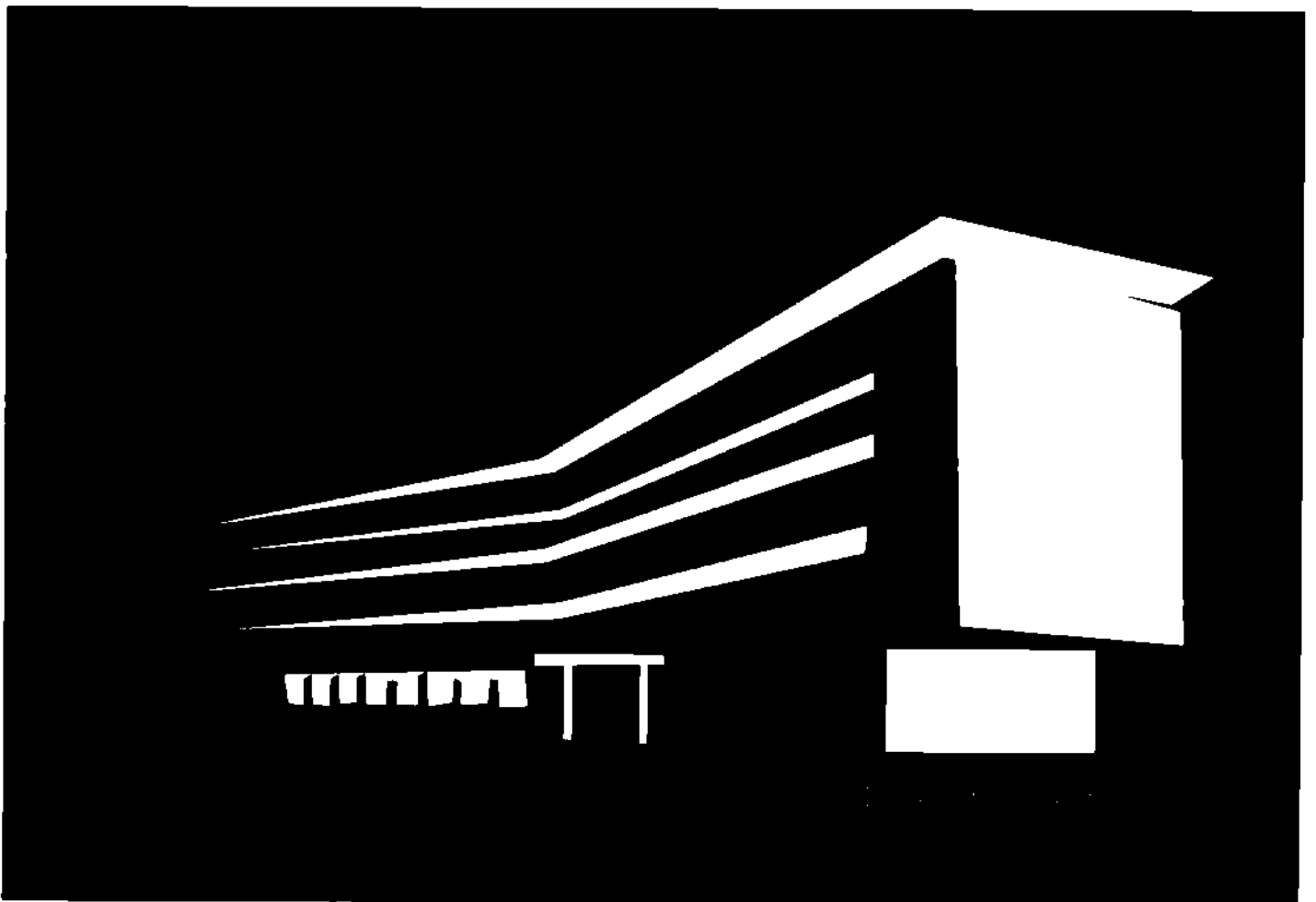




HUE UNIVERSITY OF MEDICINE AND PHARMACY

JOURNAL



CONTENT No.3/2013

	Articles	Page
1	Are the outcomes of psychotic illness more favourable in developing countries? A literature review <div style="text-align: right;"><i>Seiji Humphries</i></div>	5-12
2	Concentration of the serum hs-CRP in patients with chronic renal failure who were treated by conservative therapy <div style="text-align: right;"><i>Nguyen Van Tuan, Vo Tam, Hoang Bui Bao</i></div>	13-15
3	The partnership between Hue University of Medicine and Pharmacy and Tokyo Metropolitan University on the fight against emerging and reemerging infectious diseases in Southeast Asia <div style="text-align: right;"><i>Masami Sugamata, Min Yang, Tran Xuan Chuong, Nguyen Vu Quoc Huy</i></div>	16-21
4	Chromosomal abnormalities in couples with two or more miscarriages <div style="text-align: right;"><i>Tran Thi Thuy Trang, Ha Thi Minh Thi</i></div>	22-26
5	Assessment of left ventricular volume and ejection fraction using speckle tracking echocardiography <div style="text-align: right;"><i>Nguyen Thi Diem, Nguyen Anh Vu, Do Doan Loi</i></div>	27-30
6	Evaluation of the antibody response against <i>T. vaginalis</i> during follow-up visits of pharmacologically treated patients <div style="text-align: right;"><i>Ton Nu Phuong Anh, Ngo Thi Minh Chau, Nguyen Phuoc Vinh, Le Minh Tam, Pier Luigi Fiori, Nguyen Vu Quoc Huy</i></div>	31-38
7	Factors affecting survival probability of patients with breast cancer in Thua Thien Hue Province <div style="text-align: right;"><i>Nguyen Hoang Lan, Nguyen Mau Duyen</i></div>	39-46
8	A2143G point mutation in the 23S rRNA gene: A risk factor of failure of <i>Helicobacter pylori</i> eradication by triple therapy <div style="text-align: right;"><i>Ha Thi Minh Thi</i></div>	47-51
