

Specialty choice of senior medical students at a healthcare university in Southern Vietnam

Thoai Dang Nguyen^{1,#}, Tram Thi Huyen Nguyen^{2,#}, Quang Vinh Tran¹, Thuy Phan Chung Tran²

¹ Faculty of Pharmacy, Pham Ngoc Thach University of Medicine, Ho Chi Minh City 700000, Vietnam.

² Department of Pharmacy, Ear-Nose-Throat Hospital in Ho Chi Minh city, Ho Chi Minh City 700000, Vietnam.

These authors are co-first author and contributed equally to this work.

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ABSTRACT

Background: Medical students are the future health workers, and the specialty choice greatly affects the future distribution of health workers in the locality. This study was aimed to investigate the situation on specialty choice among senior students at a medical university at Ho Chi Minh City. **Methods:** A cross-sectional study conducted at a public university in Ho Chi Minh City, Vietnam from August 2018 to January 2019 based on face-to-face interview. Senior medical students who intended to take a post-graduated program was enrolled. Data analysis was performed by SPSS 23.0. Chi-square test was used for comparison and $p < 0.05$ was considered to be significantly different.

Results: Conferences and lecturers were the main source of reference for information finding. Lecturers and influencers were inspired most to the students. Among nine specialties, cardiology was the most preferred one (17.6%), following by general surgery and internal medicine (17.1%). Basic science was the least preferred specialty (1.2%).

Conclusion: Specialty choosing is very important for senior-year medical students. Cardiology, general surgery and internal medicine were the most three favored specialties. Lecturers were most influenced to their choice, including providing information and motivating.

Keywords: Grade point average, Internal medicine, Pediatric medicine, University education, Vietnam.

Correspondence:

Thoai Dang Nguyen (PhD.)

Faculty of Pharmacy, Pham Ngoc Thach University of Medicine, Ho Chi Minh City 700000, Vietnam.

Address: 02 Duong Quang Trung Street, Ward 12, District 10, Ho Chi Minh City 700000, Vietnam.

Email: thoaind@pnt.edu.vn

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INTRODUCTION

After graduation, the career choices of senior doctors are important for maintaining a sufficient supply of professional personnel and providing health care to the community in the future. Since some specialties, like psychology and family medicine, are selected less frequently and participation in these specialties seems to be declining, it may be helpful to investigate the factors behind the selection of specialization.^{1,2} The discipline in which the profession of physicians is dictated by doctors' favorite and the need for various kinds of doctors as shown by the amount and location of specialized training sites. Medical professionals have expectations for anticipated future income and the strengths of each specialization, including incentives to leverage clinical abilities, intellectual / educational resources and hourly versatility.³

Scientists initially noticed more than 40 years previously that wage disparity amongst general practitioners and professionals influence specialization choices which can contribute to a surplus of specialists (70).⁴ The salary disparities are constant over periods and the demand for professionals is therefore not obvious (2).⁵ Long-term wage gaps can continue due to traditionally defined and controlled fees or payment frameworks (5).⁶ Such market flaws can relate to inadequate provision of physicians throughout specialties contributing to health conditions and high health-care costs. The increasing pressure of chronic condition in general indicates that more general practitioners are required but there is no market system by which this can be converted into improvements in the general profits of primary care

physicians and professionals. The unequal delivery of physicians amongst primary health care and other professions is an unresolved policy issue considering the significant role that primary care should perform in supporting a more serious disease-focused, more effective and equal medical system (5).⁷

Though disparities in wages between disciplines are a concern, certain characteristics of work / job stability and inherent job features often affect the decision of speciality.³ This study was aimed to investigate the situation on specialty choice among senior students at a medical university at Ho Chi Minh City.

METHODS

Study design and study site

This is a cross-sectional study based on face-to-face interview. Our current research was conducted at a public university in Ho Chi Minh City, Vietnam from August 2018 to January 2019.

