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Attitudes of Graduating Health Practitioners Toward Older Persons in Ghana.

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## ABSTRACT

**Purpose:** This study examined attitudes of graduating medical and nursing students toward older persons in Ghana. The association between the overall quality of students' experiences with older persons and their attitudes was also examined to identify educational interventions to increase interest in geriatrics.

**Materials and Methods:** A sample of 135 final year medical and nursing students from a public institution in Ghana participated in a cross-sectional study by completing a web-based self-administered questionnaire consisting of the 14-item University of California at Los Angeles Geriatric Attitudes (UCLA-GA) scale and demographic questions. Data analysis involved a two-sample t-test and a one-way ANOVA.

**Results:** Overall, most participants (82.2%) held positive attitudes towards older persons. Medical students had significantly more positive attitudes toward older persons ( $3.50 \pm 0.44$ ) than nursing students ( $3.26 \pm 0.38$ ) ( $t [133] = 3.257, p = .001$ ). The association between students' attitudes and the quality of their experiences with older persons was significant ( $F [2, 132] = 7.062, p = .001$ ). Students whose experiences with older persons were negative had the least positive attitudes.

**Conclusion:** Considering the impact of previous experiences with older persons on medical and nursing students' attitude in Ghana, training to increase interest in geriatrics should include positive clinical and community-based exposure.

**Keywords:** Attitudes towards older persons, Geriatrics, Ghana, Medical Students, Nursing Students

## 1. INTRODUCTION

The population of older persons in Africa has grown exponentially (Aikins & Apt, 2016; Dotchin, et al., 2012; United Nations [UN], 2017), with the number of people 60 years of age living in sub-Saharan Africa projected to increase from 34 million in 2005 to 67 million by 2030 (Tawiah, 2011). Africa's median age of 18.6 years in 2010 is also anticipated to increase by 46% to 27.2 years in 2050 (Kpessa-Whyte, 2018; Tawiah, 2011).

In West Africa, Ghana has one of the fastest growing aging populations (Aikins & Apt, 2016; Kpessa-Whyte, 2018; World Health Organization [WHO], 2014). The aging population rose from 4.6 % of Ghana's total population in 1960 to 7.2% in 2015 and is anticipated to reach 11.9% by 2050 (Adinkrah, 2018; Aikins & Apt, 2016; Mba, 2010; Kpessa-Whyte, 2018; WHO, 2014). This increase in the older adult population in Ghana has been attributed to improvements in life expectancy along with declines in fertility and mortality rates (Aikins & Apt, 2016; Kpessa-Whyte, 2018; Mba, 2010).

While improvements in life expectancy offer opportunities for Ghana, anticipated related demands, especially on healthcare delivery along with infrastructure and services, will require the nation's attention (Mba, 2010; WHO, 2014). Health authorities recommend that health care services to older adults be rendered by geriatric-trained providers (Dotchin et al., 2013; Fitzgerald et al., 2003; Sahin et al., 2011; WHO, 2014).

Yet, as in most countries, insufficient geriatricians are available to meet the needs of the aging Ghana population (Dotchin et al., 2013; Dovie, 2019; Essuman et al., 2019). Though the underlying reasons for the lack of geriatric-oriented health care providers in Ghana are still being explored, one major factor identified as a predictor of interest and consideration of a geriatric career is the attitudes of health providers towards aging and older adults (Fitzgerald et

al., 2013; Reuben et al., 1998; Sahin et al., 2011). Considering that medical and nursing students in Ghana will be encountering and providing services to older patients during their clinical training and upon being employed, exploration of their attitudes towards older persons is critically important.

### **1.1. Study purpose**

The study had two aims: to explore possible differences in the attitudes of graduating nursing and medical students in Ghana towards older persons and to investigate the association, if any, between students' overall quality of experiences (positive, neutral, or negative) with older persons and their attitudes towards older persons in Ghana. To the authors' knowledge, no previous study has employed the UCLA-GA scale to assess the attitudes of clinical students or health professionals towards older persons in Ghana.

## **2. MATERIALS AND METHODS**

This cross-sectional study was conducted in Kumasi, Ghana. Participants completed a web-based self-administered questionnaire via Qualtrics®. Ethical approvals were received from Indiana University (IRB Protocol No. 1803860551), and the Committee on Human Research Publications and Ethics (reference number CHRPE/AP/240/18) in Kumasi, Ghana.

