

Intent to work with older people after graduation: A descriptive survey among student nurses in the Western Cape Province, South Africa

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Background. Ensuring that adequate numbers of well-prepared nurses respond appropriately to the unique and often complex health needs of a growing number of older persons in South Africa, requires not only an investigation of the intent of nursing students to work with older people after graduation, but also of their knowledge about and attitudes towards older people.

Objectives. To describe undergraduate nursing students' knowledge of ageing, attitudes towards older people and their intention to work with older people after graduation.

Methods. A survey was conducted of undergraduate nursing students ($N=240$) from a university in the Western Cape Province, South Africa. Stratified random sampling by year level was used to select students, and a self-administered questionnaire was completed. The questionnaire included two validated scales, i.e. an adapted Facts on Aging Quiz from Breyspraak and Badura, and Kogan's Attitudes Toward Old People scale. In addition, specific questions about previous exposure and intent to work with older people upon graduation were included in the questionnaire. Descriptive data analysis was done using SPSS version 28. Data were analysed by seniority of students and compared for knowledge total scores, attitudes and intent to work.

Results. A response rate of 100% was achieved from 240 respondents \square most of them being female ($n=198$; 82.5%) and with an average age of 22.9 (standard deviation (SD) 5.4) years. The average knowledge score was 15.4/25 (61.6%), with no significant differences between junior and senior students. There were significant differences between males and females, with males having higher-rated positive appreciation attitudes towards older persons (49.0 (3.1) (95% confidence interval (CI) 44.9 - 53.1) v. 45.3 (9.2) (95% CI 44.0 - 46.6); $t=2.2$; $p=0.030$). A lower proportion of senior students than junior students indicated an intention to work with older people after graduation (40.9% v. 60.8%, respectively; $\chi^2=9.4$; $p=0.002$).

Conclusion. More research is needed to determine the factors that could possibly contribute to the increasing lack of interest and thus intent to work with older people among nursing students after graduation.

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Globally, countries are faced with a growing ageing population and a concomitant increase in the use of health services.^[1] In South Africa (SA), life expectancy has increased from 55.8 years in 2000 to 65.3 years in 2021, and the ageing index has increased from 29 in 2015 to 32 in 2020.^[1] It is predicted that the number of older people in SA will double by 2050, resulting in more older people utilising health services.^[1] In most of the health services that older people frequent, nurses are the main providers of healthcare and are expected to provide optimal and inclusive healthcare^[2] to ensure the physical and mental wellbeing of older people.^[3,4] There is therefore an increasing need for healthcare professionals who are adequately prepared to meet the diverse healthcare needs of older people, and qualified nurses who are willing to work with older people and pursue a career in geriatric care.^[5-7] Recent literature has highlighted a critical deficiency in the knowledge, skills and attitudes of healthcare professionals, including nurses, specifically pertaining to geriatric care,^[8] indicating limited geriatric content in the curriculum of undergraduate nursing students as a possible contributing factor.^[5,9]

Although undergraduate nursing students encounter older people during their clinical training, there is a growing body of evidence suggesting that many of them are reluctant to work with older people after graduation.^[10,11]

Choosing a career in geriatric nursing after graduation has been indicated as undesirable by many student nurses,^[12,13] seeing it as tedious work without challenges and without the opportunity to use advanced nursing skills.^[11,13] Negative attitudes may also stem from insufficient knowledge and practical skills to deal with the management and care of older people, which result in nurses avoiding working with the elderly or specialising in gerontology.^[14] Similarly, some studies have reported that students often associate ageing with frailty, ill health, physical inability and mental decline, leading to negative stereotyping of older persons.^[10,14]

As nurses' knowledge and attitudes can influence their preference for working with older people and the quality of care offered to them, the knowledge of undergraduate nursing students and their attitudes towards older people require deeper exploration. Nurses should be educationally prepared to attend to the complex and often chronic multisystem health needs of older people. This is especially the case in SA, where a primary healthcare approach towards service delivery has been implemented,^[15,16] and where statistics show a rise in life expectancy, as well as an increase in the number of older people.^[1] Yet, there still is a significant lack of gerontology content in the curricula of SA universities that offer education and training for undergraduate nursing students.^[15,16] The socioeconomic

realities of countries such as SA^[1] demand that a high level of primary healthcare content, especially communicable diseases, be included in the training of nurses, focusing less on geriatric-specific content.^[5]

It is therefore important for the stakeholders in nursing education to determine the knowledge, attitudes and perceptions of undergraduate nursing students towards older people. This understanding will help to ensure efficient planning and implementation of an inclusive nursing curriculum that is focused on improving the knowledge and interest of nursing students in the full continuum of care, including the practice of gerontology.^[16,17]

Methods

Design

A quantitative descriptive survey using a self-administered questionnaire was conducted.

