career trajectory) via the demographic characteristics data sheet contained in Appendix D. A measure of the frequencies and percentages was described.
2. The nursing student was asked to complete self-reported data on the Caring Dimensions Inventory questionnaire (CDI) and scores were tallied after they were collected. A distribution of the scoring displayed the results.
3. To answer research question number three, the nursing students who had experience caring for older adults before they entered the nursing program were compared with those who had no experience. The range of scores from the CDI was determined.

   Once data were collected, they were analyzed using SPSS software program. Data were examined using a *t*-test to compare the mean of the two groups. The findings from the study participants were used to determine differences between nursing students who have experience with caring for older adults when compared to those who have not had this experience.

Human Subjects

The sample of nursing students were given verbal and written instructions indicating that participation in the research was voluntary and that participation would not affect their grade. A completed demographic questionnaire and CDI measure was used as implied consent to participate in the study. There were no known risks to the student. A small gift card to Starbucks was given to the participants after the questionnaire was collected as a token of appreciation for their time. The study proposal was submitted to Case Western Reserve University's IRB for approval prior to data collection.

Summary

Is it important to understand what nursing students know about caring that can be related to the care of aging individuals? Will knowing what nursing students bring with them from past experiences with older people change how students are taught? What can be done to make patient outcomes of tomorrow better? Once this knowledge is revealed and ultimately implemented into the nursing curricula, caring attitudes of practicing nurses can be changed to more positive behavior. This study may contribute to knowledge development of nursing students' attitudes and caring behaviors.

Chapter Four

Analysis and Interpretation of Data

This chapter presents an analysis of data from the self-reported attitudes and caring behaviors of nursing students from George Mason University, Manassas, Virginia. A two-part using questionnaire was used: the Caring Dimensions Inventory (Appendix E) and a Demographic Characteristics Data Sheet (Appendix D) developed by the investigator. Data were collected over a two–day period (October 29-30, 2016). IBM SPSS 24.0 was used to perform the statistical analysis. The demographic questionnaire included information about the students' experience with older adults and planned career trajectory. A convenience sample of 121 first semester traditional and accelerated BSN nursing students was obtained. The Demographic Characteristics Data Sheet consisted of 15 questions requiring yes/no responses and fill in the blank. The Caring Dimensions Inventory (CDI) is a 25 – item operationalized account of nursing actions using a five- point Likert scale to indicate agreement with caring statements.

The study findings will be presented in three sections; the first section will discuss the demographic characteristics of the nursing students; the second section shows the self-reported scores on the CDI, the third section examines the differences in the CDI scores between nursing students who have experience caring for older adults before they entered the nursing program when compared to those who have not had this experience. The demographic data will be presented in percentages and means and displayed in tables.

Research question 1. What are the personal characteristics (e.g. age, gender, race/ethnicity, prior experience with older adults, i.e., relationship with grandparents and planned career trajectory) of nursing students?

Age. The age of the nursing students ranged from 18 to 60 years, the mean age of the sample was 25.19. These findings take into consideration that some students were old enough to have completed an undergraduate degree in another field, while some have just completed high school (Table 1).

Table 1: Age of Participants in Groups by Years

Age		Frequency	Percent	Valid Percent	Cumulative Percent
	18- 20	32	26.4	26.7	26.7
	21- 30	66	54.5	55.0	81.7
	31- 40	16	13.2	13.3	95.0
	41- 50	5	4.1	4.2	99.2
	51- 60	1	.8	.8	100.0
	Total	120	99.2	100.0	
Missing		1	.8		
Total		121	100.0		

Gender. The majority of the nursing students (n = 103 or 85.1%). This finding is not surprising given that nursing has traditionally been a female profession. Only 18 of the nursing students were male (Table 2).

Table 2: Gender of the Nursing Student Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
female	103	85.1	85.1	85.1
male	18	14.9	14.9	100.0
Total	121	100.0	100.0	

Race/Ethnicity. There were 58 (47.9%) White nursing students in the sample. The majority of the nursing students were non- White (n = 52.1%) and their nationalities were self-identified as Northern African, Vietnamese, Black Asian, Malagasy, White Iranian, Korean, African, Arab-American, African American or Black, Latino, Asian, Hispanic, Pacific-Islander, Middle-Eastern, and White Russian (Table 3).