### **2.1. Study participants**

Final-year (6<sup>th</sup>-year) medical students and final-year (4<sup>th</sup>-year) nursing students from the Kwame Nkrumah University of Science and Technology (KNUST) College of Health Sciences participated in this study. At the time of data collection, all participants were undergoing clinical training and had provided some sort of supervised services to older patients (e.g. taking medical history) at the Komfo Anokye Teaching Hospital, KNUST's affiliate hospital.

## 2.2. Questionnaire

The University of California at Los Angeles Geriatric Attitudes (UCLA-GA) scale was adopted to measure students' attitudes; select sociodemographic variables were also collected. The UCLA-GA scale is a 14-item, 5-point Likert scale originally validated for measuring attitudes towards older persons and providing care for older patients among primary care physicians (Reuben et al., 1998). It has subsequently been modified to measure geriatric attitudes among medical students and other health care providers in the United States, (e.g., De Biasio, et al., 2016; Fitzgerald et al., 2003;), Turkey (Sahin et al., 2011), Singapore (Koh, et al., 2012) and the United Kingdom (Hughes et al., 2008). Other health related fields such as dental (Gupta et al., 2014) and nursing (Türgay et al., 2015) have also used the UCLA-GA scale to measure students' attitudes towards older persons and providing treatment to the aging population. This instrument is known for its high construct validity and overall reliability (Cronbach's  $\alpha = .76$ ) (Reuben et al., 1998).

The items on the scale had the options of “strongly agree”, “somewhat agree”, “neutral”, “somewhat disagree”, and “strongly disagree”. Following the recommendations from the original authors, Rueben et al. (1998), positively worded attitude expressions were scored as “5” points if respondents chose “strongly agree”, “4” points if they “somewhat agree”, “3” points if “neutral”, “2” points if they “somewhat disagree”, and “1” point if they “strongly disagree”. Negatively worded items were scored in the reverse order as “1” point if they “strongly agree”, “2” points if “somewhat agree”, “3” points if “neutral”, “4” points if “somewhat disagree”, and “5” point if “strongly disagree”. Five of the 14 statements selected were worded positively (questions: 1; 4; 7; 9; 14), and nine were worded negatively (questions: 2; 3; 5; 6; 8; 10; 11; 12; 13). Scores of reversed negatively worded items are added to positively worded items to produce the total score. The possible range of scores was 14 to 70. Higher scores correspond to more

positive attitudes (Reuben et al., 1998; Sahin et al., 2011). The UCLA-GA scale has high reliability (Cronbach's  $\alpha = .76$ ) and known-groups and construct validity (Reuben et al., 1998).

### **2.2.1. Instrument modifications**

The instrument was modified to adapt it to the language and culture in Ghana. First, question 8 of the UCLA-GA scale originally read “*I believe that taking a medical history from elderly patients will frequently be an ordeal*”. To avoid any confusion leading to measurement error(s), the question was modified by adding “a nightmare” in parenthesis to read “*I believe that taking a medical history from elderly patients will frequently be an ordeal (a nightmare)*.” Also, these modifications in Chua et al. (2008) were adopted (i) using “*government*” instead of “*federal government*” and “*elderly care*” instead of “*Medicare*” for question two. The term “elderly” was retained in the questionnaire as it was the most common term for referencing older persons in Ghana at the time of data collection.

### **2.3. Data analysis**

Data were analyzed using STATA/SE 14.0 (StataCorp, Texas, USA). For descriptive statistics, categorical variables were summarized as frequencies and percentages, and continuous variables as means and standard deviations (SD). Mean values were compared using t-tests. A positive attitude was assessed with a mean score of three or higher whereas a negative attitude was assessed with a mean score lower than three. To examine the differences in the attitudes of the students and the association between the overall quality of students’ experiences and their attitudes, a two-sample t-test and a one-way analysis of variance (ANOVA) were conducted, respectively. Both the t-test and ANOVA had the same dependent variable – “Attitudes toward elderly adults”. The independent variables were – student type: medical and nursing (for the ttest) and overall quality of experiences (for the ANOVA). The overall quality of experiences variable was measured with the question, “How would you indicate your overall quality of

experiences with persons aged 65 and older in the past?” This item’s original five-level response scale (very negative, negative, neutral, positive and very positive) was converted to three levels-negative, neutral and positive. Thus, the students were divided into three groups according to their experiences (Group 1: Negative; Group 2: Neutral; Group 3: Positive). The compliance test for normal distribution was applied to continuous variables as a check for consistency with parametric test criteria. P-values of < 0.05 were considered statistically significant.