9	Periprocedural complications of image guided venous access port implantation in UKMMC <div style="text-align: right;"><i>Nguyen Vu Dang</i></div>	52-63
10	The effect of stress on academic achievement among preclinical students at Hue University of Medicine and Pharmacy, Vietnam: A pilot study <div style="text-align: right;"><i>Nguyen Van Hung, Wongsu Laohasiriwong, Vo Van Thang</i></div>	64-68
11	Effectiveness of the combination of atorvastatin and aspirin on the inflammation and progression of carotid atherosclerosis in patients with acute cerebral infarction <div style="text-align: right;"><i>Le Chuyen</i></div>	69-75
12	Determination of acetylsalicylic acid and its major metabolites in human urine by High-Performance Liquid Chromatography <div style="text-align: right;"><i>Tran Thui Son, Marcus Öhman</i></div>	76-81

13	Evaluation the results of thoracoscopic esophagectomy for esophageal cancer <i>Duong Xuan Loc, Hoang Trong Nhat Phuong, Ho Van Linh, Le Manh Ha, Le Loc</i>	82-87
14	The efficacy of intrathecal morphine for postoperative analgesia after valve surgery <i>Nguyen Van Minh</i>	88-93
15	Assesment of essential skills and needs for scientific research of students in Hue University of Medicine and Pharmacy <i>Tran Dinh Trung, Vo Van Thang, Nguyen Van Hoa, Tran Binh Thang, Nguyen Thi Nga, Hoang Dinh Tuyen, Hoang Duc Thuan Anh, Tran Thi Thanh Thu, Cao Thi Khanh Thu, Hau Nguyen Nhat Minh, Pham Minh Tuan, Ngo Thi Bich Ngoc</i>	94-100
16	Hemoglobin and thalassemia <i>Le Phan Minh Triet, Phan Thi Thuy Hoa, Bruno Masala</i>	101-108
17	Vietnamese Medical Students' attitudes toward the doctor-patient relationship <i>Bui Thi Hy Han, Michael P Dunne, Gerald J Fitzgerald</i>	109-116
18	Prevalence of dental caries among adult patients at commune health centres in Central Vietnam <i>Hoang Anh Dao, Nguyen Toai, Nguyen Minh Tam, Ngo Hien, Peter Hill</i>	117-124
19	Medicine and Pharmacy news <i>Le Minh Tan</i>	125-127

