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Research Article

Knowledge and Attitudes of Nursing and Medical Students of A Nigerian University towards the Care of Older Persons

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ABSTRACT

There is a growing number of older persons globally. Geriatric Care is however evolving in Africa. This study was conducted to assess the knowledge and the attitude of nursing and medical students of the University of Ibadan, Nigeria towards the care of older persons. A descriptive cross-sectional study using self-administered questionnaires among 311 students comprising 258 (83%) medical students and 53 (17%) nursing students to assess their knowledge, attitude and older person's care experience. Data were analysed using the Statistical Package for Social Sciences version 27 (SPSS-27) software. Data were summarized using frequency and percentages and presented in tables and figures. Chi-Square was used for the test of association between knowledge and attitude scores and socio-demography. The level of significance was set at 5%. The mean ages of respondents were 23.48 ± 2.367 and 21.26 ± 1.571 for medical students and nursing students, respectively. Majority of the respondents, 244 (94.6%) and 36 (67.9%) were older than 20 years old. Majority of Nursing 48 (90.6%) and Medical Students 201 (77.9%) had poor knowledge of caring for older persons. However, more than two thirds 34 (64.2%) and 173 (67.1%) of the medical and nursing students respectively, had a good attitude towards the care of older persons. More female medical 32 (26.2%), and nursing students 5 (10.4%) had good knowledge compared to their male colleagues (25, 18.4%), (0, 0.0%). ($p = 1.000$). Majority of medical and nursing students at the University of Ibadan, Nigeria have limited knowledge but a good attitude towards the care of older people. Hence, there is a need to include geriatrics-specific courses into their training curriculum.

Keywords: *Knowledge, Attitude, Students, Care of older persons, Nigeria*

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INTRODUCTION

The world population is ageing, and persons aged 60 years and older are projected to be 2 billion and more by 2050, and 80% of this population will live in low-and middle-income countries (Ageing 2018). Life expectancy at age 65 is projected to increase in all regions. Nigeria ranks 24th globally among countries with the highest proportion of older persons (United Nations 2019). The country's population aged 60 years and older is expected to increase to 26 million from 9 million reported in 2016 (National Bureau of Statistics 2018). This changing population demographics in Nigeria is accompanied by an attendant increase in the burden of chronic diseases including disability, impairments, and a more

complex patient base (Akinoyemi *et al* 2019, Adebuseye *et al* 2015). The implication is that there is a growing need for health professionals who are knowledgeable and committed to working with older adults in diverse settings (Heydari *et al* 2019). The concept of attitude is a manner of behaviour that shows the disposition, of an individual to a particular subject and can be physically or verbally expressed positively or negatively and can lead to behavioural action (Ratanasiripong *et al* 2013). Various factors account for poor attitude in the care of older persons including poor staffing, difficulty in caring for the elderly, and behavioural changes in the older person (Oyetunde *et al* 2013).

Though family-centred care values are rapidly eroded (Tanyi *et al* 2018), studies have suggested longer life

expectancy with more people living longer with multi-morbidities and disabilities (Igenbergs *et al* 2013, Dotchin *et al* 2013). Older patients require holistic care and achieving this can be hindered by various factors including negative attitudes toward elder care, lack of knowledge and skills, poor resources, and poor environmental care (Heydari *et al* 2019). There is a dearth of knowledge about the physical and social aspects of ageing among primary care providers globally (Alamri and Xiao 2017, Abdi *et al* 2019). This has led to poor communication by health professionals which has left patients with an unmet expectation in their desire to cope with their illness (Abdi *et al* 2019). Hence, healthcare professionals need to be trained in the care of older persons (Abdi *et al* 2019, Heydari *et al* 2019).