### 3. RESULTS

#### 3.1. Characteristics of students

Demographic characteristics of the students are presented in Table 1. Reported results involved responses from all 135 participants (84 medical students and 51 nursing students). The mean ages and related standard deviations for medical and nursing students were  $24.73 \pm 2.00$  and  $23.59 \pm 2.32$ , respectively. More medical students (62.2%) and males (57.0%) completed the survey.

**Table 1: Demographic Characteristics of Students**

Factors	Medical Students		Nursing Students (n= 84) (n= 51)	
	n	%	n	%
Age Category (years)				
18-24	35	41.7	37	72.6
25-29	47	56.0	12	23.5
30+	2	2.4	2	3.9
Sex				
Male	54	64.3	23	45.1
Female	30	35.7	28	54.9



### 3.2. Experiences caring for older persons

More than half of the students (59.3%) had no experience caring for older persons in the past as a paid job, while 11.9% had experiences caring for older persons as an unpaid job. Almost half (47.4%) self-reported overall assessment of the quality of their experiences with older persons in the past as positive, with 40.7% assessing their experiences as neutral (neither negative nor positive).

**Table 2: Distribution of Students' Experiences with Older Persons**

Factors	Medical Students		Nursing Students	
	n	%	n	%
Experiences caring for elderly as unpaid job in the past	A			
great deal	8	9.5	8	15.7
Some	23	27.4	17	33.3
Very little	25	29.8	13	25.5
None	28	33.3	13	25.5
Experiences caring for elderly as paid job in the past	A			
great deal	3	3.6	3	5.9
Some	10	11.9	23	45.1
Very little	14	16.7	13	25.5
None	57	67.9	12	23.5
Overall quality of the experiences with elderly in the past				
Positive	45	53.6	27	52.9
Negative	6	7.1	2	3.9
Neutral	33	39.3	22	43.1

### 3.3. Attitudes towards older persons

The grand mean of the UCLA-GA scale was  $3.41 \pm 0.41$  (min: 2.29, max: 4.64). The majority of students (82.2%) had positive attitudes toward older persons. Medical students had significantly more positive attitudes toward older persons ( $3.50 \pm 0.44$ ) than nursing students

(3.26 ± 0.38) (t [133] = 3.257, p = .001). Additional findings specified by student group are shown in Table 3.

**Table 3: Distribution of the UCLA-GA Scale Scores by Socio-Demographic Characteristics of Students.**

Factors	UCLA-GA scale score		P value
	Means (SD)		
	Medical	Nursing	
Age Category (years)			
18-24	3.52 (0.43)	3.28 (0.33)	0.012*
25-29	3.47(0.44)	3.11 (0.46)	0.017*
30+	3.96 (0.45)	3.71 (0.10)	0.527
Sex			
Male	3.52 (0.44)	3.22 (0.37)	0.006*
Female	3.47 (0.44)	3.29 (0.39)	0.113
Experiences caring for elderly as unpaid job in the past			
A great deal	3.89 (0.42)	3.38 (0.35)	0.019*
Some	3.43 (0.45)	3.29 (0.35)	0.292
Very little	3.52 (0.42)	3.25 (0.39)	0.063
None	3.44 (0.42)	3.16 (0.42)	0.064
Experiences caring for elderly as paid job in the past			
A great deal	4.24 (0.35)	3.10 (0.29)	0.012*
Some	3.32 (0.31)	3.43 (0.20)	0.321
Very little	3.47 (0.32)	3.23 (0.40)	0.099
None	3.50 (0.46)	3.20 (0.43)	0.009*
Overall quality of the experiences with elderly in the past			
Positive	3.62 (0.45)	3.36 (0.32)	0.009*
Negative	3.07 (0.46)	3.04 (0.15)	0.921
Neutral	3.41 (0.36)	3.16 (0.42)	0.022*

*t*-test was used to compare the means. \*significant at  $p < 0.05$ .

