Baccalaureate Nursing Students' Knowledge of and Attitudes toward Older Adults

Meghan Mattos[1], **Yun Jiang**[2], **Jennifer B. Seaman**[3], **Marci Nilsen**[4], **Eileen R. Chasens**[5], and **Lorraine M. Novosel**[6]

[1]University of Virginia, Department of Acute & Specialty Care, PO Box 800782, Charlottesville, VA 22908, Phone: (434) 243-3936

[2]University of Michigan, Department of Systems, Populations and Leadership

[3]University of Pittsburgh, Department of Critical Care Medicine

[4]University of Pittsburgh, Departments of Acute & Tertiary Care and Otolaryngology Head and Neck Surgery

[5]University of Pittsburgh, Department of Health & Community Systems

[6]University of Pittsburgh, Department of Health Promotion & Development

INTRODUCTION

Increasing the number of nursing graduates who are knowledgeable and interested in caring for older adults is one of the greatest challenges for nurse educators. The number of older adults (>65 years) is estimated to more than double to 88.5 million in 2050 (U.S. Census Bureau, 2011). Moreover, those aged 85 years and older, a group most likely to need health and long-term care services, are expected to increase in proportion from 1.9% in 2010 to 4.3% by 2050 (U.S. Census Bureau, 2010). An increasingly aged population will be associated with major growth in health care needs and costs; therefore, future nurses will be increasingly faced with the responsibility of caring for older adults.

Preparing nursing students to care for an aging population can be challenging. Previous studies found nursing students frequently hold negative attitudes toward older adults (Holroyd et al., 2009; Liu, Norman, While, 2013; Lovell, 2006) and caring for older adults is often not seen as an attractive option upon graduation (Brown et al., 2008; Haron et al., 2013; Koh, 2012; Swanlund & Kujath, 2012; Stevens, 2011). The decision to go into gerontological nursing may be affected by personal factors such as beliefs, attitudes, knowledge, and past experiences (Haron et al., 2013; Lovell, 2006). Nursing students who have experience working with older people have more positive attitudes (Henderson et al., 2008; Swanlund & Kujath, 2012). This suggests positive exposure to older adults influences nursing students' preferred patient population upon graduation.

Correspondence to: Meghan Mattos.

It is assumed nursing students who have completed a gerontological nursing course will have increased knowledge of common syndromes affecting older adults as well as how to provide specialized care to promote health and functional independence. However, it is unknown whether the gerontology courses affect nursing students' attitudes toward older adults and preferred practice care setting. Understanding nursing students' knowledge, attitudes, and experiences will assist in understanding their learning needs and guide development and refinement of gerontology nursing courses (Heise, Johnsen, Himes, & Wing, 2012; Koren et al., 2008). In addition, assessing students' knowledge and attitudes will help identify potential misconceptions regarding older adults. To date, the potential impact of exposure to healthy older adults in shaping undergraduate nursing students' knowledge and attitudes has not been fully explored. Whether such exposure influences their preferred nursing position is barely known.

The purpose of this study was to explore baccalaureate nursing (BSN) students' knowledge and attitudes about older adults. Specific research questions included: 1) What are BSN students' knowledge of aging and attitudes toward older adults? 2) Is there a difference in the knowledge, attitudes, and work plans between BSN students who are and are not enrolled in a stand-alone geriatric course? and 3) How do BSN students perceive their experience of interactions and interviews with community-dwelling older adults?

METHODS

A mixed-method study using a concurrent nested design was used. Data were collected during fall 2013 and consisted of self-report surveys and analysis of a written course assignment. The sample consisted of junior BSN students and second-degree, accelerated BSN students at a nursing school located in Western Pennsylvania. Participants received both verbal and written descriptions of the study prior to agreeing to participate. Return of the completed surveys implied consent for the quantitative component; participants who chose not to provide their work for the qualitative component provided a written request for data exclusion. Institutional Review Board approval was obtained prior to data collection.

Quantitative component

All junior students in attendance on the day of survey administration, which was the last scheduled class of the semester, consented to participate in the surveys (N=132). The sample consisted of 1) students who completed the gerontology-specific (gero) course, which included a weekly, three-hour clinical experience, (n=85) and 2) a comparison group of nursing student peers who had not yet enrolled in the gero nursing course (n=47). All BSN students are required to complete the gero nursing course prior to graduation. Paper surveys were administered by members of the research team at the beginning of class.