Africa is yet to meet the recommended World Health Organization (WHO) requirement of medical personnel to cater efficiently for its large population (WHO 2016). This dearth is evidenced by the limited trained health care professionals (trained geriatricians and specialists' nurses) available in the care of older persons largely because of insufficient interest in geriatrics (Dotchin *et al* 2013). Out of 43 African countries surveyed, 25 countries had no geriatricians. While 35 out of 40 African countries had no formal undergraduate training for medical students in geriatrics and 33 out of 40 African countries reported no national postgraduate training scheme in geriatrics (Dotchin *et al* 2013). Hence, the gap in the knowledge of healthcare professionals on geriatric issues has been linked to unstructured training in geriatrics (Gishu *et al* 2019, Eltantawy 2013, Kabatova *et al* 2016, Igenbergs 2013). However, Faronbi *et al* observed amongst nursing students in Ile Ife, Nigeria a positive perception and attitude towards the care of the older adults and also good knowledge of essential clinical practice issues on ageing (Faronbi *et al* 2017). Similarly, Oyetunde *et al* reported a fairly good knowledge of the ageing process among nurses in two selected hospitals in Ibadan, Nigeria, although, respondents reported that caring for the elderly was time-consuming, difficult and demanding (Oyetunde *et al* 2013). This study, therefore, aimed to assess the knowledge and attitudes of Nursing and Medical students of the University of Ibadan, Nigeria in their clinical training years towards the care of older persons to inform policies on the geriatric curriculum of nursing and medical students and mitigate barriers affecting their interest in geriatrics care.

MATERIALS AND METHODS

Study site: The study was carried out in the College of Medicine, University of Ibadan. The University of Ibadan is the premier University established in 1948 and located in the city of Ibadan, South-Western Nigeria. The University has eleven faculties with 33 departments and a student population of about 33,000 students (undergraduate and post-graduate students inclusive). The College of Medicine is made up of the Faculties of the Basic Medical Sciences, Clinical Sciences, Dentistry and Public Health (College of Medicine 2021). Medical students are trained within the Faculty of Clinical Sciences for the last three years of the six-year Bachelor of Medicine and Bachelor of Surgery programme. Similarly, the

nursing students are schooled within the Faculty of Clinical Sciences for their clinical preceptorship.

Study population: The study population consisted of all consenting 121 Nursing students in the clinical years of training (3rd year = 41 students, 4th year = 37 students, and 5th year = 43 students) and 532 Medical students in the clinical years of training (4th year = 206 students, 5th year = 170 students and 6th year = 156 students) of the University of Ibadan at the time of data collection.

Study design: A descriptive cross-sectional study design was employed.

Sample size estimation: The required sample size was calculated using Leslie and Kish's ($N = Z^2pq/d^2$) statistical formula for estimating the minimum sample size in descriptive health studies at a 95% confidence interval and 5% margin of error while considering a 20% non-response rate (Ajay & Micah 2014). An estimated proportion of 50% was used. Based on these assumptions, three hundred and eleven students comprising; 258 medical students and 53 nursing students were recruited for the study.

Inclusion and Exclusion Criteria: Consenting male and female students in the second and third year of the Department of Nursing, and fourth, fifth, and sixth-year medical students of the College of Medicine, the University of Ibadan who was available during the period of data collection were recruited. Only students on clinical clerkship were included.

Sampling technique: Each group of selected clinical students from the different levels of training were identified and consecutively approached after classes with a total sampling of all consented students done. Verbal informed consents were obtained after explaining the study's purpose to the students and assured of their confidentiality. The questionnaires were administered until the minimum calculated sample size was attained.

Data collection instrument: The questionnaire for the study was designed and developed by the investigators following an extensive review of relevant literature (Gishu *et al* 2019, Momtaz 2019, Kabatova *et al* 2016, Eltantawy 2013, Igenbergs 2013) and previous practice experience. Face-validation of the questionnaire was done by two experts (a geriatrician and a gerontologist) and it was pre-tested amongst students from the Department of Pharmacy. The semi-structured questionnaire was conducted in the English language and comprised of three sections; A, B, and C:

Section A: Obtained information on socio-demographics including the age, sex, year of study, number of siblings, religion, marital status, and ethnic group. Other information included whether living/have lived with an older person(s), whether he/she is/ had been taken care of by their grandparents, and whether he/ she has had an older person's care experience.