### 3.4. Overall quality of experiences and Attitudes

The one-way ANOVA revealed significant differences in the attitudes of students based on their experiences with older persons (F [2, 132] = 7.062, p = .001). The effect size (eta squared) was .10. Per the criteria proposed by Cohen (1988), this suggests a more than moderate effect size. Tukey HSD post hoc comparisons showed that students with negative experiences

(Negative; M = 3.06, SD = .392) and students with neutral experiences (Neutral; M = 3.31, SD = .402) differed significantly from students with positive experiences (Positive; M = 3.52, SD = .424). However, students with negative experiences and those with neutral experiences did not differ significantly from each other (see Table 4).

**Table 4: One-way ANOVA (and Post Hoc Comparisons): Overall Quality of Experiences and Attitudes**

	Sum of Squares	df	Mean Square	F
Between Groups	2.416	2	1.208	7.062*
Within Groups	22.581	132	0.171	
Total	24.997	134		

Tukey HSD Post Hoc Comparisons

( I) Overall quality of experiences		Mean Difference (I-J)	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Negative	Neutral	-0.25049	0.15650	-0.6215	0.1205
Positive	Negative	.46131**	0.15414	0.0959	0.8267
	Neutral	.21082**	0.07407	0.0352	0.3864

\*p < .001, \*\* p < .05

#### 4. DISCUSSION

The study assessed differences in attitudes towards elders of graduating medical and nursing students in a public institution in Ghana. The association between the quality of their experiences with older persons and students' attitudes was also examined. Graduating medical students were shown to have more positive attitudes towards older persons than nursing students. Similar results were reported from Turkey and Spain where Turkish and Spanish medical students showed more positive attitudes toward older persons than nursing students (Ayog̃lu, et

al., 2014; Zambrini, et al., 2008). In these similar studies, researchers attributed the differences in attitudes to the sociodemographic characteristics of students, exposure to geriatric education, and encounters with healthy older persons in the community (Ayog̃lu et al., 2014; Zambrini et al., 2008). In some studies, however, nursing students were found to have more positive attitudes than medical students (e.g., Fajemilehin, 2014 from Nigeria; Wang et al., 2009 from Taiwan). Authors of these studies reported that nursing students' more positive attitudes resulted from their frequent clinical interactions and services to older persons in hospitals. To the contrary, Sahin et al. (2012) found no differences in attitudes towards older persons between medical and nursing students in Turkey.

In the current study, an additional plausible reason accounting for the differences in students' attitudes toward older persons was identified. Findings showed an association between the overall quality of students' experiences and their attitudes toward older persons. Students whose quality of experiences with older persons was negative had the least positive attitudes compared to students with positive experiences. This implies that the quality of students' experiences while interacting with older persons plays an essential role in the attitudes towards geriatric practice that they develop. For this reason, attention should be given to creating positive experiences with older adults in both clinical and community settings in Ghana.

In the current study, overall attitudes toward older persons among participants as assessed by the UCLA-GA scale were primarily positive (82.2%). Interestingly, the literature provides contrasting findings concerning overall attitudes of students toward older persons in different societies. Many studies focusing on attitudes among medical students before the year 2000 reported mostly indifferent and negative attitudes towards older persons (e.g., Brooks, 1993; Coccaro & Miles, 1984; Duerson, et al., 1992; Green, et al., 1983; Warren, et al., 1983). Negative attitudes were attributed to stereotypes and beliefs that diseases related to older persons

are chronic and untreatable. Intervening during the later years was considered a waste of resources as the health of older persons will naturally decline (Duerson et al., 1992).

Interestingly, a shift towards positive attitudes seems to have materialized in recent years. In their study of first year medical students in Singapore, Chua and colleagues (2008) found positive attitudes among students, though only one in three students was willing to pursue geriatrics. A similar result was found in a pilot study by Hughes et al. (2008) among medical students at the University of Aberdeen (in Scotland). A potential explanation for some of the reported findings could be that medical students in recent years have earlier exposure and better awareness of the needs of older persons in their societies (Chua et al., 2008).