Ethical consideration

The study was approved by the Science Research Committee. The research complied with ethical standards by obtaining informed consent, ensuring respondent autonomy, and guaranteeing anonymity and confidentiality. Explanations provided to the respondents included information regarding the voluntary nature and safety of participation in the study. The participants were informed of their right to refuse participation or withdraw from the survey at any time without consequences. No details that could point to the participants'

identities were reflected on the questionnaires, and only members of the research team were authorized to collect information on the participants.

Sampling and data collection

The sample size was 245. Students were enrolled if they were at senior year and had an intention to take a post-graduated program. Interviewers went to the lecturer rooms and select the students. Each student was invited into a face-to-face interview which took about 10 minutes. Characteristics and specialty choice of them was collected.

Data analysis

Data was then entered into Microsoft Excel for Window 2010 for management. Data analysis was performed by the Factual Package for Social Sciences version 23.0 (SPSS Inc., Chicago, IL, USA). Categorized variables were presented as frequency and percentage. Continuous variables were presented as mean and standard deviation (SD). Chi-square test was used for the immensity level and $p < 0.05$ was considered a fact of interest.

RESULTS

Table 1 showed the characteristics of senior medical students. The percentages of male and female were nearly the same. The majority of students did not come from Ho Chi Minh City but other provinces (70.6%) and lived with their friend (67.8%). Most of them were evaluated as well-done based on their grade point average (80.8%). About 70% of students come from families without tradition of medicine and about a quarter (73.9%) claimed that medicine was their first choice when choosing major to enter university.

The information source and motivation when choosing specialty were illustrated in the **Figure 1**. As could be seen, conferences and lecturers were the main source of reference for information finding, however, difference between two genders. There was an opposite between males and females regarding information from friends. Only 12/121 of males but 56/124 of females claimed that they consulted their friends for specialty information. Regarding motivation, lecturers and influencers were inspired most to the students. There was an opposite between males and females regarding motivation from family members. Only 78/124 of females but 110/121 of males stated that they were motivated by a member of their family.

Among nine specialties, cardiology was the most preferred one (17.6%), following by general surgery and internal medicine (17.1%). Basic science was the least preferred specialty (1.2%). There were significant differences between males and females when choosing cardiology, general surgery and pediatric medicine (**Table 2**).

Table 1. Characteristics of included students (N=245)

Characteristics	n (%)
Gender	
Male	124 (50.6)
Female	121 (49.4)
Residence	
Ho Chi Minh City	72 (29.4)
Provinces	173 (70.6)
Religion	
Yes	156 (63.7)
No	89 (36.3)
Living status	
Live with family/relatives	70 (28.6)
Live with friends	166 (67.8)
Live with wife/husband/partner	9 (3.7)
Grade Point Average	
Good or Excellence	3 (1.2)
Well-done	198 (80.8)
Intermediate or lower	44 (18.0)
Family with tradition of medicine	
Yes	74 (30.2)
No	171 (69.8)
Medicine is your first choice when entering university	
Agree	181 (73.9)
Disagree	64 (26.1)

Note: Data were presented as n (%)

Table 2. Specialty choice divided by genders (N=245)

Specialty	Male (n=124)	Female (n=121)	Total (n=245)	P-value*
Basic Science	2 (1.6)	1 (0.8)	3 (1.2)	0.235
Family Medicine	3 (2.4)	2 (1.7)	5 (2.0)	0.091
Cardiology	15 (12.1)	28 (23.1)	43 (17.6)	0.023
Cardiac Surgery	11 (8.9)	9 (7.4)	20 (8.2)	0.109
Otology-Rhinology-Laryngology	21 (16.9)	20 (16.5)	41 (16.7)	0.065
General Surgery	28 (22.6)	14 (11.6)	42 (17.1)	0.021
Neurology	4 (3.2)	2 (1.7)	6 (2.4)	0.186
Pediatric Medicine	18 (14.5)	25 (20.7)	43 (17.6)	0.035
Internal Medicine	22 (17.7)	20 (16.5)	42 (17.1)	0.083

*Chi-square tests for difference between males and females.

