Knowledge, Attitude and Willingness Towards Geriatric Medicine of Fourth Year Medical Students and Postgraduate Interns Training in a Tertiary Hospital: A Cross-sectional Study

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Background: The increase in demand for a more comprehensive care for the elderly in the Philippines raises the importance of sufficient number of adequately trained medical professionals in geriatric care. This study aimed to determine and compare the knowledge, attitude, and willingness to consider a career in geriatric medicine of fourth year medical students and postgraduate interns in a tertiary hospital in Manila.

Methods: A cross-sectional study was conducted among 105 fourth year medical students and 81 postgraduate interns using a self-administered questionnaire incorporating the Facts on Aging Quiz 2015, UCLA Geriatric Attitude Scale, and a section exploring the willingness of students to consider a career in geriatric medicine and their reasons. Knowledge scores, attitude scores and prevalence of those willing to consider geriatric medicine as a career were analyzed using Student T-test, Mann Whitney U test, and Chi-square test, respectively.

Results: The mean knowledge scores of fourth year medical students and postgraduate interns were 31.15 (60.30%) and 30.98 (61.95%), respectively. Median attitude score of both groups was 3.79. Among students, 58.10% are willing to consider geriatric medicine as a career, while 50.62% among interns. Both groups had adequate level of knowledge and positive attitude. However, no statistical significance was found between their knowledge scores (p=0.72), attitude scores (p=0.61) and prevalence of willingness (p=0.31). The main reason of participants in having interest in geriatric medicine was their social and personal responsibilities towards the elderly, while difficulty in handling patients was the top reason for not considering the field.

Conclusion: Continuously developing the Philippine geriatric medicine education and curriculum will assist in enhancing the knowledge and improving the positive attitudes of trainees. This will later translate in better care for the elderly.

Key words: geriatric medicine, knowledge, attitude

Background

In recent years, Asian countries including the Philippines are experiencing a shift towards an aging population. People considered as senior citizens (60 years old and above) comprise 9.22 million or 8.5% of the Filipinos in 2020, as compared to 7.53 million or 7.5% in 2015[1]. This translates to a higher health and economic burden to address the various biopsychosocial problems of older people[2,3].

Geriatrics is the branch of medicine that focuses on problems specific to aging, and on preventing, diagnosing, and treating diseases in the elderly. The Universal Health Care Act (R.A. 11223) strived to promote the health of all Filipino people and embrace the unique needs of the elderly. Although one of the provisions of the law is the inclusion of geriatric training among primary care physicians, there are some health conditions that only those specialized in geriatric medicine can address. However, the number of geriatricians in the Philippines is comparably low to the increasing elderly population. As of 2020, there are only 147 specialists according to the Philippine College of Geriatric Medicine, with most of them practicing in Metro Manila[4].

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One of the avenues to promote specialized geriatric care is to increase the understanding of wellbeing and health determinants in older people during the early education of medical students. The United States and European countries have geared towards enhancing their geriatric training in medical schools. However, geriatric medicine in the Philippines is still a budding and somewhat unfamiliar career path. It needs considerable reinforcement in the medical school curriculum[5].

As such, it is essential to evaluate the current level of awareness and attitude of medical students and interns regarding geriatric medicine given the existing standard of training here in the Philippines to be able to appraise possible opportunities for improvement. Moreover, this will be helpful in formulating policies for geriatric care in the country. At present, there are various studies tackling the knowledge and attitude of medical students towards older people[6]. However, there are limited research in the Philippines addressing this question, which is the intent of this paper. This study aimed to determine and compare the knowledge, attitude, and willingness to consider a career in geriatric medicine of fourth year medical students and postgraduate interns in a tertiary hospital in Manila.

This study aimed to determine and compare the knowledge, attitude, and prevalence of willingness towards a career in geriatric medicine of fourth year medical students and postgraduate interns of a tertiary hospital in Manila

Methods

Study Design

This was an analytical cross-sectional study.

Subjects

All 105 fourth-year medical students at a local university in Metro Manila, Philippines for the SY 2023-2024 training and 81 postgraduate interns who graduated from the same university assigned to a tertiary hospital in Manila, Philippines from August 2023 to July 2024 were included in the study. The list of medical students and postgraduate interns was acquired from their respective institutions. Participants were invited through communication with their group leaders. Inclusion criteria for this study were fourth year medical students enrolled at a local university in Metro Manila, Philippines for the year 2023-2024 training at a tertiary hospital in Manila, and postgraduate interns who graduated from the same local university assigned at the same tertiary hospital from August 2023 to July 2024. Excluded were fourth year medical students and postgraduate interns who were not able to complete the one-year training due to certain circumstances including leave of absence and dropping out from the program, postgraduate interns assigned from January 2023-December 2023 or January 2024-December 2024 (midyear internship), those who were not available during the duration of the study, and those who did not consent and would not sign the physical consent form to participate in the study.