Setting

The study was conducted at a university in the Western Cape Province, SA, where a highly diverse group in terms of age, culture and previous experiences are enrolled as undergraduate nursing students. The school offers a 4-year degree in nursing, leading to registration as a professional nurse and midwife/accoucheur with the SA Nursing Council. The programme includes both a theoretical and a clinical component comprising practical skills development in a dedicated skills laboratory, as well as placement in accredited health facilities where students are exposed to work-integrated learning. A lifespan approach is followed, with geriatric content imbedded across the years as part of Fundamentals of Nursing in their first year, Communicable and Non-communicable Diseases in their second year, Community Nursing Science in their third year and Psychiatric Nursing in their fourth year. Nursing students are not placed at dedicated geriatric facilities, but encounter older people in hospital during their first and second years of study, during clinical placements in primary healthcare facilities in their third year and in psychiatric facilities during their fourth year.

Population and sampling

The study population comprised 1 036 students enrolled as undergraduate nursing students at the time of the study. The sample size was calculated using the formula: $ss = z^2 \times (p) \times (1 \div p) / c^2$, with the following parameters: ss = sample size for infinite population ($N=1\ 036$); z = z -value (1.96 for 95% confidence level); p = population proportion (0.5); c = confidence interval (CI) with an estimated error of 0.05, resulting in a sample size of 240. The sample of $N=240$ was distributed over the strata (year levels). A random sampling method was used to select the respondents from each stratum (Table 1).

Instrument

A self-administered questionnaire with 67 questions was used to collect the data. The questionnaire included two scales, i.e. an adapted Facts on Aging Quiz (FAQ) from Breytspraak and Badura,^[18] and Kogan's Attitudes Toward Old People (KAOP) scale.^[19] Both these scales have well-established validity and reliability,^[4,10,20] and had adequate internal consistency in this study (FAQ: $\alpha = 0.578$; and KAOP: $\alpha=0.652$ and $\alpha=0.658$ for positive and negative attitudes, respectively). The adapted FAQ had 25 true/false questions testing knowledge about the ageing process.^[18] The original questionnaire included 50 questions, but permission was obtained from the authors to exclude some of the questions, as they were not applicable to

the SA context. The 25 questions used in the questionnaire included basic physical, mental and social facts about ageing, as well as some common misconceptions. A higher score indicated greater knowledge. The KAOP scale^[19] has 34 closed-ended questions, measured on a 5-point Likert scale. Half of the items measured positive attitudes (appreciation) and the other half measured negative attitudes (prejudices). A higher score represented a higher number of positive attitudes. Although the wording of some items of the KAOP is currently being criticised,^[21] it has been used in a recent study in Cameroon, where the calculated Cronbach α was 0.66 for the English scale.^[22] The KAOP scale has also been used in Ghana.^[23] The intention to work with older people after graduation was included, as well as the presence of older people in the family and previous experiences on working with older people. The instrument was pre-tested to ensure that the questions were readable, clear and unambiguous.

Data collection and data analysis

Ethical approval was received from the Humanities and Social Science Research Ethics Committee of the University of the Western Cape (ref. no. HS17/1/39) and data collection was done by administering the questionnaires through an appointment system. Data analysis was conducted using SPSS version 28 (IBM Corp., USA). Based on the anticipated exposure to older people in clinical placements and theory content in the curriculum, it was hypothesised that there would be a difference between students in the beginning and towards the end of their training. Students were therefore grouped into junior students (first and second year) and senior students (third and fourth year). A summary knowledge score was calculated, as well as an average negative and positive attitude score (95% CIs). Comparison was done using the independent-samples Mann-Whitney U -test, χ^2 -test and t -test. Logistic regression analysis was conducted to test which factors predicted intention to work with older people. Significance was seen as $p < 0.05$.