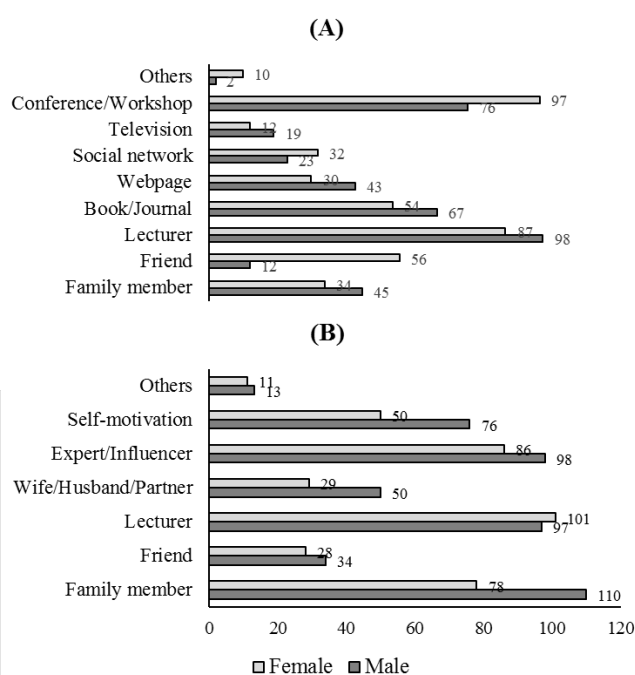


Figure 1. Information source (A) and motivation (B) when choosing specialty

DISCUSSION

The main purpose of this study was to investigate the specialty choosing of senior students. We found that lecturers were most influenced to their choice, including providing information and motivating. Moreover, conferences and workshops were also the main source of reference for the students. Cardiology, general surgery and internal medicine were the most three favored specialties.

Over the past twenty years, various studies have been conducted to investigate the factors that contribute to the decision of a profession in surgery by senior medical students.⁸⁻¹⁷ Such findings were motivated by questions about the potential makeup of the surgery profession, a shrinking pool of candidates, the replacement in gender distribution of students from medical schools, and a change in priorities and values that affect career decision.

Despite the general similarity between males and females when choosing specialties, some essential differences were found to assessing the influencing of gender. Female students are more likely to understand whether maternity leave would tie in with employment and duration of preparation and less likely to regard current labor market power, job security, and impact on future earnings as very significant.¹⁸

In addition, while males have a tendency to prefer technology-based and innovative healthcare, females prefer areas of direct interaction with patients.^{19, 20} The proportion of female workforce in healthcare settings in Switzerland have been increasingly, reach the peak of almost 50. However, studies indicated that the total work hours of women is lower than those of man.²¹ This is an evidence support to the statement that working hours play significant role in career choice on women, including in medical major.²² 8 Some recent studies show similar findings on men regarding working hours.^{23, 24} This study is lack of information to assess the impact of working hours on career choice of the students.

From the showing result, it is obvious to see the highly important role that lecturers, mentors, experts or supervisors play in the choice of specialty of the students. Their lecturers are the main information source and their motivation as well. The previous studies also support this agreement. The overwhelming majority of students with mentors treated their mentors as role models for how to combine work and home life (more so for male than female mentors). A dedication to tutoring could be the most manageable element in the surgical educator's hands.¹⁸

For decision making, there should be more conference for students to participate for a better understanding about the whole view of medicine major. Orientation meetings among lecturers or clinical practitioners and students should be hold more frequently. The finding from this study was limited to the public university, which could reduce the generalizability of the study. Future research should explore the factors that associated to the specialty choosing of the students.

CONCLUSION

Specialty choosing is very important for senior-year medical students. Cardiology, general surgery and internal medicine were the most three favored specialties Lecturers were most influenced to their choice, including providing information and motivating.

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CONFLICT OF INTEREST

The authors have no conflicts of interests to declare.

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