Setting

All participants were invited through their group leaders and asked to answer the printed questionnaire during the last month of their clinical rotation: June 1 to 30, 2024 for fourth year medical students, and July 1-31, 2024 for postgraduate interns. The survey was issued and answered in a secure office under the Department of Family and Community Medicine of Ospital ng Mayla Medical Center. Prior to answering the questionnaire, a brief 5-minute explanation from the primary researcher was done regarding the research and data collection process. The informed consent and questionnaires enclosed in a folder were distributed to the participants. The participants were given 25 minutes to answer the questionnaire. The forms were submitted only to the researcher and were stored in a secured filing cabinet with lock. The forms were encoded in password-encrypted MS Excel in the secured personal laptop by the researcher in August 2024.

Variables and Data Collection

The questionnaire used was a four-part questionnaire. The first part obtained the demographic information of the participant including name (optional), age, gender, and their level of training (fourth year medical student or post graduate intern). The second part assessed the knowledge of the participant regarding health of older people. This was adapted from the publicly available validated questionnaire for Facts on Aging Quiz 2015 version by Breytspraak and Badura [7]. This is a fifty-item true or false quiz, with <50% correct items considered as poor knowledge and ≥50% as adequate knowledge. The third part evaluated the attitude of the participant towards the elderly using the publicly available validated University of California, Los Angeles, Geriatric Attitude Scale[8]. This is a 14-item questionnaire answerable by a Likert scale (1=strongly disagree, 2=somewhat disagree, 3=neutral, 4=somewhat agree, 5=strongly agree). For the scoring, scores on items 2, 3, 5, 6, 8, 10-13 were reversed before adding them to the scores on the positively worded items. An average score of >3 was considered to have positive attitude, while ≤3 was negative attitude. The last part of the questionnaire was a Yes or No question regarding willingness to consider a career in geriatric medicine. This was followed by an open-ended question asking the reason for the answer in the previous item.

Statistical Analyses

The demographics data (age, sex, and level of training) were analyzed using descriptive statistics. Scores on the knowledge part were totaled for each participant. The mean of the knowledge scores for both groups was obtained, and the Student's T-test was used to compare the scores of the two groups. For attitude, median scores were determined, and Mann Whitney U test was used to contrast scores of the groups. Lastly, the prevalence of those who were willing to consider a career in geriatric medicine was obtained for each group. Chi-square was used to compare the prevalences. The open-ended question at the end was reported descriptively.

Ethical Considerations

The protocol was assessed and approved by the technical review board of the Department of Family and Community Medicine of Ospital ng Maynila Medical Center. It has also undergone ethics review by the National Center for Mental Health, Research Ethics Committee. Upon approval by the two committees, a courtesy meeting with the school dean and hospital director was conducted to formally ask permission to proceed with data collection. Included in the questionnaire was a consent form that must be accomplished prior to completing the survey. Subjects were allowed to withdraw at any point in the study. Code numbers were assigned on each questionnaire. Data privacy was assured during the data collection. The forms were submitted to and processed by only the researcher and stored in a secured filing cabinet with lock. Only the researcher will have access to the answered questionnaires and password encrypted encoded file.

Results

All 105 fourth year medical students and 81 postgraduate interns invited to participate in the study signed the consent form and completed the self-administered questionnaire. The answers from the participants were obtained and analyzed accordingly, as shown in Figure 1.

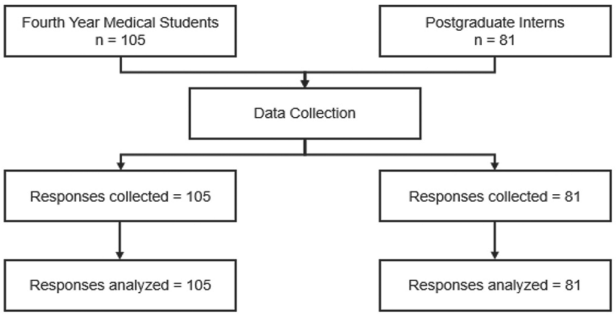

Figure 1. Flow diagram

Most of the participants had ages from 26 to 30 years old, with mean ages of 26.1 for both groups. Table 1 also shows that majority of participants were females, comprising 77.14% of fourth year medical students, and 60.49% of postgraduate interns.