ASSESSMENT OF ESSENTIAL SKILLS AND NEEDS FOR SCIENTIFIC RESEARCH OF STUDENTS IN HUE UNIVERSITY OF MEDICINE AND PHARMACY

Tran Dinh Trung¹, Vo Van Thang², Nguyen Van Hoa², Tran Binh Thang², Nguyen Thi Nga², Hoang Dinh Tuyen¹, Hoang Duc Thuan Anh¹, Tran Thi Thanh Thu¹, Cao Thi Khanh Thu¹, Hau Nguyen Nhat Minh¹, Pham Minh Tuan¹, Ngo Thi Bich Ngoc¹

(1) Student, Faculty of Public Health, Hue University of Medicine and Pharmacy, Viet Nam

(2) Personnel, Faculty of Public Health, Hue University of Medicine and Pharmacy, Viet Nam

Abstract

Background: Scientific research for students still requires more attention. To obtain good research skills, it is required that any individuals should cultivate their knowledge early on, especially during college time when they learned fundamental knowledge of scientific research in university. **Objectives:** 1. To assess essential skills in scientific research of students of Hue University of Medicine and Pharmacy. 2. To assess the needs for essential skills in scientific research of students of Hue University of Medicine and Pharmacy. **Study methods:** *Quantitative research:* 535 students included 253 males and 282 females who majored in General Practitioner, Preventive Medicine, Bachelor of Public Health of Hue University of Medicine and Pharmacy. *Qualitative research:* Students in different academic years were separated into two groups: the first group is the students who have been participating in researches (including thesis) and the second group is the students who haven't been participating. In each group, 10 students were selected with the same gender ratio to participate in focus group discussions. **Results:** 71.4% of the students involved in scientific research activities with the majority participating because these activities were a part of their curriculum (65.8%). Students conducting their thesis researches had higher skills and needs for learning these skills compared to students who did not ($p < 0.05$). Public health and Preventive medicine students mastered the research skills better and had higher needs for learning these skills compared to General Practitioner students ($p < 0.05$). **Conclusion:** A high prevalence of students participated in activities related to scientific research but mainly in simple and compulsory forms. Students conducting their thesis researches and majoring in Public health and Preventive medicine have higher level of skills and needs for learning these skills compared to the others.

Key words: *student, scientific research, skills, needs.*

1. INTRODUCTION

Scientific research is very important because it produces new knowledge, and provides scientific proof for clinical practice and community intervention programs. The important "Products" of scientific research is the articles of science, therefore, the article is often used to measure scientific productivity and the level of scientific research. Recently, there have been the analysis and evaluation of scientific publications in Vietnam of Prof. Nguyen Van Tuan and his colleagues on the

Scientometrics Journal, it shows that during about 20 years from 1991 to 2010, the total number of international articles that Southeast Asian countries published in the international Journal, the Institute for Scientific Information is about 165.020, accounted for 0.5% of the total number of articles all over the world. And in Vietnam, it was accounted for about 6% (9901 article), lower than other countries in the same region such as Singapore (45%), Thailand (21%), Malaysia (16%), Indonesia and the Philippines (5%) [10].

Corresponding author: Tran Dinh Trung, email: idtrung.yhdp@gmail.com

*Received: 22/4/2013 * Revised: 18/5/2013 * Accepted: 15/6/2013*

Scientific research among students is paid more and more attention in order for them to do research well in the future. To make this happen, students have to learn hard, especially when they are still at universities. Scientific research is the first step to help students get used with the most basic as well as necessary skills in scientific research and also help them develop thinking skills and research methods [7], [8], [9]. A research at the Can Tho University showed that 68.52% students have accurate knowledge about scientific research and approximately 31.48% students do not understand what scientific research really means [3].

At Hue University of Medicine and Pharmacy, the number of scientific research works of students from the year 2006 to 2012 didn't increase, but instead, it decreased from 17 threads to 13 threads [2]. With the wish to assess the research skills of students and how many students participating in scientific research, we conducted this research: "Assessment essential skills and the needs of doing scientific research in students of Hue University of Medicine and Pharmacy". Our objectives are: 1. *To assess essential skills in scientific research of students of Hue University of Medicine and Pharmacy.* 2. *To assess the needs for essential skills in scientific research of students of Hue University of Medicine and Pharmacy.*

2. STUDY METHODS

2.1. Study design:

The study was designed as a cross-sectional investigation, in which 535 students between 3rd - 6th academic years including: General Practitioner, Preventive medicine doctor students and bachelors of Public Health students in Hue University of Medicine and Pharmacy. This cross-sectional study used a combination of quantitative and qualitative method.