Table 3: Race / Ethnicity of Nursing Student Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
White	58	47.9	47.9	47.9
African American or Black	9	7.4	7.4	55.4
Latina	1	.8	.8	56.2
Asian	25	20.7	20.7	76.9
Hispanic	13	10.7	10.7	87.6
Pacific Islander	1	.8	.8	88.4
Middle Eastern	2	1.7	1.7	90.1
Missing	1	.8	.8	90.9
White Russian	1	.8	.8	91.7
Northern African	1	.8	.8	92.6
Vietnamese	1	.8	.8	93.4
Black Asian	1	.8	.8	94.2
Malagasy	1	.8	.8	95.0
White Iranian	1	.8	.8	95.9
Korean	2	1.7	1.7	97.5
African	2	1.7	1.7	99.2
Arab-American	1	.8	.8	100.0
Total	121	100.0	100.0	

Study participants at George Mason University identified their race / ethnicity that could be placed in the following groups according to the U.S. Census 2006 (Table 4):

Table 4: Race / Ethnicity of Students Compared with the U. S. Population 2010

United States	Percentage	GMU	Percentage
White	72.4%	White	47.9%
Black	12.6%	Black	7.4%
Multiracial	2.9%	Multiracial	0.8%
Asian	4.8%	Asian	20.7%
Native American	0.9%	Native American	0%
Pacific Islander	0.2%	Pacific Islander	0.8%
Others	6.2%	Others	22.4%
	100%		**100%**

According to the U.S. Census Bureau 2010, Race and Hispanic origin are two separate indices in the federal statistical system. This is because a Hispanic person may have originated from any race.

What area / specialty do you plan to work in once you graduate from nursing school? Pediatrics was the first, second and third choice of specialty for the nursing students (Tables 5, 6 and 7). Interesting, only two students reported geriatrics as their first choice, two students reported geriatrics as their second choice, and six students reported geriatrics as their third choice, suggesting that only a small number of nursing students plan to work with older adults 65 years and older once they graduate.

Table 5: First Choice for Nursing Specialty of Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
ER or Emergency	19	15.7	16.4	16.4
OB or Mother Baby	7	5.8	6.0	22.4
ICU	13	10.7	11.2	33.6
Peds or Pediatrics	26	21.5	22.4	56.0
Trauma	2	1.7	1.7	57.8
Psych or Mental Health	2	1.7	1.7	59.5
Wound	1	.8	.9	60.3
Community	1	.8	.9	61.2
L&D	3	2.5	2.6	63.8
Med Surg	5	4.1	4.3	68.1
OR	5	4.1	4.3	72.4
CCU	3	2.5	2.6	75.0
Geriatrics	2	1.7	1.7	76.7
Specialty Nurse	1	.8	.9	77.6
Forensic	4	3.3	3.4	81.0
Oncology	3	2.5	2.6	83.6
Post-partum	1	.8	.9	84.5

	Cardiac	6	5.0	5.2	89.7
	Neuro	1	.8	.9	90.5
	Midwifery	1	.8	.9	91.4
	Surgical ICU	1	.8	.9	92.2
	CRNA	1	.8	.9	93.1
	GYN/NP	1	.8	.9	94.0
	Neonatal	1	.8	.9	94.8
	Clinic	1	.8	.9	95.7
	Navy	1	.8	.9	96.6
	Primary Care	1	.8	.9	97.4
	NICU	3	2.5	2.6	100.0
	Total	116	95.9	100.0	
	Missing	5	4.1		
Total		121	100.0		

Table 6: Second Choice for Nursing Specialty of Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
ER or Emergency	12	9.9	10.4	10.4
OB or Mother Baby	14	11.6	12.2	22.6
ICU	13	10.7	11.3	33.9
Peds or Pediatrics	15	12.4	13.0	47.0
Trauma	3	2.5	2.6	49.6
Psych or Mental Health	6	5.0	5.2	54.8
Wound	2	1.7	1.7	56.5
Community	2	1.7	1.7	58.3
L&D	7	5.8	6.1	64.3
Med Surg	5	4.1	4.3	68.7
OR	5	4.1	4.3	73.0
CCU	1	.8	.9	73.9
Geriatrics	2	1.7	1.7	75.7
Oncology	5	4.1	4.3	80.0
INOVA	1	.8	.9	80.9
Family	2	1.7	1.7	82.6
Cardiac	2	1.7	1.7	84.3

	Rehab	1	.8	.9	85.2
	Nurse Practitioner	1	.8	.9	86.1
	CRNA	1	.8	.9	87.0
	Travel Nurse	1	.8	.9	87.8
	Adult	1	.8	.9	88.7
	Home Care	1	.8	.9	89.6
	Neonatal	1	.8	.9	90.4
	Orthopedic	1	.8	.9	91.3
	Telemetry	1	.8	.9	92.2
	Anesthetics	1	.8	.9	93.0
	Hospital	1	.8	.9	93.9
	Veterans Administration	1	.8	.9	94.8
	Hospice	1	.8	.9	95.7
	NICU	5	4.1	4.3	100.0
	Total	115	95.0	100.0	
	Missing	6	5.0		
Total		121	100.0		