Section B: The knowledge of the participants was tested using the Facts on Aging Quiz consisting of 50 true or false questions which were adapted to measure knowledge related to basic physical, psychological, and social facts on ageing (Breyspraak 2015). For the knowledge questions, a correct answer was assigned “one” and the incorrect answer was given “zero” Of the 50-knowledge questions, a score of at least thirty out of the fifty maximum obtainable score, (i.e. $\geq 60\%$) was categorised as “good” knowledge, while score less than thirty out of the fifty maximum obtainable score (i.e. $< 60\%$) was categorised as “poor” knowledge.

Section C: The Kogan’s Attitudes towards Old People Scale (KAOP) questionnaire was used to assess the attitude of the participants. It consists of 34 statements, 17 of which are positive and the further 17 are negative. Each statement is described on a 6-point Likert’s scale; 1 = Strongly disagree; 2 = disagree; 3 = slightly disagree; 4 = slightly agree; 5= Agree and 6 = strongly agree. The internal consistency of the KAOP using Cronbach alpha was 0.751 (Doherty *et al* 2011).

The negative statements were reverse-scored so that higher scores were attributed to more positive attitudes. The minimum score possible was 34, and the maximum score possible was 204 (Doherty *et al* 2011). The following point division was adopted: Negative attitude; 34 to 118 points; positive attitude; low level, 119 to 146 points, medium level; 147 to 174 points, and high level; 175 to 204 points. A total score of 34 to 118 points was categorised as “Negative Attitude”. While scores of 119 to 204 points (low, medium and high levels) were categorised as “Positive Attitude”.

Data analysis: The data collected was analysed using the Statistical Package for Social Sciences version 27 (SPSS-27) software. Descriptive statistics such as proportions, mean, and standard deviation was used to summarize the data. The data was presented in tables, graphs, and figures as below. The Chi-square test was used to evaluate the association between demographic characteristics and the overall knowledge and attitude scores. The level of significance was set at 5%.

Ethical consideration: Ethical approval was obtained from the University of Ibadan/UCH Institutional Ethical Review Board (UI/EC/21/0232). Also, Informed consent was obtained from each respondent before the administration of the questionnaire.

RESULTS

Three hundred and eleven respondents comprising 258 (83%) medical students and 53 (17%) nursing students participated in the study. The mean ages of respondents were 23.48 ± 2.367 and 21.26 ± 1.571 for medical students and nursing students, respectively. Majority of the respondents, 244 (94.6%) and 36 (67.9%) were older than 20 years old.

Knowledge and Attitude towards Care of Older Persons: Figure 1 shows that the majority of 48 (90.6%) and 201 (77.9%) Nursing and Medical Students respectively had poor knowledge of caring for older persons. However, two-thirds, 34 (64.2%) and 173 (67.1%) Nursing and Medical Students

respectively, had a good attitude regarding the care of the older persons (Figure 2).

Knowledge of Respondents to the care of older persons: The associations between the socio-demographic variables of the respondents and their knowledge of geriatric care are summarised in Tables 2 and 3. More female medical students 32 (26.2%), had good knowledge of geriatric care compared to their male colleagues (25, 18.4%), ($p=0.129$). Similarly, 5 (10.4%) of the female nursing students had good knowledge as opposed to none of the male nursing students (0, 0.0%). About a quarter of the medical students 55 (22.5%) aged greater than 20 years had good knowledge compared to (2, 14.3%) aged 20 years and below ($p= 0.741$). Majority (59; 84.1%) of the Medical Students in Year Four had poor knowledge of caring for older people compared to those in Year Five and Six respectively (49; 73.1%), (94, 77.0%). However, the differences were not statistically significant ($p= 0.293$).