Instruments—Demographic information collected included age, gender and student status as either a four-year undergraduate nursing student or second-degree nursing student. Questions related to experiences with older adults included: "Have you lived with or had a close relationship with a healthy older adult?"; "Have you lived or had a close relationship with an unhealthy older adult?"; "Not including your nursing school experience, have you had any experience, paid or volunteer, with older adults?"; and "Do you plan to work with

older adults in the future?". These questions were included to describe students' previous experiences with older adults based on their own, subjective, definition of "healthy" and "unhealthy". Finally, students were asked the clinical setting or specialty in which they planned to work in the future.

The Facts of Aging-Form 2 (FAQ2-Multiple-Choice Format) (Palmore, 1988), a 25-item multiple choice instrument, was used to measure knowledge of older adults. The FAQ-2 presented by Palmore (1988) notes revisions in wording as well as a multiple choice structure for improved reliability compared to the original True/False option. The Cronbach's alpha was found to be substantially higher for the multiple-choice test than for the true-false test (.36 vs. .07) when being administered to two classes of sociology students (Harris & Changeas, 1994). A tendency towards higher discriminating power was also demonstrated on multiple choice items in the same study (Harris & Changeas, 1994). Nurses and patient care aids typically scored over 60% correct (Palmore, 1998) and 51.5% mean correct was reported in first-year psychology students (Pachana, Helmes, Gudgeon, 2013).

The Geriatric Attitudes Scale (GAS) (Reuben et al., 1998) was used to measure the attitudes of nursing students. The GAS is a 14-item instrument that demonstrates internal consistency (Cronbach's alpha= .76), construct validity, and has been used to measure geriatric-specific attitudes toward older adults (Reuben et al., 1998). Using a sample of medical students, more positive attitudes were associated with more medical training ($p<$ .001) (Reuben et al., 1998). Those interested in pursuing geriatric specialties had higher GAS scores than those less interested ($p=$ .007). For purposes of this study, there was a change in the wording of item #2 from AIDS to cancer.

Qualitative component

To gain insight into student responses to their interactions with community-dwelling older adults and thereby complement findings from the GAS, we reviewed written reflections completed as part of the gerontological nursing course ($n=$72). As part of an assignment for their gerontological nursing class, students were required to conduct a semi-structured interview with a community-dwelling adult 65 years of age then, upon a return visit, administer two selected health assessment tools. Finally, students were instructed to compose a one-page, reflection of the experience, summarizing what was unique about the older adult and what they found to be most difficult, interesting, and/or meaningful about the assignment. Assignments were de-identified; the course instructor provided a photocopy of the reflection portion of the assignment for analysis.

Statistical Analysis

Quantitative Component—Undergraduate research student assistants entered data into SPSS (V.21, IBM Corp., Armonk, NY) and two members of the research team verified data entry. A p-value of <.05 was considered to be statistically significant. Twenty-two of the 25 items on the FAQ-2 had missing values (range 0.8% -11.6%). Participants were instructed to place a '?', instead of making a guess at a response, if they were unsure of an answer. Both '?' and missing responses were coded as incorrect. Total FAQ-2 scores were computed by summing the number of correct responses. Independent sample t-tests (two-tailed, 95% C.I.)

were used to determine if participants who failed to respond to at least one of the items differed from those who responded to all 25 items. Cronbach's alpha for the total sample, gero group, and comparison group were .22, .23 and .11, respectively.

Two students did not complete any GAS items and were excluded from analysis. One missing value was noted on two GAS items and imputed using case mean substitution. After correcting for reverse scoring, we computed mean GAS values by summing items and dividing by 14. One outlier was identified (> 3 SDs below the mean) and removed. Cronbach's alpha for the total sample, gero group, and comparison group were .77, .79 and .72, respectively.

Analyses of the difference of students' reported future work plan with older adults (coded as "yes", "no" and "undecided") between the two groups were reported as Cramér's V statistic, a chi-square-based measure of nominal associations appropriate for our 2×3 crosstabs table. In addition, relationships between knowledge or attitude and students' reported plans to work with older adults were examined. Multinomial regressions and logistic regressions were computed with work plan as the dependent variable and mean FAQ-2 or mean GAS as the predictor.