Table 7: Third Choice for Nursing Specialty of Participants

				Cumulative
	Frequency	Percent	Valid Percent	Percent
ER or Emergency	7	5.8	6.4	6.4
OB or Mother Baby	8	6.6	7.3	13.8
ICU	2	1.7	1.8	15.6
Peds or Pediatrics	16	13.2	14.7	30.3
Trauma	3	2.5	2.8	33.0
Psych or Mental Health	2	1.7	1.8	34.9
Wound	1	.8	.9	35.8

Community	3	2.5	2.8	38.5
L&D	5	4.1	4.6	43.1
Med Surg	9	7.4	8.3	51.4
OR	5	4.1	4.6	56.0
CCU	3	2.5	2.8	58.7
Geriatrics	6	5.0	5.5	64.2
Forensic	1	.8	.9	65.1
Oncology	1	.8	.9	66.1
Administration	2	1.7	1.8	67.9
Global Health	1	.8	.9	68.8
Managerial	1	.8	.9	69.7
INOVA	1	.8	.9	70.6
Family	2	1.7	1.8	72.5
Cardiac	3	2.5	2.8	75.2
Neuro	1	.8	.9	76.1
Dermatology	2	1.7	1.8	78.0
Periopertive	1	.8	.9	78.9
Surgical	6	5.0	5.5	84.4
Outpatient	1	.8	.9	85.3
Adult	1	.8	.9	86.2
Neonatal	4	3.3	3.7	89.9
Post Operative	1	.8	.9	90.8
Palliative Care	1	.8	.9	91.7
Women's Health	1	.8	.9	92.7
Hospice	1	.8	.9	93.6
NICU	6	5.0	5.5	99.1
Med School	1	.8	.9	100.0
Total	109	90.1	100.0	

	Missing	12	9.9
Total		121	100.0

If you had of choice of patient assignment, would you prefer to care for children, adolescents, young adults, middle age adults, or older adults, the majority of the nursing students circled children (n = 42 or at 34.7%), while n = 24 (19.84%) circled older adults (Table 8).

Table 8: First Choice of Patient Assignment of Participants

GMUT	GMUA	Total	Percentage
Children 28	Children 14	42	34.71%
Adolescent 8	Adolescent 0	8	6.61%
Young Adult 14	Young Adult 14	28	23.14%
Middle Age 10	Middle Age 9	19	15.70%
Older Adult 10	Older Adult 14	24	19.84%
Total 70	51	121	**100%**

Do you have work experience with older adults? A total 86 (or 71.1%) of the students reported work experience with older adults (Table 9).

Table 9: Nursing Students who had Work Experience

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	86	71.1	71.1	71.1
no	35	28.9	28.9	100.0
Total	121	100.0	100.0	

Are you currently providing direct care to older adults in a clinical setting? The number of nursing students who reported that they were currently provided direct care to older adults in a clinical setting was n =112 (or 92.6%) (Table 10).

Table 10: Nursing Students who currently provide Direct Care

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	112	92.6	92.6	92.6
no	9	7.4	7.4	100.0
Total	121	100.0	100.0	

How many months of work experience with older adult via work do you have? Table 11 indicates that 17 students did not report any work experience with older adults; 39 students had two months of work experience; 14 students had three months of work experience, and 21 students had 11 months. One student had 12 months of experience, one had 18, another one had 35 months of working experience, and one had 204 months of working experience. Thus, four students had more than 11 months of work experience with older adults.

Table 11: Number of months of work Experience Reported by Nursing Students

	Frequency	Percent	Valid Percent	Cumulative Percent
0	17	14.0	14.0	14.0
1	7	5.8	5.8	19.8
2	39	32.2	32.2	52.1
3	14	11.6	11.6	63.6

	4	4	3.3	3.3	66.9
	5	2	1.7	1.7	68.6
	6	8	6.6	6.6	75.2
	7	1	.8	.8	76.0
	8	2	1.7	1.7	77.7
	9	1	.8	.8	78.5
	10	1	.8	.8	79.3
	11	21	17.4	17.4	96.7
	12	1	.8	.8	97.5
	18	1	.8	.8	98.3
	35	1	.8	.8	99.2
	204	1	.8	.8	100.0
Total		121	100.0	100.0	

Have you had experience caring for older adults before nursing school? The number of students reporting that they had experience caring for older adults before nursing school was 74 or 61.2% and 46 or 38% reported that they did not have experience caring for older adults before nursing school (Table 12).

Table 12: Students with Experience Caring for Older Adults before Nursing School

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	74	61.2	61.2	61.2
no	46	38.0	38.0	99.2
8	1	.8	.8	100.0
Total	121	100.0	100.0	

Have you lived with older adults 65 years of age and older? The number of nursing students who have lived with older adults 65 years and older was 53 or 43.8% (Table13).

Table 13: Lived with Older Adults 65 Years or Older

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	53	43.8	43.8	43.8
no	68	56.2	56.2	100.0
Total	121	100.0	100.0	

Have you had to care for older adults in your family? The number of nursing students who reported that they had cared for older adults in their own family was 61 or 50.4%, which is half of the sample (Table 14).