Results

Demographics

A total of 240 questionnaires (100% response rate) were completed. Most of the respondents were female ($n=198$; 82.5%), with an average age of 22.9 (standard deviation (SD) 5.4) years and significant differences in the age of junior students compared with senior students ($U=8.7$; $p < 0.001$). There were no significant differences between junior and senior students in terms of gender (Table 2).

Table 1. Sample size and population

Students	Population, <i>n</i>	Sample, <i>n</i>
Stratum		
First-year undergraduate nursing students	345	84
Second-year undergraduate nursing students	236	46
Junior students (subtotal)	581	130
Third-year undergraduate nursing students	257	62
Fourth-year undergraduate nursing students	198	48
Senior students (subtotal)	455	110
Total	1 036	240

Knowledge about the ageing process

Knowledge was measured using 25 questions from the FAQ, with a total score of 25. The FAQ total average score was 15.4 (2.6) (61.1%) out of a possible score of 25 (95% CI 15.07 - 15.75). As hypothesised, the average knowledge score was higher for senior students (years 3 and 4) than for junior students (years 1 and 2), respectively (15.87 (2.6) (95% CI 15.38 - 16.36) v. 15.02 (2.7) (95% CI 14.55 - 15.48)), although this difference was not significant (Fig. 1).

Further descriptive analysis of the FAQ between junior and senior students showed the highest level of knowledge for both groups related to statements about physiological changes that come with older age, followed by statements regarding the social position of older people (Table 3). The lowest percentage of correct answers was related to common misconceptions about ageing. The lowest scores (<40% of students answered correctly) were driven by four of the items in the FAQ scale, i.e. personality changes with age (35.8%); the majority of old people have no interest in or capacity for sexual relations (30.8%); it is very difficult for an older adult to learn new things (20.4%); and older

people do not adapt as well as the younger age group when they relocate to a new environment (15%). However, comparing the junior and senior students, no significant differences were noted for these items. Significantly more senior students scored correctly for two items on the FAQ scale, i.e. most older people live in nursing homes (66.4% v. 51.4%; $\chi^2=5.4$; $p=0.020$) and the majority of old people (≥ 65 years of age) have Alzheimer's disease (50.9% v. 37.7%; $\chi^2=4.2$; $p=0.040$). Both these questions dealt with common misconceptions (Table 3).

Attitudes towards older people

Attitudes towards older people were measured with the KAOP scale, which included both positive attitudes (appreciation) and negative attitudes (prejudice). The total score of appreciation among respondents was 46.0 (10.1) out of a possible 85 (95% CI 44.6 - 47.2). There were significant differences between male and female respondents, with male respondents having higher appreciation scores than females (49.0 (3.1) (95% CI 44.9 - 53.1) v. 45.3 (9.2) (95% CI 44.0 - 46.6); $t=2.2$; $p=0.030$). The average score for prejudice among respondents

was 51.7 (10.2) out of a possible 75 (95% CI 50.4 - 53.0). There were again significant differences between males and females, with males having lower prejudice scores than females (51.0 (10.2) (95% CI 51.8 - 57.8) v. 54.8 (9.5) (95% CI 49.6 - 52.5); $t=4.9$; $p=0.029$), although this was not hypothesised. Comparing the average scores for positive and negative attitudes between junior and senior students showed no significant difference (2.79 v. 2.80) (Fig. 2).

Prior exposure to older people

Prior exposure to older people was determined through previous experience in working with such people and the presence of older people in the family. About two-thirds of the students ($n=158$; 65.8%) reported having previously worked with older people, even though this did not significantly differ between junior and senior students ($\chi^2=0.2$; $p=0.665$). A total of 209 students (87.1%) reported a high presence of older people in the family, again with no significant differences between junior and senior students (Table 4).

Intent to work with older people after graduation

Only 51.7% of respondents indicated an intention to work with older people after graduation, with junior students reporting a significantly higher intent to work with them than senior students (60.8% v. 40.9%, respectively; $\chi^2=9.4$; $p=0.002$) (Table 4). Although a lower proportion of males ($n=17$; 40.5%) than females ($n=99$; 50.0%) indicated an intent to work with older people after graduation, this was not significant ($\chi^2=1.3$; $p=0.262$). Similarly, previous experience of working with older people had no influence on intent ($\chi^2=0.8$; $p=0.359$) nor did having an old family member ($\chi^2=1.4$; $p=0.245$) (Table 4).