Qualitative Component—The de-identified student reflections were printed and distributed to four of the investigators. Content analysis was conducted using the following process: 1) each investigator individually read the reflections to gain familiarity; 2) performed line-by-line coding and generated categories; and 3) shared their categorical analyses with the team who then refined and collapsed categories and identified overarching themes. Discrepancies were resolved by consensus review (Strauss & Corbin, 1998).

RESULTS

Quantitative Findings

One hundred and twenty nine records were analyzed. Demographic information is presented in Table 1. The average age of participants was 21 years old, the majority female (90.7%), and enrolled in a traditional BSN program (93%). Only two students indicated interest in pursuing geriatric nursing (1.6%). All students in the comparison group were enrolled in the traditional BSN program, whereas 11% of students in the gero group were enrolled as second-degree BSN students. The two sample groups were comparable on variables of 1) acquaintance with a healthy adult, 2) acquaintance with an unhealthy older adult and 3) having prior work/volunteer experience with older adults (all p-values >.05). Student age was not associated with group classification (gero vs. comparison) ($p > .05$).

Knowledge of Aging—Significant differences between gero and comparison groups were observed on six questions of the FAQ-2. None of the participants correctly answered one question regarding home injury occurrence, prompting a verification of the data values to original surveys. However, there were no discrepancies in data entry. Mean total score ($N = 129$) was 9.71 ($SD = 2.10$), ranging from 5–14 correct items. The gero students scored significantly higher ($M = 10.11$, $SD = 2.08$) than the comparison group ($M = 8.98$, $SD = 1.94$), $t(127) = 3.02$, $p < .01$, 95% CI [.39, 1.87]. History of living with or having a

relationship with an unhealthy older adult was associated with FAQ-2 score (r_{pb} =.20, p =. 02). Point-biserial correlations between gender (r_{pb} =.07), student classification (r_{pb} =.17), healthy older adult (r_{pb} = .03) and prior experience (r =.05) were not significant. Student age did not correlate with FAQ-2 (r =−.09, p =.29).

Results of the independent t-tests are presented in Table 2. FAQ-2 scores differed between students depending on their history of living with or having a close relationship with an unhealthy older adult (t (127) = −2.34, p = .02, 95% CI [−1.71, −0.14]). No differences were observed in scores between participants according to gender, history of living with or having a close relationship with a healthy older adult, or history of prior experience with older adults. Little, if any, relationship was observed between attitude (GAS) and knowledge (FAQ-2). Pearson's r correlation coefficients for the study sample (.06), gero (.08), and comparison (−.06) groups were not statistically significant.

Attitudes of Aging—The mean GAS value for the sample was "neutral" at 3.66 (SD = 0.48, range 2.36 – 4.71). The gero (M = 3.70, SD = 0.49) and comparison (M = 3.59, SD = 0.42) groups did not differ significantly, t(127) = 1.29, p = .20, 95% CI [−.06, .28]. Significant differences were noted on three of the 14 items (see Table 3). In all three instances, students who had taken the geriatric nursing course had a more positive attitude than their nursing student peers. Overall, female students had significantly more positive attitudes (M =3.69, SD =0.45) than male students (M = 3.39, SD = 0.56), t (127) =−2.14, p =.03, 95% CI [−.58, −.02]. Students who had some type of prior experience with older adults (M =3.74, SD = 0.45) were also more likely to have positive attitudes compared to their peers without experience (M = 3.45, SD = 0.47), t (127) = 3.21, p <.01, 95% CI [.11, .48]. No differences were observed in attitudes relative to having a history of living with or having had a close relationship with either a healthy or unhealthy older adult. There were relatively weak, although significant, correlations between gender (r_{pb} =.19, p =.04) and prior experience with older adults (r_{pb} =.27, p <.01) and attitudes (see Table 2).

Future Work Plans—The data revealed significant differences between gero and comparison groups in future plans to work with older adults (V = .273, p = .01) and differences between students with and without prior work/volunteer experience with older adults (V = .252, p = .02). No appreciable differences in work plans were noted across gender or student classification, or healthy and unhealthy older adult relationships.