Table 14: Nursing Students who cared for Older Adults in Their Own Family

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	61	50.4	50.4	50.4
no	60	49.6	49.6	100.0
Total	121	100.0	100.0	

Have you ever lived with grandparents? Most of the students 54.5% had not lived with their grandparents while 55 or (45.5%) or nearly half had lived with their grandparents (Table 15).

Table 15: Nursing Students who lived with Grandparents

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	55	45.5	45.5	45.5
no	66	54.5	54.5	100.0
Total	121	100.0	100.0	

Do/did you have a close relationship with your grandparents? The majority of students 96 or (79.3%) reported that they had a close relationship with grandparents (Table 16).

Table 16: Students who have or had a Close Relationship with Grandparents

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	96	79.3	79.3	79.3
no	25	20.7	20.7	100.0
Total	121	100.0	100.0	

How much contact have you had with adults 65 years of age and older in the community? Forty-one out of 121 of students had at least 11 months of community contact with adults 65 years and older. Thirty students (24.8%) had no community contact with older adults 65 years of age and older. Only six students had community contact for more than 11 months (Table 17).

Table 17: Nursing Students who have had Contact with Older Adults in the Community

	Frequency	Percent	Valid Percent	Cumulative Percent
0	30	24.8	24.8	24.8
1	4	3.3	3.3	28.1
2	11	9.1	9.1	37.2
3	6	5.0	5.0	42.1
4	8	6.6	6.6	48.8
5	2	1.7	1.7	50.4
6	9	7.4	7.4	57.9
8	1	.8	.8	58.7
9	2	1.7	1.7	60.3
10	1	.8	.8	61.2
11	41	33.9	33.9	95.0
13	1	.8	.8	95.9
18	1	.8	.8	96.7
24	1	.8	.8	97.5
36	1	.8	.8	98.3
120	1	.8	.8	99.2
204	1	.8	.8	100.0
Total	121	100.0	100.0	

Was nursing your first choice of study? Nursing students who chose nursing as their first choice of study numbered 62 (51.2%). For 59 (48.8%) of the students, nursing was not their first choice of study (Table 18).

Table 18: Students who Chose Nursing as their First Choice of Study

	Frequency	Percent	Valid Percent	Cumulative Percent
yes	62	51.2	51.2	51.2
no	59	48.8	48.8	100.0
Total	121	100.0	100.0	

Research question 2. What are the nursing students' self-reported scores on the Caring Dimensions Inventory (CDI) questionnaire? The internal consistency reliability estimates of the CDI measure for this study revealed a Cronbach's alpha score = .87 compared to the Cronbach's alpha score = .91 found by Watson & Lea, (1997). Of a possible range of 25 to 125 scores on the CDI questionnaire, the nursing students' scores on the CDI ranged from 77 to 125 in the study (Table 19).

Table 19: Frequencies and Percentages of CDI Scores Reported by Nursing Students

	Frequency	Percent	Valid Percent	Cumulative Percent
77	1	.8	.8	.8
85	1	.8	.8	1.7
88	1	.8	.8	2.5
89	2	1.7	1.7	4.1
90	3	2.5	2.5	6.6
92	2	1.7	1.7	8.3
93	2	1.7	1.7	9.9
94	3	2.5	2.5	12.4

95	3	2.5	2.5	14.9
96	4	3.3	3.3	18.2
97	2	1.7	1.7	19.8
98	2	1.7	1.7	21.5
99	3	2.5	2.5	24.0
100	4	3.3	3.3	27.3
101	2	1.7	1.7	28.9
102	2	1.7	1.7	30.6
103	5	4.1	4.1	34.7
104	5	4.1	4.1	38.8
105	1	.8	.8	39.7
106	2	1.7	1.7	41.3
107	1	.8	.8	42.1
108	3	2.5	2.5	44.6
109	4	3.3	3.3	47.9
110	5	4.1	4.1	52.1
111	6	5.0	5.0	57.0
112	5	4.1	4.1	61.2
113	3	2.5	2.5	63.6
114	5	4.1	4.1	67.8
115	4	3.3	3.3	71.1
116	6	5.0	5.0	76.0
117	5	4.1	4.1	80.2
118	5	4.1	4.1	84.3
119	5	4.1	4.1	88.4
120	2	1.7	1.7	90.1

	121	5	4.1	4.1	94.2
	122	2	1.7	1.7	95.9
	123	3	2.5	2.5	98.3
	125	2	1.7	1.7	100.0
Total		121	100.0	100.0	

The mean scores on the Caring Dimensions Inventory for the sample of nursing students was 107.85 (SD = 10.34), which indicates a high level of caring for the participants in this study (Table 20).