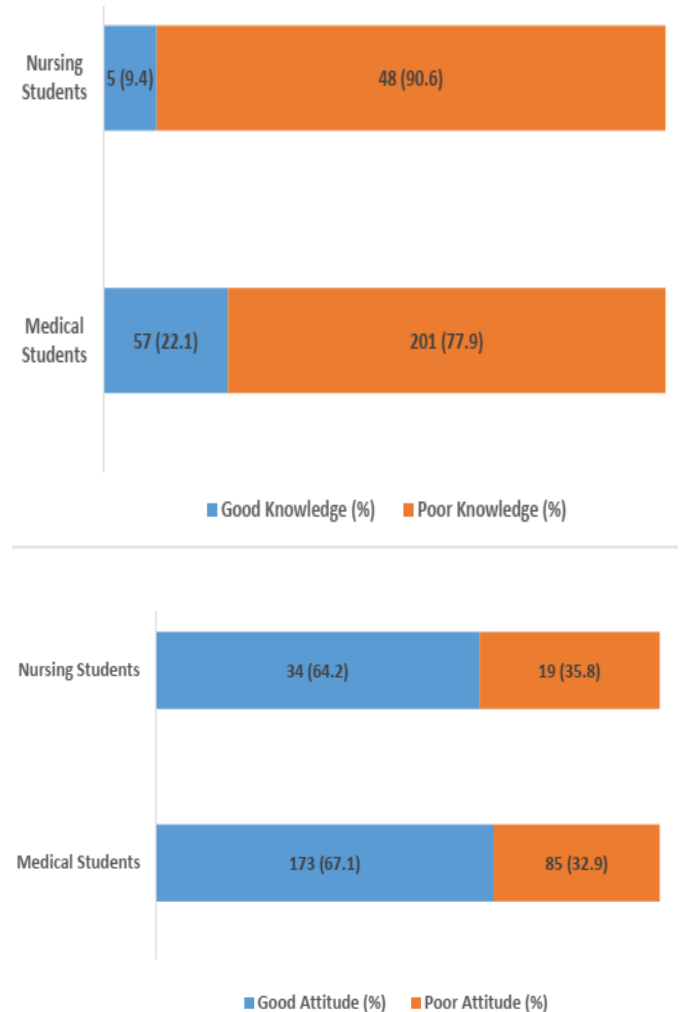


Figure 1
Knowledge of caring for older persons

Attitudes of Respondents towards the care of older persons: Majority of the male medical students 96 (70.6%) expressed a good attitude towards care of the older persons as well as their female counterparts 77 (63.1%) ($p=0.202$).

Similarly, two-thirds of the male 3 (60.0%) and female nursing students, 31 (64.6%) expressed a good attitude. Majority of the medical and nursing students 164 (67.2%), and 21 (58.3%) respectively, older than 20 years expressed good attitudes.

Overall, 173 (67.1%) medical students had good attitudes toward caring for the elderly comprising 84 (68.9%) Year Six, 42 (62.7) Year Five and 47 (68.1%) Year Four students respectively (p=0.673). Two-thirds of the Year Two (15, 65.2%) and Year Three (19, 63.3%) nursing students also had a good attitude towards the care of the older persons.

Respondents' Experience in living with and caring for older people: One hundred and ten medical students (42.6%) reported they lived with an older person while growing up and 24 (45.3%) of the nursing students had some experience in caring for the elderly. More proportion of medical students 139 (53.9%) than nursing students 25 (47.2) were involved in caring for the older persons during their clinical training (Table 1).

Table 2 shows that a slightly higher proportion of medical students 25 (22.7%) who lived with an older person while growing up had good knowledge of geriatric care compared to those who did not 32 (21.6) (p=0.832). Whilst, majority of nursing students (19, 90.5%), (29, 90.6%) exhibited poor knowledge regardless of if they lived with an older individual while growing up or not. However, this was not statistically significant (p= 1.000).