Attitudes of nursing students toward older persons have also been explored at length but have no clear pattern of either extensive negative or positive attitudes (Liu, et al., 2013). Ball (1999) reported positive attitudes among University of Massachusetts undergraduate students in the nursing program regardless of their individual characteristics. Likewise, Hweidi and Al-Obeisat (2006) reported positive attitudes among Jordanian nursing students. However, they reported a strong correlation between students' attitudes and their socio-economic status. Adding to the findings on positive attitudes are Gallagher, et al. (2006) from the United Kingdom, Myers, et al. (2001) from Australia, Pan, et al. (2009) from Taiwan, Türgay et al. (2014) from Turkey, and Wu (2011) from China. Neutral attitudes have also been reported by Chen and Walsh (2009) from Taiwan, and Erdemir et al. (2011) from Turkey. Conversely, an international systematic review of both registered nurses and nursing students by Liu et al. (2013) revealed negative attitudes, adding that nursing students' attitudes towards older persons have been less positive since the year 2000. The variation in attitudes observed by various researchers from different countries could be reflective of the different cultures, students, unique

characteristics, and aging-related policies that exist within nations (Liu et al., 2013; Myers et al., 2001).

## 5. CONCLUSION

To meet the growing need for geriatric specialists in Ghana, students' interest in providing geriatric care must be encouraged. Graduating medical students in this study were found to have more positive attitudes toward older persons and providing care to older persons than graduating nursing students. Students' attitudes were significantly affected by the overall quality of experiences they have had with older persons in the past. To improve attitudes toward geriatric care among Ghanaian students, the professional preparation curriculum, especially for nursing students, should include both clinical and community-based positive experiences with older persons. For instance, developing and testing community-based learning interventions that pair students with healthy older adults could help correct some of the negative stereotypes and enhance positive experiences (Lu, et al., 2010). Educational content that explains the aging process and considerations for communicating with aging patients can also be incorporated in students' curricula (Hughes, et al., 2008).

### **Study Limitations**

To the authors' knowledge, this is the first study to explore differences in Ghanaian medical and nursing students' attitudes towards older persons using the UCLA-GA scale. However, the study involved a small sample size and was limited to only one public institution in the Ashanti Region of Ghana. Findings should, therefore, be interpreted with caution. Moreover, since this was a cross-sectional study, it is uncertain whether students' experiences with older adults preceded attitudes towards older adults. It could be that these two variables are

mutually influential. That is, students with positive attitudes toward older people are more likely to have had good quality experiences with older adults.

### **Future Research**

Future studies should consider including more medical and nursing institutions, expanding the sample size, and utilizing a random sampling method. A longitudinal study is also highly recommended for exploring and monitoring the trends and patterns of attitudes of health professionals in Ghana. Similarly, a longitudinal study would be instrumental in fostering a better understanding of the time dimension for association between experiences and attitudes.

### **Conflict of Interest**

Authors have no conflict of interest related to this study

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## APPENDIX

### MODIFIED UNIVERSITY OF CALIFORNIA, LOS ANGELES (UCLA) GERIATRICS ATTITUDES SCALE

Note: On the online platform, Qualtrics, the survey was separated and customized by replacing geriatric medicine with geriatric nursing where necessary. The primary contents however, remained the same.

**PART I-Attitudes. Directions:** Please use the scale below to indicate the degree to which you agree or disagree with each statement. The scale below is a modified version of the University of California, Los Angeles (UCLA) Geriatrics Attitudes Scale (Chua et. al., 2008; Reuben et. al 1998)

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1. Most old people are pleasant to be with.	1	2	3	4	5
2. The government should reallocate money from care of the elderly to research on AIDS or pediatric diseases.	1	2	3	4	5
3. If I have the choice, I would rather see younger patients than elderly ones.	1	2	3	4	5
4. It is society's responsibility to provide care for its elderly persons.	1	2	3	4	5
5. Medical care for old people uses up too much human and material resources.	1	2	3	4	5
6. As people grow older they become less organized and more confused.	1	2	3	4	5

7. Elderly patients tend to be more appreciative of the medical care they receive than are younger patients.	1	2	3	4	5
8. I believe that taking a medical history from elderly patients will frequently be an ordeal (a nightmare).	1	2	3	4	5
9. I tend to pay more attention and have more sympathy towards elderly patients than younger patients.	1	2	3	4	5
10. Old people in general do not contribute much to society.	1	2	3	4	5
11. Treatment of chronically ill old patients is hopeless.	1	2	3	4	5
12. Old people don't contribute their fair share towards paying for their healthcare.	1	2	3	4	5
13. In general, old people act too slow for modern society.	1	2	3	4	5
14. It is interesting listening to old peoples' accounts of their past experiences.	1	2	3	4	5