Table 20: Mean Caring Dimensions Inventory Scores of Nursing Students

N	121
Missing	0
Mean	107.85
Std. Deviation	10.340
Range	48

Research question 3: Are there differences in the Caring Dimensions Inventory between nursing students who have experience caring for older adults before they entered the nursing program when compared to those who have not had this experience? To answer this research question, an independent-samples t-test was conducted. The findings revealed there was no difference in the CDI scores of those who have experience caring for older adults before they entered the nursing program (M = 108.57, SD = 9.89) and those who have not had experience (M = 106.67, SD = 11.140), t (df = 118) = 0.971, p = 0.333) (Table 21).

Table 21: A t-Test comparing nursing students with Experience Caring for Older Adults before Entering the Nursing Program and Those Who Have Had Experience

	Exp. Caring	N	Mean	Std. Deviation	Std. Error Mean
CDI	yes	74	108.57	9.891	1.150
	no	46	106.67	11.140	1.642

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig.(2-tailed)
	0.729	0.395	0.971	118	0.333
			0.944	87.032	0.348

Further exploratory analysis was done to determine if there was a statistical difference when comparing the traditional nursing students in the sample with those in the accelerated program on the Caring Dimensions Inventory (CDI). An independent-samples t-test revealed a statistical significant difference in the CDI scores of the traditional nursing students (M = 110.77, SD = 9.524) when compared to the accelerated nursing students (M = 103.84, SD = 10.154; t (df = 119) = 3.843, p = 0.000) with traditional students scoring higher on caring attitudes and behaviors than those in the accelerated program (Table 22).

Table 22: A t-test Comparing Traditional and Accelerated Nursing Students on the Caring Dimensions Inventory

	Traditional and Accelerated	N	Mean	Std. Deviatic
Caring	Traditional	70	110.77	9.524
	Accelerated	51	103.84	10.154

Independent Samples Test

Levene's Test for Equality of Variances		t-test for Equality of Means		
F	Sig.	t	df	Sig. (2-tailed)
0.517	0.473	3.843	119	0.000
		3.804	103.752	0.000

In another independent –samples t-test to compare differences in White and Non-White Nursing students on the Caring Dimension Inventory, the findings revealed a statistically significant difference in the White nursing students (M = 104.74, SD = 10.701) compared to the Non-White students (M = 110.63, SD = 9.230); t (df = 118) = -3.233, p = 0.002), indicating the Non-White students reported higher scores on the CDI compared to the White nursing students (Table 23).

Table 23: A t-test comparing White and Non-White Nursing students on the Caring Dimensions Inventory

	Nonwhite	N	Mean	Std. Deviation	Std. Error Mean

Caring	White	58	104.74	10.701	1.405
	Non-White	62	110.63	9.230	1.172

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
	2.072	0.153	-3.233	118	0.002
			-3.218	112.864	0.002

In one final analysis of independent –samples t-test, the nursing students were asked "Was nursing your first choice of study" A t-test revealed a higher mean score on the Caring Dimensions Inventory for the 62 students who chose nursing as their first choice (M = 109.97, SD = 10.196) compared to 59 students who did not (M = 105.63, SD = 10.101); t (df = 119) = 2.351, p = 0.020) (Table 24).

Table 24: A t-test Comparing Nursing Students on Nursing as First Choice of Study with Those Who Did Not on the Caring Dimensions Inventory

	First Choice of Study	N	Mean	Std. Deviation	Std. Error Mean
Caring	yes	62	109.97	10.196	1.295
	no	59	105.63	10.101	1.315

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
	0.044	0.835	2.351	119	0.020
			2.352	118.804	0.020

Missing Data

A few instances of missing data were observed in the sample as follows. On the Demographic Characteristics of the GMU Nursing Students Questionnaire, one (1) nursing student did not answer the question about age. One nursing student did not answer the question about race / ethnicity. Five (5) students did not answer first choice, six (6) nursing students did not answer second choice, and 12 nursing students did not answer third choice on the question: What area / specialty of nursing do you plan to work in once you graduate from nursing school? One (1) nursing student did not answer: Have you had any experience caring for older adults before nursing school? Because the majority of students answered "yes" that same response was substituted for that item in the questionnaire. Therefore, missing data in the demographic characteristics were re-coded in IBM SPSS 24.0 by substituting the number 8 or re-coded as the response most frequently reported.

On the CDI questionnaire, one student did not answer question #15: Instructing a patient about an aspect of self-care (washing, dressing, etc.) This item was scored by substituting the values corresponding to the majority of nursing students who responded with a 5- strongly agree on the Likert scale. "SPSS can only make use of cases that have non-missing values for the independent and dependent variables, so if the case has a missing value for either variable, it cannot be included in the test" (libguides.library.kent.edu/spss/independentTTest).