When comparing undecided students with students who did not plan to work with older adults, mean GAS was a statistically significant predictor (Wald Chi-square = 9.53, p < .01) when logistic regression was run with work plan as a dependent variable. The odds ratio for mean GAS was 5.22, indicating that as attitude value increased, there was a significantly greater chance that work plan was "undecided" compared to "no".

FAQ-2 was statistically significant when comparing the "yes" with "no categories. For a one unit increase, the model estimates a .25 increase in the log odds of being "yes" relative to "no" (Wald Chi-square = 4.00, p < .05). Knowledge was not statistically significant when comparing the "undecided" to the "no". FAQ-2 was not a statistically significant predictor of work plan when comparing the "undecided" to the "yes" category.

Qualitative Findings

Of the 76 students who participated in the survey administration, 72 agreed to have their reflection assignments shared with the research team. Students' reflections on their interviews were overwhelmingly positive; almost all described the interview as inspiring and meaningful. Two themes emerged: 1) the students' responses to the interview process and 2) their perceptions of older adults. Within each of the themes, there were contrasting sub-themes and corresponding categories (Table 4).

Reactions to the Interview—Students' perceptions of the interview reveal the value of exposure to community-dwelling older adults. One wrote, *"My interview was surprisingly fun…she was very witty, sarcastic, and light-hearted,"* and *"it was a very rewarding experience, and I definitely have a greater appreciation for those who are elderly."* Students described how the experience challenged their misconceptions and stereotypes about healthy older adults. Many students were surprised to find that older adults they interviewed lived independent, productive, and meaningful lives in the community. *"I was surprised she still drove,"* and *"I found the most difficult portion of the interview process to be determining which assessment tools to use…Mr. K. is a very functional and self-sufficient older adult."* Students contrasted this with their clinical experiences within the hospital environment, where many of older adults they cared for were frail and debilitated.

Students described the challenges they experienced during the interview. Many expressed experiencing discomfort discussing sensitive topics such as death and loss; others remarked that the older adults did not seem to have as much difficulty talking about these topics. One student related, *"He went on to tell me about his wife's 15 year struggle with stage 4 breast cancer…I started crying…listening to the story of his wife was the hardest part of the assignment for me."* Students also related difficulty being in the simultaneous roles of evaluator and conversational partner, drawing out a reticent interviewee and keeping a loquacious individual on-topic. Regarding the two roles, students offered comments such as, *"I felt almost as if I was insulting her, or that she'd think I expected her to be depressed or dependent on others for care."* Student comments on their interviewees' responsiveness ranged from, *"Mrs. B did not go into much detail on many of the interview questions,"* to *"The hardest part of the interview was cutting off the conversation."*

Perceptions of Older Adults—Students' perceptions of older adults, as with their interview responses, were largely positive. Among perceptions, themes of strengths, vulnerabilities, and tensions emerged. The theme of strengths was dominant throughout, with subthemes of value, resilience, positivity, family-orientation and faith-orientation. Students described the older adults as "having something to offer", overcoming adversity in difficult life situations, and generally positive in their outlook. One wrote, *"He respects that he will have less energy and must be careful with physical activity; however, he continues to build furniture like the shelves he is currently working on."* A more minor theme of vulnerability also emerged, with students describing the potential for depression and social isolation, as well as rare instances of poor self-care. In addition to themes of strengths and vulnerabilities, there emerged a theme of tension. Students talked about how older adults sought to strike a balance between being independent and accepting assistance in the interest

of safety, *"Mrs. J is able to live independently in the community, but I do think it is smart for her to start thinking about moving closer to her family."*

DISCUSSION

The first two research questions examined BSN students' knowledge of aging and attitudes toward older adults and compared differences between students who completed a geriatric course and those yet to take the course. The FAQ-2 was used to gauge a general idea of knowledge, and results showed there was an observed difference between groups. The results found that mean scores for both groups were relatively low, but gero students did score significantly higher on the instrument, as would be expected since they were enrolled in or had completed an academic gerontological nursing course. This low percent correct has been observed in previous studies in undergraduate samples (Edwards et al., 1992; Lovell, 2006; Pachana, Helmes, & Gudgeon, 2012). The FAQ-2 had a limited internal reliability in our student groups. However, it is consistent with previously reported low Cronbach's alpha values for FAQ-2 (Lusk et al., 1995, Harris & Changas, 1994). The low internal consistency for FAQ in general may be due to certain plausible distractors in the quiz and those items that do not correlated well with the overall test (Harris, Changas, & Palmore, 1996). Although there are limitations to using the FAQ-2, this instrument was chosen because it has been used most frequently over the past 20 years.