The average knowledge scores of fourth year medical students and postgraduate interns were 31.15 (60.30%) and 30.98 (61.95%), respectively. Scores of both groups indicated moderate level of knowledge (>50%). T-test showed that there was no significant difference ($p=0.72$; $\alpha=0.05$) between the knowledge of the two groups. The average corrected scores for attitude of fourth year medical students and postgraduate interns were 3.79 and 3.79, correspondingly. This shows that the participants had positive attitude towards the elderly. Mann Whitney-U test revealed no significance ($p=0.61$; $\alpha=0.05$) between the attitude scores of the two groups. Among fourth year medical students, 58.10% are willing to consider geriatric medicine as a career, while 50.62% among postgraduate interns. There is no statistical significance ($p=0.31$; $\alpha=0.05$) between these prevalences using the Chi-square test (Table 2).

The reasons for considering or not considering a career in geriatric medicine are listed in Table 3. For both groups, their perception of caring for older adults as a personal or social responsibility was the top reason for considering geriatric medicine as a profession. This accounts for 55.74% of reasons among fourth year medical students, and 36.59% among postgraduate interns. Other reasons for considering geriatric medicine profession among fourth year medical students were preference in interacting and caring for the elderly (26.23%), positive personal encounters with older adults in the past (19.67%), insight that geriatric medicine is an interesting specialty (18.03%), rewards of working with older adults (11.48), and opportunities for growth in the field (4.92%). For postgraduate interns, other reasons include insight that geriatric medicine is an interesting specialty (24.39%), preference in interacting and caring for the elderly (21.95%), positive personal encounters with older adults in the past (19.51%), rewards of working with older adults (14.63), and opportunities for growth in the field (7.32%).

On the other hand, difficulty in interacting and handling patients was the top reason for not considering a career in geriatric

Table 1. Demographic characteristics of fourth year medical students and postgraduate interns at a tertiary hospital in Manila

Variable	Fourth Year Medical Students N = 105 n (%)	Postgraduate Interns N = 81 n (%)
Age		
20-25 years old	41 (39.05 %)	32 (39.51 %)
26-30 years old	61 (58.10 %)	48 (59.26 %)
31-35 years old	3 (2.86 %)	1 (1.23%)
Sex		
Female	81 (77.14 %)	49 (60.49%)
Male	24 (22.86 %)	32 (39.51%)

medicine. About 43.18% of fourth year medical students and 52.50% of postgraduate interns reported this as the reason for saying no. Among fourth year medical students, less frequent reasons include preference for other specialty/population group (27.27%), complexity of geriatric cases (15.91%), lack of knowledge or skills in managing elderly patients (9.09%), lack of interest in geriatric medicine (6.82%), negative personal encounters with older adults in the past (6.82%), lack of exposure to geriatric patients (4.55%), and geriatric medicine is not a rewarding specialty (2.27%). For postgraduate interns, other reasons were the following: preference for other specialty/population group (35.00%), complexity of geriatric cases (7.5%), lack of exposure to geriatric patients (5.00%), lack of interest in geriatric medicine (5.00%), lack of knowledge or skills in managing elderly patients (5.00%).

Discussion

The knowledge, attitude and willingness to consider a career in geriatric medicine among fourth year medical students and postgraduate interns were evaluated in this study. Results showed that there was no statistical significance among the two groups for all variables. Evaluating the knowledge of the participants using the Facts on Aging Quiz revealed adequate level of knowledge (60.30%, 61.95%). These baseline values are similar to those obtained from other studies done in Malaysia, Africa, and United States[6,9,10], wherein an adequate level of knowledge among students and trainees were reported (>50%). This shows that with the current medical curriculum being imposed in the local university where this study was done, geriatric medicine was being discussed and lectured in short modules that resulted in adequate knowledge among students and at par with level of knowledge gained by postgraduate interns.

Average scores of both groups in the UCLA Geriatrics Attitude Scale showed a positive attitude towards the elderly. This positive attitude among trainees is consistent with results in various studies in Malaysia, Singapore, Taiwan, and China. In contrast, in some countries like Turkey and Australia, there is a negative attitude towards the elderly despite having great respect for them[6].

More than half of participants were also inclined to consider a career in geriatric medicine. Similar results were observed in other research in China, Singapore and United States[11]. Exploring the reasons stated by the participants why they consider geriatric medicine as

Table 2. Knowledge scores, attitude scores, and proportion of those who are willing to consider a career in geriatric medicine among fourth year medical students and postgraduate interns.