Summary

This chapter has presented an analysis of data from the self-reported attitudes and caring behaviors of nursing students from George Mason University, Manassas, Virginia. There were 70 traditional nursing students and 51 students in the accelerated nursing program. The study findings were presented in three sections: the first section addressed the demographic characters of the nursing students, the second section addressed the self-reported scores on the CDI, and the third section examined differences in CDI scores between nursing students who have had experience caring for older adults before they entered the nursing program when compared to those who have not had this experience. Additional exploratory analysis was done on three variables. The final chapter will present an overall summary of the study as well as implications for nursing theory, research, policy, education, and practice. The chapter will conclude with recommendations for future research.

Chapter Five

Summary and Implications for Nursing Theory, Research, Policy, Education, and Practice

Summary: Attitudes may influence nurses to act in a certain way toward patients. Current nursing literature suggests that positive caring attitudes and behaviors of the nurses are essential for the competent care of older adults. This chapter presents the pertinent study findings, limitations of the study, and implications for nursing theory, policy, education, and practice as well as recommendations for future research. Few studies were found in the literature that have examined caring attitudes and behaviors of nursing students toward older adults based on Jean Watson's Theory that focuses on 10 carative factors.

The purpose of this study was to examine the self-reported attitudes and caring behaviors of nursing students toward older adults. Three research questions were addressed: (1) What are the personal characteristics i.e., (age, gender, race / ethnicity, prior experience with older adults, relationship with grandparents, and planned career trajectory of the nursing students? (2) What are the nursing students' self-reported scores on the Caring Dimensions Inventory (CDI)? (3) Are there differences in the CDI scores between nursing students who have experience caring for older adults before they entered the BSN nursing program when compared to those who have not had this experience?

Sample

A convenience sample of 121first semester traditional and accelerated BSN nursing students attending George Mason University, a large school of nursing outside Washington, D.C. participated in the study. The age range was 18 to 60 years, and 53% of the students were non- White.

Measures

Data were collected using a two-part questionnaire: The Caring Dimensions Inventory (CDI) and an investigator-developed Demographic Characteristics Data Sheet. The data sheet included information about the students' experience with older adults and the students' planned career trajectory.

Pertinent findings

Research question 1: Most of the nursing students participating in the study were female, not a surprise since nursing is traditionally a female profession. An unexpected finding was that the majority of nursing students were non – White and represented a number of different nationalities. When asked to choose their first choice of nursing specialty to work in after graduation, pediatrics was the first choice for 26 participants. Only two nursing students chose geriatrics as their first choice. This number is very low considering the future predicted increase and the number of adults 65 and over who would need nursing care from geriatric specialists. Pediatrics was also the preferred first choice for a patient assignment (42 or 34.71%), followed by young adults (28 or 23.14%), and older adults (24 or 19.84%). On the other hand, the number of nursing students who reported that they had work experience with older adults was 86 or 71%. Given their first semester in nursing at George Mason

University, the percentage of nursing students having had experience with older adults was high. A majority 112 or 92.6% of the BSN students stated that they currently provide direct care to older adults in a clinical setting. Nursing students (n = 68) or 56.2% reported that they had not lived with an older adult 65 years of age or older, yet the majority of the students have provided care to older adults in their own family.

Most of the nursing students had not lived with their grandparents; however, the majority or 79.3% of the students reported that they had a close relationship with their grandparents. A number of nursing students reported that nursing was their first career choice (51.2%); 48.8% had not chosen nursing as their first career choice.

Research question 2: On the CDI, the average score for the nursing students on attitudes and caring behaviors was 107 of a possible 125, indicating a high level of caring. The range was 77 to 125. The internal consistency reliability estimate of the CDI measure for this study revealed a Cronbach's alpha score = .87

Research question 3: There were no differences on the CDI scores on attitudes and caring behaviors between nursing students who have had experience caring for older adults before they entered the nursing program and those who did not have the experience.

Additional analysis revealed that there was a significant difference in the CDI scores between the 70 traditional and 51 accelerated students. There was also a significant difference in the CDI scores between White and non-White nursing students. Although the CDI had widespread use from a culturally diverse perspective,

this study adds to the body of nursing knowledge development in this area. No differences were found on the CDI scores between students who had a close relationship with their grandparents and those who did not. There was a significant difference on the CDI scores between those nursing students who chose nursing as a first career and nursing students who did not.

Limitations of the Study

The sample size of 121 was less than the 128, the number suggested in the G*Power. Thus, a smaller sample size limits the generalizability of the study to other nursing students. Another limitation was that some of the nursing students, even though they were in their first semester of the nursing program had had working experience caring for older adults. Furthermore, the Caring Dimensions Inventory has not had widespread use from a culturally diverse perspective, given that the majority of the nursing students in the sample were non-White. In addition, there were two groups of nursing students, traditional and accelerated, providing a different set of experiences when combined.