Content analysis of the gero group's reflections suggested that students experienced a shift in their perceptions of older adults, even though we found no significant difference in the overall attitude scores toward older adults between the gero and comparison groups. There were statistically significant differences between groups for individual questions for the GAS. As an example, students who completed the gero course revealed a more positive attitude to the statement, "Most old people are pleasant to be with". This may be influenced by a variety factors, including their interview experience with an older, community-dwelling adults. When considering the scores on the GAS in tandem with the qualitative findings, it was helpful to examine the individual items on which the gero and comparison groups differed. Students in the gero group had significantly more positive responses to the following items on the GAS: 1) "As people grow older, they become less organized and more confused." and 2) "Taking a health history from elderly patients is frequently an ordeal". This finding is interesting as our qualitative analysis found that student's had concerns regarding keeping the interviewee on track and drawing out information. This question may have been perceived to be addressing taking a detailed health history in an outpatient or inpatient setting rather than the interview. Overall, the gero student's positive attitudes were consistent with the qualitative results that found the interviews to be valuable, inspirational and meaningful. Similar to our findings, a previous study examining attitudes of nutrition students found that a one-on-one experiential project with an older adult led to significantly increased attitude scores for students after the experience (Lee et al., 2008).

Based on the interview, there were some items in the GAS that one would have expected to observe a difference between groups. Specifically, the gero students were only slightly more positive to the statement, "Old people in general do not contribute much to society". The gero group also indicated a less positive attitude toward the item "It is interesting listening to

old people's accounts of their past experiences". Comparing GAS item responses to their reflections from the interviews, it was surprising to find that gero students showed more negative attitudes in some specific survey items. However, it is possible that gero students over-reported positivity in their narratives since their reflection assignments were submitted for a grade. This would help explain the divergence in qualitative and quantitative data for some of the GAS questions. One of the more salient findings from the interviews was that students challenged their previously-held negative stereotypes of older adults, specifically related to functioning and carrying out activities of daily living. Since most student experiences with older adults were in an inpatient hospital setting, students were surprised that older adults lived independent and productive lives within their communities.

A small number of students reported planning to work with older adults in the future, and they were more likely to have significantly higher GAS and FAQ-2 scores, or greater knowledge and more positive attitudes toward older adults. As positive attitudes increased, there was also a significantly greater chance that students' work plans were "undecided" compared to "no", which allows for an opportunity to promote gerontological nursing at this time in a student's course of study. A stand-alone gerontology course that exposes the undergraduate nursing student to community-dwelling older adults may stimulate an interest in pursuing a nursing position focused on providing health care to our vulnerable, and rapidly growing, older adult population.

Limitations

There were several limitations in this study. Because this study was non-experimental, no causal relationships can be inferred. Furthermore, the small, relatively homogenous, sample of BSN students limits generalizability to other nursing programs. Although there were a small number of male students in the sample, female students had a slightly more positive attitude towards older adults. Although statistically significant, this difference may not be clinically meaningful. For the quantitative component, there were limitations to the survey instruments. First, the FAQ-2 results showed substantial variability in the percent correct for both groups. To address this, the instrument could be modified to include recent guidelines from the literature as well as pertinent items from the required curricula in the health sciences. We observed a lack of variability in scores on the GAS. This might be explained by our study sample, as we compared two groups of nursing students: we did not compare the gero group to *non-*nursing students. Previous reliability and validation studies compared groups similar to our designated groups (Koh et al., 2012; Reuben et al., 1998; Visvanathan, R., Silakong, T., & Yu, S., 2011). A true control group, such as non-nursing baccalaureate students that have the opportunity to work with older adults in their field may be a better comparison.

