

KNOWLEDGE AND ATTITUDE OF DOCTOR OF PREVENTIVE MEDICINE STUDENTS TOWARDS THEIR CAREERS IN FUTURE

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Abstract

Background: Doctor of Preventive Medicine is a new training program in Vietnam. Observation suggests that knowledge and understanding of Preventive Medicine Students are still vague and thus leading to the unenthusiastic learning attitude. **Research objectives:** 1. To assess the understanding of Preventive Medicine students towards the functions and duties of Doctor of Preventive Medicine. 2. To assess the attitude of Preventive Medicine students towards their careers in future. 3. To identify related factors of the knowledge and attitude of Preventive Medicine students towards their careers in future. **Methods:** A cross-sectional study was conducted among all Preventive Medicine students of Hue University of Medicine and Pharmacy from the 1st year to 5th year (N=536) using structured questionnaire which were self-administered by participants. **Results:** 92.5% of respondents had a good understanding about functions and duties of staff working in preventive medicine. 62.6% of students reported their interest in preventive medicine. However, the interest in preventive medicine is not significantly associated with the understanding of students about preventive medicine and the study results of students. Students in different courses was significantly different in reporting their good understanding in preventive medicine. **Conclusions:** A high proportion of preventive medicine students had good understanding about their field of studying. Further studies are recommended to examine the patterns while marketing and education activities are needed to improve the understanding about the training program and the application in future careers.

Key words: *preventive medicine, student, understanding, career.*

1. INTRODUCTION

Preventive Medicine is the specialty of medical practice that focuses on the health of individuals, communities, and defined populations. Its goal is to protect, promote, and maintain health and well-being and to prevent disease, disability, and death [7]. Preventive Medicine includes: hygiene education, epidemiology, associated subjects such as genetics, immunology, biology, microbiology, environmental and occupational health, nutrition...The nature of modern medicine is

prevention. Preventing diseases, protecting and improving people's health, society and also improving the living environment are also some fields of Preventive Medicine.

According to the report "Preventive Medicine system, success and challenge" of Dr. Trinh Quan Huan, the Preventive Medicine system had some functions such as: biostatistics, epidemiology, environmental and occupational medicine, planning and evaluation of health services, management of health care organizations.. etc. Doctor of Preventive Medicine can work

at the Ministry of Health, Research Centers, Preventive Medicine centers...

The branch of Preventive Medicine Doctor is a new training program in Vietnam. The knowledge and understanding of Preventive Medicine students are not much and quite general and lead to their unenthusiastic learning attitude. The first course of Preventive Medicine started in 2007 and up till 2012, there was only 5 courses are training. Therefore, the orientation of Preventive Medicine students from the early years has a very important role. To identify the interventions from the school and the management levels, we conducted this study with the desire to evaluate a scientific level of awareness and attitudes of students towards Preventive Medicine. There is no study that assessed the knowledge and attitudes of students of Preventive Medicine towards their careers in future so far. Hence, we chose this study with 3 objectives:

1. To assess the understanding of Preventive Medicine students towards the functions and duties of Doctor of Preventive Medicine.
2. To assess the attitude of Preventive Medicine students towards their careers in future.
3. To identify factors that influence the knowledge and attitude of Preventive Medicine students towards their careers in future.

2. MATERIAL AND METHODS

2.1. Target population

All the Preventive Medicine students

from the first year to the fifth year from the Faculty of Public Health, Hue University of Medicine and Pharmacy.

2.2. Study methods: Cross-sectional study

2.3. Research duration: From March, 2012 to July, 2012

2.4. Sampling methods: There were 562 students in preventive medicine department, Faculty of Public Health. However, 21 students did not take part in the research. Therefore, the final sample was 536 participants (except 5 students in the research group).

2.5. Data collection:

Using structured questionnaire which were self-administered by participants

2.6. Data analysis:

- Using SPSS program version 16.0
- Using test χ^2 (chi-square test),
- Statistically significant ($p < 0.05$)

3. RESULTS AND DISCUSSION

3.1. Characteristics of target population

- Female students had the higher rate (64.7%) than male students (35.3%).
- The first year students have the highest percentage 35.4% while the 5th year students had the lowest number of students 9.9%.