Direct logistic regression was performed to assess the impact of several factors on the intent to work with older people. The model contained seven independent variables (gender,

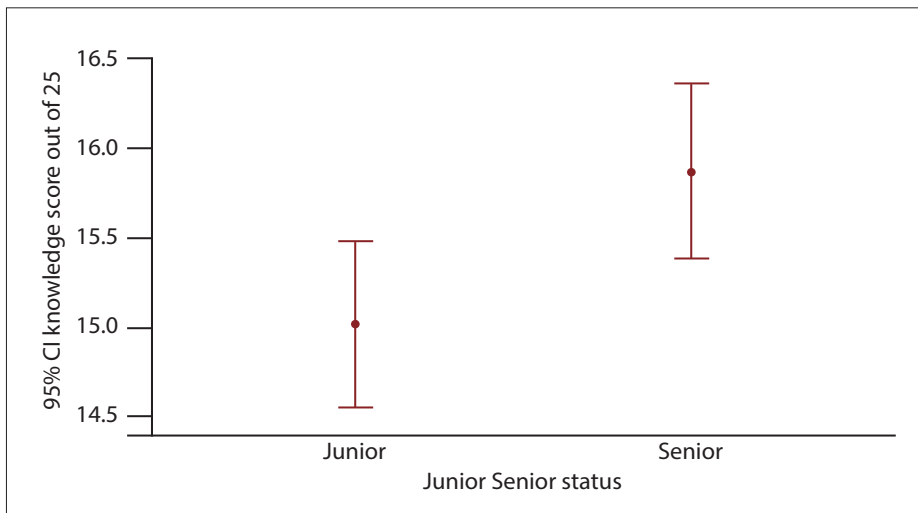


Fig. 1. Knowledge score distribution between junior and senior students. (CI = confidence interval.)

Table 2. Demographic profile of respondents

Demographics	Total, N=240	Junior, n=130	Senior, n=110	Test	p-value
Gender, n (%)					
Male	42 (17.5)	19 (14.6)	23 (20.9)	1.6*	0.268
Female	198 (82.5)	111 (85.4)	87 (79.1)		
Age (years), mean (SD)	22.9 (5.4)	21.1 (4.0)	25.0 (6.0)	8.7†	<0.001

SD = standard deviation.

* χ^2 .

†Independent-samples Mann-Whitney U-test.