CONCLUSION

Well-designed patient experiences as part of an undergraduate gerontological nursing course have the potential to change student nurse attitudes toward older adults and to challenge widely held stereotypes that students hold. However, the overall low scores on the FAQ-2 generated questions about the instrument's ability to assess the impact of educational

interventions to improve student knowledge in particular, and thereby assess the impact of educational interventions to improve student knowledge. Nurse educators have an important role in promoting gerontological nursing interest through both gerontology-specific classes and experiences for those students who are not yet sure if they would like to work with the older adult population upon graduation. Additionally, faculty who teach didactic and clinical gerontological nursing have the unique opportunity to challenge poor attitudes and stereotypes held towards older adults, and should acknowledge their own preconceptions before imparting their expertise. Careful selection of clinical sites and structured patient experiences may help enhance interest and understanding of their own attitudes, societal attitudes, and stereotypes surrounding work with older adults.

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Table 1

Sample Characteristics (*N*=129)

Characteristic	Total (*N*=129) N	(%)	Gero (*n*=83) n	(%)	Comparison (*n*=46) n	(%)
Gender						
Male	12	(9.3)	8	(9.6)	4	(8.7)
Female	117	(90.7)	75	(90.4)	42	(91.3)
Student classification						
Traditional BSN	120	(93.0)	74	(89.2)	46	(100)
Second-degree BSN	9	(7.0)	9	(10.8)	0	(0)
Relationship with healthy older adult						
Yes	99	(76.7)	67	(80.7)	32	(69.6)
No	29	(22.5)	16	(19.3)	13	(28.3)
Relationship with unhealthy older adult						
Yes	86	(66.7)	53	(63.9)	33	(71.7)
No	40	(31.0)	28	(33.7)	12	(26.1)
Prior experience with older adults						
Yes	96	(74.4)	63	(75.9)	33	(71.7)
No	33	(25.6)	20	(24.1)	13	(28.3)
Plan to work with older adults						
Yes	24	(18.6)	22	(26.5)	2	(4.3)
No	58	(45.0)	34	(41.0)	24	(52.2)
Undecided	47	(36.4)	27	(32.5)	20	(43.5)
Clinical setting/specialty plans						
Geriatrics	2	(1.6)	1	(1.2)	1	(2.2)
CC/ER/OR/Trauma	27	(20.9)	20	(24.1)	7	(15.2)
Hospital medical/surgical	16	(12.4)	12	(14.5)	4	(8.7)
Obstetrics/gynecology	9	(7.0)	6	(7.2)	3	(6.5)
Other[a]	7	(5.4)	5	(6.0)	2	(4.3)
Pediatrics/neonates	44	(34.1)	20	(24.1)	24	(52.2)
Advanced practice nurse	12	(9.3)	10	(12.0)	2	(4.3)

Characteristic	Total (N=129)		Gero (n=83)		Comparison (n= 46)	
	N	(%)	n	(%)	n	(%)
Unknown	11	(8.5)	8	(9.6)	3	(6.5)

Table 2

Group Comparisons on Study Outcome Variables (N=129)

	FAQ-2			GAS			Work Plans	
	$M \pm (SD)$	t (127)	p	$M \pm (SD)$	t (127)	p	V	p
Group								
Gero	10.11 ± 2.08	3.02	<.01	3.70 ± .49	1.29	.20	.273	.01
Comparison	8.98 ± 1.94			3.59 ± .42				
Gender								
Male	9.25 ± 2.22	−0.79	.43	3.39 ± .56	−2.14	.03	.129	.34
Female	9.75 ± 2.09			3.69 ± .45				
Student classification								
Traditional BSN	9.80 ± 2.11	0.19	.06	3.65 ± .47	−1.28	.20	.129	.34
Second-degree	8.44 ± 1.42			3.86 ± .40				
Healthy older adult[a]								
Yes	9.68 ± 2.12	−0.34	.74	3.70 ± .47	1.64	.10	.198	.08
No	9.80 ± 2.04			3.54 ± .46				
Unhealthy older adult[b]								
Yes	9.40 ± 2.17	−2.34	.02	3.69 ± .46	1.01	.31	.098	.54
No	10.3 ± 1.82			3.61 ± .48				
Prior experience[c]								
Yes	9.77 ± 2.05	0.60	.55	3.74 ± .45	3.21	<.01	.252	.02
No	9.51 ± 2.24			3.45 ± .47				

Note. Abbreviations include: GAS (Geriatric Attitudes Scale), FAQ-2 (Facts on Aging Quiz-2), Work plans (Plans to work with older adults after graduation), Traditional BSN (Traditional baccalaureate nursing) student and V (Cramér's V).