3.2. Knowledge of students about Preventive Medicine

3.2.1. Knowledge of students about the place of future work of Doctor of Preventive Medicine

Table 1. Knowledge of students about the place of future work of Doctor of Preventive Medicine

No.	Place of work	Absolutely		Maybe		Not sure		No		Unknown	
		n	%	n	%	n	%	n	%	n	%
1	Ministry of health	338	63.1	150	28.0	22	4.1	4	0.7	22	4.1
2	Non-government Organizations	202	37.7	147	27.4	83	15.5	35	6.5	83	15.5
3	Hospital, Health centers, Clinics, Health stations	286	53.4	179	33.4	15	2.8	10	1.9	15	2.8

4	Preventive Medicine Centers	480	89.6	42	7.8	5	0.9	6	1.1	5	0.9
5	Health Research Centers	268	50.0	177	33.0	24	4.5	8	1.5	24	4.5
6	Universities, Colleges	322	60.1	161	30.0	17	3.2	8	1.5	17	3.2
7	Factories, Companies	177	33.0	165	30.8	69	12.9	34	6.3	69	12.9
8	Projects	377	70.3	130	24.3	17	3.2	1	0.2	17	3.2

- Most of the respondents supposed that Doctor of Preventive Medicine could work at the Preventive Medicine Centers (89.6%), work for projects (70.3%), the Ministry of Health (63.1%), and at the Universities and Colleges (60.1%).

- A small number of students thought that Doctor of Preventive Medicine could work in the Non-government Organizations (37.7%), in companies and factories (33.0%).

3.2.2. Knowledge of students about the functions and duties of Preventive Medicine

Table 2. The understanding of students about the functions and duties of Preventive medicine

No.	Functions and duties of Preventive Medicine	Definitely		Maybe		Not sure		No		Unknown	
		n	%	N	%	n	%	n	%	n	%
1	Prevention of Infection diseases	501	93.5	28	5.2	2	0.4	3	0.6	2	0.4
2	Prevention of HIV/ AIDS	487	90.9	39	7.3	4	0.7	3	0.6	3	0.6
3	Prevention of NCDs	387	72.2	117	21.8	14	2.6	14	2.6	4	0.7
4	Medical quarantine at border	354	66.0	129	24.1	34	6.3	4	0.7	15	2.8
5	Using vaccines, biomedicine; expanded vaccination	485	90.5	39	7.3	7	1.3	3	0.6	2	0.4
6	Inspection of food safety	446	83.2	71	13.2	11	2.1	3	0.6	5	0.9
7	Community nutrition work	454	84.7	72	13.4	3	0.6	2	0.4	5	0.9
8	School health care	414	77.2	100	18.7	13	2.4	3	0.6	6	1.1
9	Environmental science works and management of medical environment	399	74.4	111	20.7	14	2.6	2	0.4	10	1.9
10	Occupational health care	411	76.7	89	16.6	21	3.9	4	0.7	11	2.1

Over 90% students thought prevention of Infection diseases, HIV/AIDS and using vaccines, Biomedicine, expanded vaccination are the main Preventive Medicine functions and duties. However, nearly 2% or lower the students did not think these were Preventive Medicine functions and duties.

3.2.3. Knowledge of students about the post-graduate programs

Table 3. Understanding of the students about the post-graduate programs

No.	Post-graduate programs	Absolutely		Maybe		Not sure		No		Unknown	
		n	%	n	%	n	%	n	%	n	%
1	Presidents	246	45.9	89	16.6	60	11.2	42	7.8	99	18.5
2	Specialist level 1	348	64.7	111	20.7	35	6.5	5	0.9	38	7.1
3	Specialist level 2	327	61.0	115	21.5	42	7.8	9	1.7	43	8.0
4	Master	398	74.3	88	16.4	19	3.5	6	1.1	25	4.7
5	PhD, Doctor	377	70.3	97	18.1	23	4.3	7	1.3	32	6.0

There is over 70% of participants reported Doctor of Preventive Medicine can absolutely get higher in post-graduate programs such as master or PhD. Over 60% the students thought Doctor of Preventive Medicine can reach in Specialist level I, II. However, there is just 45.9% assumed Doctor of Preventive Medicine can study in Presidents.

clinic, and the lowest proportion of students in other fields.