The self-administered questionnaire was sent to class under guideline of a researcher.

2.2. Participants:

The participants for quantitative survey were recruited based on the available lists of class students from undergraduate training office. A total of 535 students were recruited as eligible students for the study include: General Practitioner students (434 students from 5th-6th academic years - GP); Preventive Medicine doctor students (PM -

5th) and Bachelor of Public health students (PH - 3rd and 4th): 101 students.

The reason for choosing the students is that 3rd and 4th for BPH students, 5th for PMD students, 5th and 6th for General Practitioner students completed the scientific research credit, community practise in their curriculum.

2.3. Data collection

- Quantitative study: The self-administered questionnaire was sent to class under guideline of a researcher and observation of staff from Undergraduate of Training office.

- Qualitative research: Students in different academic years were separated into two groups: the first group is the students who have been participating in researches (including thesis) and the second group is the students who haven't been participating in. In each group, 10 students were selected with the same gender ratio to participate in focus group discussions.

2.4. Instrument

- Quantitative questionnaire includes: situation of scientific research; assessment of scientific research skills and needs for scientific research.

- The original scale consisted of 10 items of scientific research skills: Writing proposal; Literature review; Developing the questionnaire and collect research data in the field; Writing a Scientific Paper; Presentation; Team work; Communication; Qualitative research. Items of the scientific research skills section were scored on a 4-point scale, ranging from 1 for 'Never' to 4 for 'Very often'. Items of how confident you feel in performing these skills section were scored on a 3-point scale, ranging from 1 for "Not confident at all" to 3 for 'Very confident'. Items of needs for these skills section were scored on a 3-point scale, ranging from 1 for '1-"Not satisfied" to 3 for 'Very satisfied'.

- Qualitative questionnaire: we carried out the essential skills in scientific research of students which have been done by them and how confident you feel in performing these skills. The result above was supported for quantitative research.

2.5. Measurements of endpoints

The Skills of scientific research is the ability to do the science topic based on mastering the scientific theory [6].

The participation of scientific research: the activities relating to scientific research as: do the science topic at a level of master or assistant, graduation thesis, public internship report, clinical report, test or essay [5].

2.6. Data Analysis

All data analysis was carried out according to a pre-established analysis plan. Proportions were compared by using Chi-squared tests with continuity correction or Fisher's exact test when appropriate. The analysis was performed with the SPSS version 16.0

The results of FGDs were analyzed using a 'content analysis' method.

2.7. Study ethical

The study was approved by the moral council of Hue University of Medicine and Pharmacy. Participants were informed and approved self-complete paper consent form to participate in the study. Their name which are quoted in the report are written according to the letter. All information which objects supplied is confidential, is recorded with consent of the objects.

3. RESULTS

3.1. Number of students engaging activities relative to scientific research

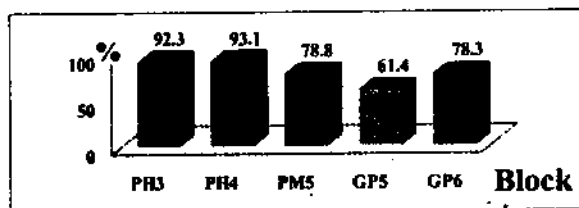


Chart 1. The percentage of students engaging scientific research activities

3.2. Evaluate scientific research skills of students

Table 1. Evaluate scientific research skills of group of students doing theses

No.	Skills	Graduation theses					
		Yes		No		Total	
		n	%	n	%	n	%
1	Writing proposal**	74	47.4	41	10.8	115	21.5
2	Literature review**	79	50.6	104	27.4	183	34.2
3	Developing the questionnaire and collect research data in the field**	138	88.5	225	59.4	363	67.9
4	Data analysis**	71	45.5	50	13.2	121	22.6
5	Report writing**	77	49.4	90	23.7	167	31.2

Comment: Among 71.4% of students participating in scientific research, 93,1% of Students of Public Health (the highest percentage), and 61,4% of General Practitioner students (the lowest percentage).