[a]Lived with or close relationship with healthy older adult.

[b]Lived with or close relationship with unhealthy older adult.

[c]Prior work/volunteer experience with older adults.

Table 3

Mean Geriatric Attitudes Scale (GAS) Item Comparisons between Student Groups *(N = 129)*

GAS Item	Gero (*n*=83)		Comparison (*n*=46)		*t* (127)
	M	*(SD)*	*M*	*(SD)*	
Most old people are pleasant to be with.	4.12	(0.80)	3.57	(0.89)	3.63 **
The federal government should reallocate money from Medicare to research on cancer or pediatric diseases.	3.35	(0.99)	3.48	(0.81)	−0.75
If I have the choice, I would rather care for younger patients than elderly ones.	2.29	(1.05)	2.11	(1.04)	0.94
It is society's responsibility to provide care for its elderly persons.	3.77	(1.05)	4.02	(0.91)	−1.36
Medical care for old people uses up too much human and material resources.	3.78	(0.95)	3.74	(0.95)	0.24
As people grow older, they become less organized and more confused.	3.39	(0.97)	2.52	(0.94)	4.89 **
Elderly patients tend to be more appreciative of the nursing care I provide than are younger patients.	3.63	(1.06)	3.57	(1.13)	0.31
Taking a health history from elderly patients is frequently an ordeal.	3.28	(0.91)	2.93	(0.95)	2.02 *
I tend to pay more attention and have more sympathy towards my elderly patients than my younger patients.	2.28	(0.96)	2.76	(1.04)	0.39
Old people in general do not contribute much to society.	4.39	(0.84)	4.33	(0.79)	0.39
Treatment of chronically ill old patients is hopeless.	4.42	(0.84)	4.46	(0.69)	−0.24
Old persons don't contribute their fair share towards paying for their health care.	4.13	(0.87)	4.22	(0.81)	−0.54
In general, old people act too slow for modern society.	4.05	(1.02)	4.11	(1.02)	−0.32
It is interesting listening to old people's accounts of their past experiences.	4.43	(0.86)	4.50	(0.77)	−0.44

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*
p < .05,

**
p < .001.

Table 4

Emergent Themes

Student Reactions to the Interview	Positive Responses	Inspirational and meaningful	"I found this assignment to be very meaningful. I believe it allowed us to see through the eyes of an older adult and see our possible futures."
		Different than the clinical encounter	"I also found it refreshing to speak with a elderly person who is happy with their life and in very good health, rather than a patient in the hospital, with many clinical issues."
		Misconceptions were corrected	"I learned that the older adult is more active than I originally thought."
		Stereotypes were shattered	"It's sometimes hard to imagine 'old people' being 'functioning, normal people', but she was that and more"
	Identified Challenges	Talking about sensitive or private topics such as death, regret or loss	"I found it most difficult hearing her speak of her deceased husband, because it was heartbreaking to hear…"
		Dual role as conversational partner and evaluator	"It (administering assessments) changed the dynamic between us because I went from a friend she could talk with, to a health professional evaluating her"
		Drawing out information or keeping the interview on track	"The hardest part of the interview was cutting off the conversation. Mrs. S and I could have talked for hours…"
Student Perceptions of Older Adults	Strengths	Valuable	"I thought that Mrs. B's (and her husband's) commitment to bettering the lives of the women they provide resources for was an admirable trait…"
		Positive	"…he still has faith in making people happy and making someone else's day, even at his age."
		Resilient	"Her ability to regain her happiness and identity despite the loss of her husband was heartwarming"
		Family-oriented	"I admire Mr. P for his love and devotion to working hard for his money, and for his wife and his family."
		Faith-oriented	"Her commitment to her family and her faith were unique and inspiring."
	Vulnerabilities	Potential for depression and social isolation	"She may be at risk of depression in the future, but I feel she has the proper resources and support necessary…"
		Poor self-care	"Mrs. F is independent, well-groomed, and financially stable, but a depressed and malnourished individual…she is very unenthusiastic when it comes to herself and her care."
	Tensions	Independence vs. Safety	"I think he is doing so well because he has found a balance between accepting help from his wife and other family members while still maintaining his independence"