3.3. The attitude of students about Preventive Medicine

The level of interest in the branch of Preventive Medicine

3.2.4. Tending to choose the fields of work after graduation

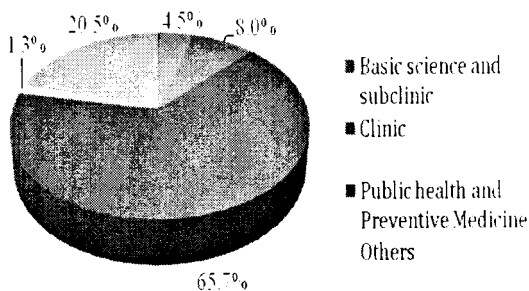


Figure 1. Tending to choose the fields of work after graduation

65.7% the students tended to choose the fields of work in Public Health and Preventive Medicine. Otherwise, there was about 1/5 the number of students (20.5%) had no clear tendency when choosing future career. 8% of respondents would choose in the clinical fields, 4.5% in the basic sciences and para-

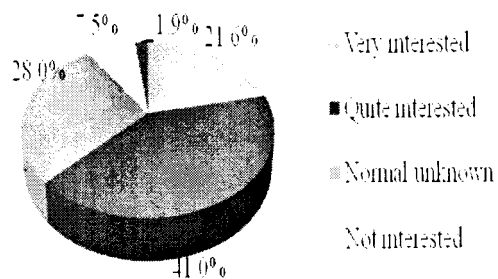


Figure 2. The level of interest in the branch of Preventive Medicine

62.6% of students reported their interest in Preventive Medicine. However, nearly 2% participants was still absolutely not interested in Preventive Medicine.

3.4. Related factors among knowledge and attitude of students of Preventive Medicine Doctor

3.4.1. The relationship between the interest and understanding of students about Preventive Medicine

Table 4. The relationship between the interest and understanding of students about Preventive Medicine

Understanding	Quantity	Interest		P ₂ χ
		N	%	
Good	496	310	62.5	p > 0.05 χ = 0.099
Not good	40	26	65.0	
Total	536	336	62.7	

The interest of students was not significantly associated with the understanding of Preventive Medicine ($p < 0.05$).

3.4.2. The relationship between the interest about Preventive Medicine and the study results of students

Table 5. The relationship between the interest about Preventive Medicine and the study results of students

Study results	Quantity	Interest		P ₂ χ ²
		N	%	
Excellent, good	84	55	65.5	p > 0.05 χ ² = 2.696
Average	343	220	64.1	
Low	109	61	56.0	
Total	536	336	62.7	

The interest about Preventive Medicine was not significantly associated with the study result of students.

3.4.3. The relationship between the good understanding of Preventive Medicine and the students in different courses

Table 6. The relationship between the good understanding of Preventive Medicine and the students in different courses

Course	Quantity	Good understanding		P ₂ χ
		n	%	
Group I (1 st , 2 nd year)	325	313	96.3	p < 0.05 χ ² = 16.995
Group II (3 rd , 4 th , 5 th year)	211	183	86.7	
Total	536	496	92.5	

The good understanding of students about Preventive Medicine was associated with the students in different courses. ($p < 0.05$).

4. DISCUSSION

4.1. Knowledge of students about Preventive Medicine functions and duties and the attitude towards their future careers

4.1.1. Knowledge of students about the functions and duties of Preventive Medicine

According to our research, most of

participants had a good understanding about Preventive Medicine functions and duties. This expressed that the students can access information about Preventive Medicine, especially about prevention of infection diseases HIV/AIDS and using medical biological, vaccination. These fields are some

of the most prominent areas and mentioned on mass media frequently.