Majority, 75 (68.8%) of medical students who lived with an elderly person while growing up expressed good attitudes. Also, two thirds 14 (66.7%) of nursing students who grew up with an older person exhibited a good attitude (Table 3). A higher proportion of the medical (68, 65.4%) and nursing students (17, 70.8%) respectively who had experience in caring for the elderly, expressed a good attitude. Similarly, more than half of 92 (66.2%), and 16 (64.0%) medical and

nursing students respectively involved in caring for older people during their clinical training exhibited good attitudes (Table 2). However, the p-value was not statically significant.

Table 1: Socio-demographic characteristics of selected clinical medicine and nursing students of the University of Ibadan

Variables	Medicine n (%) N=258	Nursing n (%) N=53	
Age-group (years)	≤20	14 (5.4)	17 (32.1)
	>20	244 (94.6)	36 (67.9)
	Mean ± SD (Range)	23.48±2.367 (19-30)	21.26±1.571 (19-25)
Level of study	200	-	23 (43.4)
	300	-	30 (56.6)
	400	69 (26.7)	-
	500	67 (26.0)	-
	600	122 (47.3)	-
Marital Status	Single	248 (96.1)	49 (92.5)
	Married	10 (3.9)	3 (5.6)
	Separated	-	1 (1.9)
Monthly income (Naira)	10,000	37 (14.8)	17 (32.1)
	10,000-20,000	62 (24.8)	29 (54.7)
	20,000-30,000	61 (24.4)	3 (5.7)
	30,000-40,000	43 (17.2)	1 (1.9)
	>40,000	47 (18.8)	3 (5.7)
Living with an older person while growing up	Yes	110 (42.6)	21 (39.6)
	No	148 (57.4)	32 (60.4)
Experienced in caring for older person	Yes	104 (40.3)	24 (45.3)
	No	154 (59.7)	29 (54.7)
Been Involved in caring for older person in clinical training	Yes	139 (53.9)	25 (47.2)
	No	119 (46.1)	28 (52.8)

Table 2: Socio-demographic characteristics and Knowledge and Attitude of medical students towards the care of older persons

Variables	Knowledge				Attitude				
	Good (%)	Poor (%)	χ ²	p-value	Good (%)	Poor (%)	χ ²	p-value	
Gender	Male	25 (18.4)	111 (81.6)	2.301	0.129	96 (70.6)	40 (29.4)	1.626	0.202
	Female	32 (26.2)	90 (73.8)			77 (63.1)	45 (36.9)		
Age-group (years)	≤20	2 (14.3)	12 (85.7)	0.524	0.741	9 (64.3)	5 (35.7)	0.051	0.821
	>20	55 (22.5)	189 (77.5)			164 (67.2)	80 (32.8)		
Income (Naira)	<30,000	35 (21.9)	125 (78.1)	0.121	0.725	101 (63.1)	59 (36.9)	2.137	0.144
	≥30,000	18 (20.0)	72 (80.0)			65 (72.2)	25 (27.8)		
Level of education	400	11 (15.9)	59 (84.1)	2.456	0.293	47 (68.1)	22 (31.9)	0.792	0.673
	500	18 (26.9)	49 (73.1)			42 (62.7)	25 (37.3)		
	600	28 (23.0)	94 (77.0)			84 (68.9)	38 (31.1)		
Living with an older person while growing up	Yes	25 (22.7)	85 (77.3)	0.045	0.832	75 (68.2)	35 (31.8)	0.110	0.740
	No	32 (21.6)	116 (78.4)			98 (66.2)	50 (33.8)		
Experienced in caring for older person	Yes	23 (22.1)	81 (77.9)	0.001	0.994	68 (65.4)	36 (34.6)	0.220	0.639
	No	34 (22.1)	120 (77.9)			105 (68.2)	85 (31.8)		
Been Involved in caring for an older person in clinical training	Yes	32 (23.0)	107 (77.0)	0.151	0.698	92 (66.2)	47 (33.8)	0.103	0.749
	No	25 (21.0)	94 (79.0)			81 (68.1)	38 (31.9)		

Table 3:
Socio-demographic characteristics and Knowledge and Attitude of nursing students towards the care of older persons