Table 3. Descriptive analysis of FAQ between junior and senior students

Questions	Junior (n=130), n (%)	Senior (n=110), n (%)	Total (N=240), n (%)	χ^2	p-value
The five senses all tend to weaken in old age	126 (96.9)	106 (96.4)	232 (96.7)	0.1	0.810
Physical strength tends to decline in old age	116 (89.2)	101 (91.8)	217 (90.4)	0.5	0.497
Older people take longer to recover from physical and psychological stress	122 (93.8)	95 (86.4)	217 (90)	3.9	0.050
The bladder capacity decreases with age, which leads to frequent urination	113 (86.9)	101 (91.8)	214 (89.2)	1.5	0.224
Memory loss is a normal part of ageing	113 (86.9)	98 (89.1)	211 (87.9)	0.3	0.608
Older adults are less anxious about death than younger and middle-aged adults	102 (78.5)	88 (80.0)	190 (79.2)	0.1	0.770
As people live longer, they face fewer acute conditions and more chronic health conditions	103 (79.2)	84 (76.45)	187 (77.9)	0.3	0.594
Old people tend to become more spiritual as they age	99 (76.2)	84 (76.4)	183 (76.3)	0.001	0.970
Older workers cannot work as effectively as younger workers*	98 (75.4)	81 (73.6)	179 (74.6)	0.1	0.757
A person's height tends to decline in old age	91 (70.0)	79 (71.8)	170 (70.8)	0.1	0.757
Older females exhibit better healthcare practices than older males	77 (59.2)	77 (70.0)	154 (64.2)	3	0.083
Older people have more trouble sleeping than younger adults	80 (61.5)	69 (62.7)	149 (62.1)	0.04	0.850
Retirement is often detrimental to health*	83 (63.8)	62 (56.4)	145 (60.4)	1.4	0.238
Older drivers are quite capable of safely operating a motor	75 (57.7)	69 (62.7)	144 (60.0)	0.6	0.428
Most older people live in nursing homes*	67 (51.5)	73 (66.4)	140 (58.3)	5.4	0.020
Grandparents today take less responsibility raising grandchildren than ever before*	73 (56.2)	66 (60.0)	139 (57.9)	0.4	0.548
Participation in volunteering through organisations tends to decline among older adults*	60 (46.2)	64 (58.2)	124 (51.7)	3.5	0.063
As people grow older their intelligence declines*	64 (49.2)	57 (51.8)	121 (50.4)	0.2	0.690
The majority of old people are bored*	56 (43.1)	61 (55.5)	117 (48.8)	3.7	0.056
The modern family no longer takes care of its older people*	64 (49.2)	49 (44.5)	113 (47.1)	0.5	0.469
The majority of old people (>65 years) have Alzheimer's disease*	49 (37.7)	56 (50.9)	105 (43.8)	4.2	0.040
Personality changes with age*	43 (33.1)	43 (39.1)	86 (35.8)	0.9	0.333
The majority of old people have no interest in nor capacity for sexual relations*	37 (28.5)	37 (33.6)	74 (30.8)	0.7	0.387
It is very difficult for an older adult to learn new things*	22 (16.9)	27 (24.5)	49 (20.4)	2.1	0.144
Older people do not adapt as well as younger people when they relocate to a new environment*	17 (13.1)	19 (17.3)	36 (15.0)	0.8	0.364

FAQ = Facts on Aging Quiz.

*False.

junior/senior status, previous work with older people, presence of older people in the family, knowledge, positive and negative attitudes). The full model containing all predictors was statistically significant, i.e. $\chi^2(6; n=237)=14.9$; $p=0.038$, indicating that the model was able to distinguish between respondents who intended to work/not work with older people. The model correctly classified 62% of cases. Only one of the independent variables made a unique statistically significant contribution to the model (junior/senior status; $p=0.003$), recording an odds ratio of 0.44 (95% CI 0.25 - 0.75). The odds ratio of 0.44 for junior/senior status was <1 , indicating that senior students were 0.44 times less likely to indicate an intention to work with older people than junior students, controlling for other factors in the model.

Discussion

The study investigated the knowledge, attitudes and exposure of undergraduate nursing students to older people with the aim of assessing their

intent to work with such people after graduation. In this study, two-thirds of the respondents had previous experience of working with older people, with an expected higher proportion of senior students, and ~90% of students indicated that they have older people in the family. In this study, the presence of older people at home is much higher than in other studies, e.g. in the USA, about one-quarter of nursing students reported that they lived with older people at home.^[24]

Even though the respondents had a high exposure to older people, they demonstrated only an average level of knowledge about the ageing process. This finding correlates with findings in other studies that reported average knowledge on ageing among undergraduate nursing students.^[5,8,14] As expected, a higher average score was noted for senior students, although this was not significant, except for questions about common misconceptions regarding older people. During their third and fourth years, students' clinical placements include community-dwelling older

people, which may explain the higher knowledge scores of senior students, especially those dealing with common misconceptions. This observation was also supported by a study that found significantly higher knowledge on ageing scores among students with more work experience.^[23]

Generally, studies report that greater knowledge of the ageing process is more likely to be associated with a positive attitude towards older people.^[4,14,20] In our study, higher negative attitudes (prejudice) compared well with positive attitudes (appreciation) towards older people, although male respondents had significantly higher appreciation and lower prejudices than female respondents. These findings were similar to those of a study of nurses in Iran, where more than half of the nurse respondents had a negative attitude towards older people, but where higher positive values among males were recorded.^[25] In a recent study in Spain, the opposite was found, with most undergraduate nursing students having a positive attitude towards older people, but with male respondents having a more negative attitude.^[26] Further investigation into the possible reasons for student nurses' negative attitudes towards older people within the SA context is needed to clearly understand the contributing factors, as it could have a direct influence on their intent to work with older people after graduation.