4.1.2. Tending to choose the fields of work after graduation of students

65.7% the students reported tending to choose the fields of work in Public Health and Preventive Medicine. However, there is still a high proportion of students who had no clear tendency after graduation (20.5%). This could be because the students are not interested and care too much about jobs after graduation. Besides that, the information about Preventive Medicine and future careers are still vague and unclear or amount of students thought it has been a long time to graduate.

In the other hand, a small proportion tended to choose the clinical fields (8%). These students may be affected from their family. Parents wanted their children to be a medical students or maybe because of the family tradition. Other reasons are that they could not have high score enough to get into the branch of general practitioner or even love practicing at hospital.

4.1.3. The interest of students about Preventive Medicine

62.6% of students reported their interest in Preventive Medicine. However, nearly 2% participants was still absolutely not interested in Preventive Medicine. In addition, The interest in Preventive Medicine is not significantly associated with the understanding of students about Preventive Medicine and the study results of students. During studying, there are many factors that can affect the interest of the students in many ways, included both subjective reasons (ie. the attitude in study, the awareness...) and objective reasons (ie. study curriculum, the difference between the traditional system and credit system). However, we did not have opportunities to get in-deep these problems.

4.2. Related factors among knowledge and attitude of students of Preventive

Medicine Doctor

4.2.1. The relationship between the interest and understanding of students about Preventive Medicine

The interest of students was not significantly associated with the understanding of Preventive Medicine ($p < 0.05$). Our research result is different from our hypothesis. May be because the samples size was still small or some limited research such as there is no course of Preventive Medicine Doctors graduated nationwide up till now, there is no official study about the knowledge and attitude of students about preventive medicine recently. Hence, in order to clarify this relationship, further studies should be examined.

4.2.2. The relationship between the interest about Preventive Medicine and the study results of students

According our research, the interest about Preventive Medicine was not significantly associated with the study result of students. Some of the reasons were mentioned in the section 2.1, however, during the study, we did not have enough conditions to conduct the qualitative researches, organize the in deep-interview or hold focus group discussions, a small proportion of students was not take part in this research. Thus, we need more in-deep studies to make this relationship clearly.

4.2.3. The relationship between the good understanding of Preventive Medicine and the students in different courses

We divided the research sample into two groups because in the first group, the students only begin to study about some general and basic science subjects, they have not to be contacted with the specialized subjects yet. They just learn like the other branch such as general doctors, dentistry students. It also maybe that they are the new students of school so it can be affect in the good understanding of Preventive Medicine. In contrast, the second group included the students from the third

year to the fifth year who had already been approached to the specialized subjects, they had chances and time to identify more about the preventive medicine. Hence, the good understanding of students about Preventive Medicine was associated with the students in different courses. ($p < 0.05$).

5. CONCLUSIONS AND RECOMMENDATION

5.1. Conclusions

- Over 90% students had a good understanding about Preventive Medicine functions and duties.

- 62.6% students were interested in the branch of Preventive medicine.

- The interest in preventive medicine is not significantly associated with the understanding of students about preventive medicine and the study results of students.

- Students in different courses was significantly different in reporting their levels of interest in preventive medicine.

5.2. Recommendation

Further studies are recommended to examine the patterns while marketing and education activities are needed to improve the understanding about the training program and the application in future careers.

REFERENCES

1. Trịnh Quân Huân (2011), *Hệ thống y học dự phòng, thành công và thách thức*, báo cáo Hội nghị khoa học lần thứ nhất - lễ ra mắt Viện đào tạo y học dự phòng và y tế công cộng.
2. Đặng Vũ Cảnh Linh (2008), Một số chỉ báo về vấn đề học tập của sinh viên hiện nay, *Tạp chí tâm lý học*, số 1 (106), tr 42-46.
3. Website Hội đồng y học dự phòng Hoa Kỳ, <https://www.theabpm.org>
4. Website trường Đại học Y Dược Huế, Quy định chuẩn đầu ra bác sĩ y học dự phòng hệ chính quy 6 năm, <http://www.huemed-univ.edu.vn/>.
5. Website Từ điển bách khoa toàn thư Việt Nam - bachkhoatoanthu.gov.vn
6. từ khoá "y học dự phòng".