Implications for Theory

Jean Watson's theory of human caring was used to guide this study. Based on the CDI, the outcome of this study provides information that could be used to further investigate the 10 carative factors used by nursing students toward older adults.

Implications for Nursing Education

This study built on a concept of caring that adds to the knowledge base of the nursing students and contributes to future development of the nursing curriculum.

Nurse educators can seek creative solutions for preparing nursing students for the challenges of caring for older adults. Caring is an essential concept of the nursing curriculum. Watson's theory of human caring may serve as both theoretically and philosophical context for a humanistic approach to care.

Implications for Nursing Practice

Caring is part of empathetic skills underscoring competent nursing practice. Nursing has an ethical and moral stance that is related to patient care. Nursing practice values caring fulfillment of client needs. Thus, caring attitudes and behaviors displayed in the practice of nursing may affect positive health outcomes and quality care for older adults.

Implications for Policy

Further policy development related to research findings of this study about caring attitudes and behaviors is warranted. Supportive policies that call for strengthening the curriculum and practice to respond to the healthcare needs of 65 years of age and older should be examined. Policy should provide support for an evaluative process of a curriculum as well as nursing practice.

Recommendations for Future Research

(1) Conduct further studies of attitudes and caring behaviors of nursing students and nurses using a larger sample size, including randomized controlled trials.

(2) Eliminate participants who have had extensive experience caring for older adults prior to entry into their nursing program.

(3) Develop a performance measure that identifies areas for improvement in attitudes and caring behaviors in practice.

(4) Identify information that assists nurses to understand behaviors and attitudes toward improving the quality of life for older adults.

Caring behaviors and attitudes present challenges as to how they are learned and put into practice. With the predicted increase of older adults living with chronic illnesses, advanced age increases the necessity for caring practices.

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Appendix D

Demographic Characteristics of the GMU Nursing Students (n=121)

Demographic Characteristic	Answers
Gender	Male Female
Age	_____
Race / Ethnicity	_____
What area/specialty of nursing do you plan to work in once you graduate from nursing school? List your first, second and third choice.	1._____ 2._____ 3._____
If you had a choice for a patient assignment, would you prefer to care for: Please circle your first choice	Children Adolescents Young Adults Middle Age Adults Older Adults

Do you have work experience with older adults?	Yes No

Are you currently providing direct care to older adults in a clinical setting?	Yes No
How many months of experience with older adults via work do you have?	None 1 2 3 4 5 6 7 8 9 10 11 months
Have you had any experience caring for older adults before nursing school?	Yes No

Have you lived with older adults 65 years of age and older?	Yes No

Have you had to care for older adults in your family?	Yes No
Have you ever lived with grandparents?	Yes No
Do/Did you have a close relationship with your grandparents?	Yes No
How much contact have you had with older adults 65 years of age and older, e.g., as a candy striper, as a volunteer in your church or other organization, etc.?	None 1 2 3 4 5 6 7 8 9 10 11 months
Was nursing your first choice of study?	Yes No

Appendix E

CARING DIMENSIONS INVENTORY (CDI)*

Stem Question: "Do you consider the following aspects of nursing practice to be caring?"

Response on five-point Likert scale: 1 (strongly disagree) to 5 (strongly agree). Circle the

number that corresponds to your perception of the intervention as caring.

1 2 3 4 5

strongly disagree — strongly agree

	Strongly Disagree				Strongly Agree
	1	2	3	4	5
1. Assisting a patient with an activity of daily living (washing, dressing, etc.)	1	2	3	4	5
2. Making a nursing record about the patient	1	2	3	4	5
3. Feeling sorry for a patient	1	2	3	4	5

4. Getting to know the patient as a person	1	2	3	4	5
5. Explaining a clinical procedure to a patient	1	2	3	4	5
6. Being neatly dressed when working with a patient	1	2	3	4	5
7. Sitting with a patient	1	2	3	4	5
8. Exploring a patient's lifestyle	1	2	3	4	5
9. Reporting a patient's condition to a senior nurse	1	2	3	4	5
10. Being with a patient during a clinical procedure	1	2	3	4	5
11. Being honest with a patient	1	2	3	4	5
12. Organizing the work of others for a patient	1	2	3	4	5
13. Listening to a patient	1	2	3	4	5

14. Consulting with a doctor about a patient 1 2 3 4 5

15. Instructing a patient about an aspect of self-care (washing, dressing, etc.) 1 2 3 4 5

16. Sharing your personal problems with a patient 1 2 3 4 5

17. Keeping relatives informed about a patient 1 2 3 4 5

18. Measuring the vital signs of a patient (e.g., pulse and blood pressure) 1 2 3 4 5

19. Putting the needs of a patient before your own 1 2 3 4 5

20. Being technically competent with a clinical procedure 1 2 3 4 5

21. Involving a patient with his or her care 1 2 3 4 5

22. Giving reassurance about a clinical

procedure	1	2	3	4	5
23. Providing privacy for a patient	1	2	3	4	5
24. Being cheerful with a patient	1	2	3	4	5
25. Observing the effects of a medication on a patient	1	2	3	4	5