Overall, only half of the respondents indicated an intent to work with older people on graduation, with significantly more junior students than senior students indicating this intent. This finding is supported by literature indicating that working with older people is not considered a favourable option by many professional nurses after completing their training.^[5,9,13] Although senior students had a higher level of exposure to older people and a higher level of knowledge of the ageing process, it did not translate to intent in this study. This finding confirmed a similar finding in a cohort of nursing students in Canada, with students in their earlier years reporting a higher intent to work with older people.^[20] These findings could

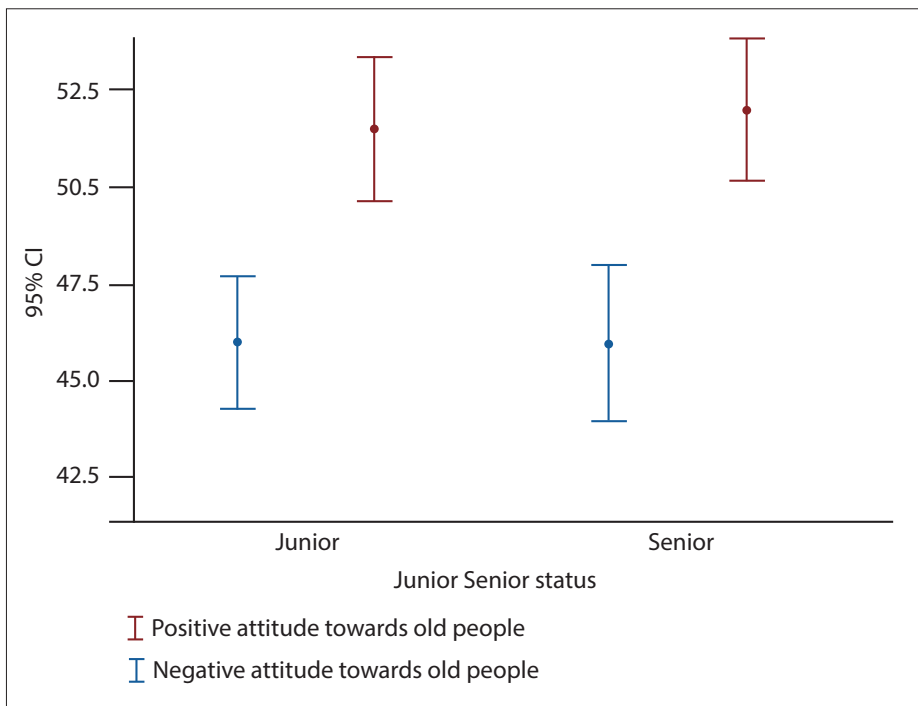


Fig. 2. Attitude score distribution between junior and senior students. (CI = confidence interval.)

Table 4. Prior exposure and intent to work with older people

Criteria	Total (N=240), n (%)	Junior (n=130), n (%)	Senior (n=110), n (%)	χ^2	p-value
Previous experience working with older people	158 (65.8)	84 (64.6)	74 (67.3)	0.2	0.665
Presence of older people in the family	209 (87.1)	116 (89.2)	93 (84.5)	1.2	0.281
Intent to work with older people after graduation	124 (51.7)	79 (60.8)	45 (40.9)	9.4	0.002

possibly be explained by the clinical placement during their senior years in the nursing specialties of midwifery and psychiatry, which could be perceived as more favourable areas to work in after graduation.

Study limitations

The study had a few limitations. Firstly, some of the questions in the FAQ were excluded, as they were not applicable to the SA context, which could have had an effect on the internal consistency of the instrument. The attitudes of students might have been influenced by other factors such as the recency of their current clinical placements.

Conclusion

This study confirmed the results of several previously published studies that showed a low intent to work with older people, only average levels of knowledge of the ageing process and more negative than positive attitudes towards older people. Although high levels of exposure to older people were reported, the key finding was that intent decrease during training should be investigated further, along with the possibility to include more geriatric-specific content in the curriculum of undergraduate nursing students to adequately prepare them to provide holistic care to an increasing ageing population in SA.

Data availability. Available on request from the corresponding author.

Declaration. None.

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