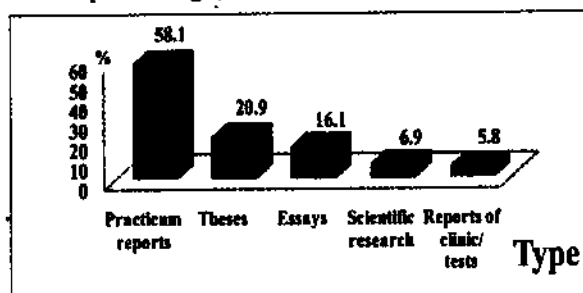


Chart 2. Type of reports and theses

Comment: Report of community practicum account for 58.1% (the highest percent) that is ten times higher than school-leveled scientific research (6.9%) and three times higher than graduation theses (20.9%).

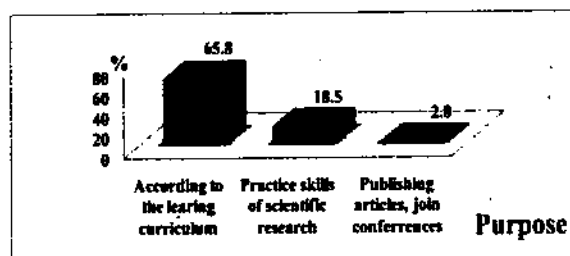


Chart 3. The purposes of students when they participating in research.

Comment: Students engaging scientific research for the purpose of going with the learning program make up 65.8 % that is 3.5 times higher than that of improving research skills (18.5%) and 23 times higher than that of publishing on news, taking part in conference (2.8%).

6	Writing a Scientific Paper**	30	19.2	21	5.5	51	9.5
7	Presentation**	68	43.6	90	23.7	158	29.5
8	Team work	71	45.5	179	47.2	250	46.7
9	Communication*	103	66.0	206	54.4	309	57.8
10	Qualitative research	29	18.6	67	17.7	96	17.9

** : $p < 0.01$; * : $p < 0.05$

Comment: Scientific research skills of students doing graduation theses is higher than that of not doing graduation theses. It has statistical meaning ($p < 0.05$). To skills of working in team and implementing qualitative research. There is not any difference between the two groups.

Table 2: Evaluate scientific research skills of group of students of General Practitioner, of public health and prevent medicine.

No.	Skills	Sectors					
		Sectors BH-PM		Sectors GP		Total	
		n	%	n	%	n	%
1	Writing proposal**	42	41.6	73	16.8	115	21.5
2	Literature review**	49	48.5	134	30.9	183	34.2
3	Developing the questionnaire and collect research data in the field**	96	95.0	267	61.5	363	67.9
4	Data analysis**	33	32.7	88	20.3	121	22.6
5	Report writing**	46	45.5	121	27.9	167	31.2
6	Writing a Scientific Paper**	10	9.9	41	9.4	51	9.5
7	Presentation**	42	41.6	116	26.7	158	29.5
8	Team work	51	50.5	199	45.9	250	46.7
9	Communication	58	57.4	251	57.8	309	57.8
10	Qualitative research	18	17.8	78	18.0	96	17.9

** : $p < 0.01$

Comment: The percentage of Public health and Prevent medicine with proficient research skills is higher than that of students of General Practitioner. It has statistical meaning with $p < 0.05$. To soft and writing scientific article skills, there is not any difference between the two groups ($p > 0.05$).