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Appendix F

Fwd: Caring Dimensions Inventory

3 messages

Tue, Jun 30, 2015 at 12:39 PM

Jacquelyn Lambert-Davis <jdl75@case.edu>
To: Faye Gary <fgary@case.edu>, Patricia McDonald <pxm9@case.edu>, Jacquelyn Slomka <jxs980@case.edu>

---------- Forwarded message ----------
From: **Roger Watson** <R.Watson@hull.ac.uk>
Date: Saturday, June 20, 2015
Subject: Caring Dimensions Inventory
To: Amandah Hoogbruin <Amandah.Hoogbruin@kpu.ca>
Cc: Jacquelyn Lambert-Davis <jdl75@case.edu>

Dear Jacquelyn,

Do you need a copy?

Roger
Sent from my iPhone
Twitter: @rwatson1955
Skype: roger.watson3
Mobile: +447808480547

On 20 Jun 2015, at 22:06, "Amandah Hoogbruin" <Amandah.Hoogbruin@kpu.ca> wrote:

Hello, Jacquelyn

Yes you have permission to use the CDI.

Good luck completing your doctoral studies. Kindly share your results when you are done.

Many thanks in advance for your assistance.

BFN & much metta/loving kindness

Amandah

cc. collaborator of the CDI, Dr. Roger Watson, Professor, University of Hull,

Amandah Hoogbruin, RN, BScN, MScN, PhD
BSN Faculty
Kwantlen Polytechnic University,
Surrey, BC. Canada
t 604 599 3144 f 599 2360

From: Jacquelyn Lambert-Davis <jdl75@case.edu>
Sent: June 12, 2015 3:51 PM
To: Amandah Hoogbruin
Subject: Caring Dimensions Inventory

Good Evening Dr. Lea Hoogbruin,

I hope that you are doing well. My name is Jacquelyn Lambert-Davis, and I am a candidate for the Doctorate of Nursing Practice at Case Western Reserve University. I am writing you today to request the use of your Caring Dimensions Inventory tool for my scholarly project.

I have an interest in care, ethics and in serving the older adult population. I am interested in surveying the current attitudes and caring behaviors of nursing student. Thank you for your time, and have a great day!

Respectfully,

Jacquelyn Lambert-Davis, MS, RN

Doctorate of Nursing Practice Candidate

Case Western Reserve University

Frances Payne Bolton School of Nursing

Faye Gary <fxg21@case.edu> Tue, Jun 30, 2015 at 12:56 PM
Reply-To: fgary@case.edu
To: Jacquelyn Lambert-Davis <jdl75@case.edu>
Cc: Patricia McDonald <pxm9@case.edu>, Jacquelyn Slomka jxs980@case.edu

Nice response.

Thank you.

FG
[Quoted text hidden]
--
Faye A. Gary, EdD, MS, RN, FAAN

Medical Mutual of Ohio and Kent W. Clapp Chair and Professor of Nursing
Frances Payne Bolton School of Nursing
Secondary Appointment, Department of Psychiatry
School of Medicine
Case Western Reserve University
10900 Euclid Avenue
Cleveland, Ohio 44106
216.368.5240 (Office Phone)
216.368.3542 (Office Fax)
fgary@case.edu
faye.gary@case.edu
Provost Scholars Program
http://www.case.edu/provostscholars/

Jacquelyn Lambert-Davis <jdl75@case.edu> Tue, Apr 5, 2016 at 9:19 PM
To: Faye Gary <fgary@case.edu>, Patricia McDonald <pxm9@case.edu>

On Tue, Jun 30, 2015 at 7:39 PM, Roger Watson <R.Watson@hull.ac.uk> wrote:
Here's the 25-item version which is all I have - but if you check the 35-item papers you can add the other items but the 25 item on is just fine.

Roger

_____
Roger Watson PhD RN FRCN FAAN
Editor-in-Chief, Journal of Advanced Nursing
Professor of Nursing, University of Hull, UK
Tel: +441482 464525
Follow me on Twitter @rwatson1955
mobile: +447808480547
"The plural of anecdote is not data"

From: Jacquelyn Lambert-Davis [jdl75@case.edu]
Sent: 30 June 2015 17:49
To: Roger Watson
Subject: Re: Caring Dimensions Inventory

Yes, I would like a copy. Would you email it to me? If need be you can mail it to: 10 Tamarisk Quay Apt. H, Hampton, Virginia 23666

Thank you so much,
Jacquelyn Lambert-Davis mail it to: 10 Tamarisk Quay Apt. H, Hampton, Virginia 23666

Thank you so much,
Jacquelyn Lambert-Davis