	Variables	Knowledge				Attitude			
		Good (%)	Poor (%)	χ^2	p-value	Good (%)	Poor (%)	χ^2	p-value
Gender	Male	0 (0.0)	5 (100.0)	0.575	1.000 ^f	3 (60.0)	2 (40.0)	0.041	1.000 ^f
	Female	5 (10.4)	43 (89.6)			31 (64.6)	17 (35.4)		
Age-group (years)	≤20	3 (17.6)	14 (82.4)	1.976	0.313 ^f	13 (76.5)	4 (23.5)	1.652	0.235 ^f
	>20	2 (5.6)	34 (94.4)			21 (58.3)	15 (41.7)		
Income (Naira)	<30,000	4 (8.2)	45 (91.8)	1.227	0.336 ^f	32 (65.3)	17 (34.7)	0.377	0.164 ^f
	≥30,000	1 (25.0)	3 (75.0)			2 (50.0)	2 (50.0)		
Level of education	200	4 (17.4)	19 (82.6)	3.011	0.154 ^f	15 (65.2)	8 (34.8)	0.020	0.887
	300	1 (3.3)	29 (96.7)			19 (63.3)	11 (36.7)		
Living with an older person while growing up	Yes	2 (9.5)	19 (90.5)	0.001	1.000 ^f	14 (66.7)	7 (33.3)	0.096	0.757
	No	3 (9.4)	29 (90.6)			20 (62.5)	12 (37.5)		
Experienced in caring for an older person	Yes	2 (8.3)	22 (91.7)	0.062	1.000 ^f	17 (70.8)	7 (29.2)	0.852	0.356
	No	3 (10.3)	26 (89.7)			17 (58.6)	12 (41.4)		
Been Involved in caring for an older person in clinical training	Yes	2 (8.0)	23 (92.0)	0.144	1.000 ^f	16 (64.0)	9 (36.0)	0.001	0.983
	No	3 (10.7)	25 (89.3)			18 (64.3)	10 (35.7)		

DISCUSSION

The management of older patients with multi-morbidity will make up a large part of the clinical work of nearly every medical speciality. Hence, a greater number of trained workforce in the healthcare sector for the care of older patients will be needed (Akinyemi *et al* 2019, Cadmus *et al* 2017, Kabatova *et al* 2016, Igenbergs 2013). This study was primarily conducted to assess the knowledge and attitudes of future health care providers to the care of older persons. In this descriptive cross-sectional study, it was observed that both medical and nursing students had poor knowledge of geriatric care. The poor knowledge score may be attributed to the fact that very few geriatric-specific lectures and clinical clerkship are incorporated into the students' medical and nursing curriculum. Though there was a Curriculum Review in the College of Medicine of the University of Ibadan in 2010 on a competency-based medical education method of instruction (Olapade-Olaopa *et al* 2010). It seems geriatric-specific courses are under-represented in the curriculum. University College Hospital, Ibadan commissioned a purpose-built facility for the care of older persons in 2012 to offer specialized care for the elderly. This facility could be harnessed for clinical preceptorship in geriatrics training for both medical and nursing students.

It was observed that the female students had better knowledge of the care of the elderly than their male counterparts. This is consistent with findings from similar studies conducted in various parts of the world (Blebil *et al* 2022, Eltantawy 2013, Meiboom *et al* 2015). In the current study, poor knowledge of care for the elderly was observed across the various levels of clinical training, with worse scores recorded in the lower classes. This finding was corroborated by similar studies (Blebi *et al*, 2022, Naidoo *et al* 2022, Liu *et al*, 2022)