Component	Fourth Year Medical Students	Postgraduate Interns
Knowledge*		
mean score + standard deviation	31.15 ± 3.32	30.98 ± 3.44
Mean difference	0.17	
t	0.355	
p-value	0.72	
Attitude*		
median score	3.79	3.79
W	4435.50	
p-value	0.61	
Proportion of those willing to consider geriatric medicine*		
%	58.10	50.62
X^2	1.03	
df	1	
p-value	0.31	

* Independent samples t-test
** Mann Whitney U test
*** Chi square test

Table 3. Reasons of fourth year medical students and postgraduate interns for considering and not considering Geriatric Medicine as a profession*

Reasons for Considering Geriatric Medicine as a Profession	Fourth Year Medical Students n (%)	Postgraduate Interns n (%)
Perceived personal or social responsibility to care for older adults	34 (55.74)	15 (36.59)
Preference in interacting with and caring for the elderly	16 (26.23)	9 (21.95)
Positive personal encounters with older adults in the past	12 (19.67)	8 (19.51)
Geriatric Medicine as an interesting specialty	11 (18.03)	10 (24.39)
Rewards of working with older adults	7 (11.48)	6 (14.63)
Opportunities for growth	3 (4.92)	3 (7.32)
Reasons for NOT Considering Geriatric Medicine as a Profession	**Fourth Year Medical Students n (%)**	**Postgraduate Interns n (%)**
Difficulty in interacting and handling elderly patients	19 (43.18)	21 (52.50)
Preference for other specialty/population group	12 (27.27)	14 (35.00)
Complex cases in geriatric medicine	7 (15.91)	3 (7.50)
Lack of knowledge or skills in managing elderly patients	4 (9.09)	2 (5.00)
Lack of interest in Geriatric Medicine	3 (6.82)	2 (5.00)
Negative personal encounters with older adults in the past	3 (6.82)	-
Lack of exposure to Geriatric Medicine	2 (4.55)	2 (5.00)
Not rewarding as a specialty	1 (2.27)	-

*multiple responses

a career, one possible reason for the positive attitude is the sense of filial responsibility towards the elderly[6]. This practice of honoring and valuing the older generation is ingrained in the Asian culture, especially in the Philippine setting and family traditions[12]. This is further strengthened by positive experiences with the elderly, especially one's own grandparents. This possibly translated to the increased preference of the participants in interacting with the older generation[6].

However, the top reason for not considering geriatric medicine as a profession is difficulty in handling geriatric patients. This was also evident in other studies where reasons for lack of interest in geriatric medicine was investigated. Some students not interested in geriatric medicine believe that older adults are burdensome to manage as compared with younger people. They consider their multiple long-term conditions and communication barriers including hearing problems, diminished vision and cognitive impairments[14]. Other research also shows that students' lack of interest in geriatric medicine is associated with prior negative interactions with the elderly, generalizing misperceptions to all patients[13,14].

One of the most significant reasons for medical students' lack of interest in geriatrics established in previous studies is the scarcity of exposure during the early medical education[15]. Other medical disciplines have updated and expanded their core competencies in the medical education worldwide. However, geriatric education has failed to be incorporated deeper in the school curriculums. Thus, the majority of health care graduates who do not specialize in geriatrics lack competencies in caring for elderly patients[14]. The integration of geriatric medicine in Asian countries, including the Philippines, is still in its early stages. In Singapore, an introductory lecture regarding geriatric medicine is only given during the third year in medical school. Medical schools in the Philippines have only incorporated geriatric medicine as short modules in some subjects, mainly in the third or fourth year[5]. Therefore, continuous improvement in the medical curriculum in the Philippines may further raise the level of knowledge of trainees which can translate to a more positive attitude, better geriatric care and interest in this field of medicine.

There are several limitations in this study that must be addressed. There are also no local questionnaires for knowledge and attitude available. Although the medical school curriculum for geriatrics is patterned from Western medicine, a specific validated local questionnaire may be more appropriate in our setting. In addition, this study only involved one university and may not be reflective of experiences of other medical students. Furthermore, other factors influencing decision to consider geriatric medicine as a profession such as family composition, religion, and socioeconomic status were not evaluated in this study.

Conclusion and Recommendations

This study evaluated and compared the level of knowledge, attitude and willingness to consider a career in geriatric medicine among fourth year medical students and postgraduate interns in a tertiary hospital in Manila. The trainees demonstrated comparable adequate level of knowledge and positive attitude towards the elderly. More than half of the participants were willing to consider geriatric medicine as a profession, with personal and social responsibility towards the elderly as their main basis for their interest. While those who were not willing stated difficulty in interacting and handling geriatric patients as the reason. Revamping the geriatric medicine education and curriculum in the Philippines would help in raising the knowledge and improving the attitude of trainees, which would transform to an improved healthcare for the older persons.

The results of this research may be used as a baseline and foundation for further studies. This study may be used by the local university to review their current geriatric medicine curriculum, and by the hospital to frame policies in improving geriatric care. A pre- and post-evaluation after geriatric module in the medical curriculum or clinical training may also be done to further measure the effectiveness of geriatric education in the country on the knowledge and attitude of trainees. In addition, a pilot study for validation of a local questionnaire for geriatric knowledge and attitude may be explored. Further research on the factors associated with positive or negative attitude and interest of students in geriatric medicine can be investigated. This study may also be used and continued to create a prospective cohort study to determine if those willing to consider geriatric medicine will continue to pursue said career.

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