According to Ratanasiripong & Chai (2013), the review of previous attitude-related articles shows a common theme of referring to the concept of attitude with the spectrum from positive to negative, hence the use of the Good to Poor

continuum in our data analysis. It was observed that the medical and nursing students held positive attitudes toward older people, hence they are less likely to be ageists. Ageism refers to prejudice and/or discrimination against older people (Tanyi *et al* 2018). Pieces of literature reported that Iranian medical students and Mansoura nursing students expressed positive attitudes toward older adults (Momtaz *et al* 2017, Eltantawy *et al* 2013). In addition, Nigerian nurses from two selected hospitals in Ibadan were reported to have a positive attitude toward the care of the elderly (Oyetunde *et al* 2013). Positive attitudes toward caring for older patients were also expressed by final year medical students at the University of KwaZulu-Natal (UKZN), Durban, South Africa (Naidoo & van Wyk 2021). However, contrary findings were reported amongst medical students and hospital-based doctors in a UK acute teaching hospital where respondents described negative attitudes about caring for older persons (Rajvinder *et al* 2015). More than half of the Pharmacy Students selected from different Malaysian universities were undecided about their attitudes toward older patients (Blebil *et al* 2022).

Studies have revealed that people with higher levels of education have more positive attitudes than people with lower levels of education (Alamri & Xiao 2017, Doherty *et al* 2011). However, the observation in this study is that though there was an association, the year of training was not statically significantly associated with the knowledge and attitude scores of the respondents. Older students, aged 20 years and above held more positive attitudes toward the elderly than the younger students in our study and similar findings were reported by similar studies globally (Eltantawy 2013, Meiboom *et al*, 2015, Naidoo & van Wyk 2021).

An exploratory descriptive study of nursing students in Ghana reported that students expressed that though older adults were perceived not receptive to trainee nurses the students saw the older adults as their grandparents so they accorded them respect and care (Attafuah *et al* 2022). Final year medical students at the University of KwaZulu-Natal (UKZN), Durban, South Africa expressed difficulties in communicating with older patients (Naidoo & van Wyk, 2021). Similar

difficulties were expressed by a cross-section of Nigerian nurses interviewed. Hence, Oyetunde opined that effective care of the elderly requires special training (Oyetunde *et al* 2013). Research work by Heydari *et al* also indicates that care for the elderly requires specialized knowledge and skills (Heydari *et al* 2019). A greater emphasis on gerontological education for health professionals is urgently needed in response to the increasingly ageing population (Akinyemi *et al* 2019, Alamri & Xiao 2017). About 80% of Pharmacy Students studied in Malaysia showed a positive attitude toward more training courses in geriatric care to improve their knowledge (Blebil *et al* 2022).

Although not statistically significant, our study shows that living with an older person while growing up had little impact on the level of knowledge of caring for an older person. It was discovered that a higher proportion of medical and nursing students who had lived with an elderly person while growing up had good knowledge of geriatrics. This pattern could also be seen in the respondents' involvement in caring for older persons during clinical clerkship. This indicates that the quality of previous geriatric experience is important (Meiboom *et al* 2015). Our study reported that the majority, of the medical and nursing students who lived with an elderly person while growing up or who had prior experience in caring for the elderly, expressed good attitudes. This is in tandem with similar studies that reported that health professionals who had work experience in geriatrics care reported more positive attitudes toward older people than health professionals who did not (Altmann 2008). It is opined that past experiences and information received contribute to the attitude expressed.

With the advancement in health and technology, many more people are now expected to survive in old age. An ageing population has implications for health care among others, especially as traditional family support systems for the elderly are breaking down (Abanyam 2013, Okoye 2012). In anticipation of this growth in the elderly population, there is a need for medical and nursing students to take specific courses to ensure sufficient preparation for practice after graduation. The medical and nursing curriculum should include structured geriatric courses that will increase knowledge regarding the care of the elderly. Also, a mandatory geriatrics clerkship in a Geriatrics Clinic should be included to expose the students to the uniqueness and complexity of caring for geriatric patients using patients centred clinical methods.

In conclusion, the overall attitude of medical and nursing students toward geriatric care is higher than their knowledge of it. Females and older trainees had better knowledge and attitude. Improved knowledge and positive attitudes toward the care of older people are needed to improve the quality of care and well-being of older people. Hence, there is a need for the inclusion of more geriatric-specific courses and structured clinical clerkship in the training curriculum to improve students' exposure to care for older persons.

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