3.3. The need for skills of scientific research of students

Table 3. The need for skills of scientific research of students doing graduation theses

No.	Skills	Essential/Very necessary					
		Graduation theses				Total	
		Yes		No			
		n	%	n	%	n	%
1	Writing proposal**	140	89.7	218	57.5	358	66.9
2	Literature review**	151	96.8	291	76.8	442	82.6
3	Developing the questionnaire and collect research data in the field**	147	94.2	260	68.6	407	76.1
4	Data analysis**	149	95.5	292	77.0	441	82.4
5	Report writing**	151	96.8	295	77.8	446	83.4
6	Writing a Scientific Paper**	136	87.2	253	66.8	389	72.7
7	Presentation**	148	94.9	307	81.0	455	85.0
8	Team work*	145	92.9	329	86.8	474	88.6
9	Communication	148	94.9	342	90.2	490	91.6
10	Qualitative research**	121	77.6	237	62.5	358	66.9

** : $p < 0.01$; * : $p < 0.05$

Comment: Students doing graduation theses with the need to know scientific research skills is higher than that of Students without graduation theses. It has statistic meaning with $p < 0.05$. There is not any difference between the two groups in terms of communicating skills ($p > 0.05$).

Table 4. The current need for skills of scientific research of Public Health, prevent medicine and General Practitioners students

No.	Skills	Block PH-PM		Block GP		Total	
		n	%	n	%	n	%
1	Writing proposal**	89	88.1	269	62.0	358	66.9
2	Literature review**	94	93.1	348	80.2	442	82.6
3	Developing the questionnaire and collect research data in the field**	95	94.1	312	71.9	407	76.1
4	Data analysis**	99	98.0	342	78.8	441	82.4
5	Report writing**	97	96.0	349	80.4	446	83.4
6	Writing a Scientific Paper**	85	84.2	304	70.0	389	72.7
7	Presentation**	98	97.0	357	82.3	455	85.0
8	Team work**	97	96.0	377	86.9	474	88.6
9	Communication*	98	97.0	392	90.3	490	91.6
10	Qualitative research**	81	80.2	277	63.8	358	66.9

** : $p < 0.01$; * : $p < 0.05$

Comment: The need of scientific research skills of Public Health. Prevent medicine students is higher than that of General Practitioner students. It has statistic meaning with $p < 0.05$.

3.4. Scientific research shortcomings

Table 5. Difficulties of students when they carry out scientific research

No.	Skills	Total		Graduation theses				Sectors			
				Yes		No		GP		PH-PM	
		n	%	n	%	n	%	n	%	n	%
1	Data analysis	168	36.4	35	31.8	117	39.4	32	40.0	120	36.7
2	Report writing	39	8.4	17	15.5	48	16.2	12	15.0	53	16.2
3	Developing the questionnaire and collect research data in the field*	30	6.5	14	12.7	41	13.8	4	5.0	51	15.6
4	Review of the literature*	13	2.8	17	15.5	44	14.8	19	23.8	42	12.8
5	Analysis of the problem	6	1.3	5	4.5	8	2.7	3	3.8	10	3.1
6	Planning	4	0.9	1	.9	7	2.4	0	0.0	8	2.4
7	Writing proposal	23	5.0	8	7.3	20	6.7	4	5.0	24	7.3
8	Team work	5	1.1	1	.9	4	1.3	1	1.3	4	1.2
9	Communication	5	1.1	2	1.8	3	1.0	1	1.3	4	1.2
10	Access to Research	7	1.5	4	3.6	3	1.0	0	0.0	7	2.1

* : $p < 0.05$

Comment: Up to 36.4% of students face difficulties in data analysis. Skills developing the questionnaire and collect research data in the field, the research subjects of public health and preventive medicine more difficult than objects of research disciplines general practitioner students and it has statistic meaning with $p < 0.05$. In contrast, subjects in disciplines general doctor to get stuck on writing literature reviews is higher than the object of study of public health and preventive medicine, and it has statistic meaning with $p < 0.05$.

4. DISCUSSION

Table 1 shows that the students' research skills are still not high, in which the students doing thesis rather high, but not significant. Especially in writing scientific papers, there has been up to 90.5% students making self-assessment is not good, in the group doing thesis, the rate is about 80.8%. With qualitative research skills, writing proposals, the rate is 82.1% and 78.5% students didn't assess themselves very well. Almost more than half of the students haven't had a good self-assessment about other skills, except those skills: building tools collecting information, field investigation and communication skills. This is also reasonable because they got to know these skills since the 3rd, 4th, 5th years through subjects such as epidemiology, methods of scientific research or community practice [2].

Table 2 shows that the students assessing themselves are not good at in three skills: writing scientific papers, doing research and writing proposals. Namely in Public Health-Preventive Medicine block, 90.1% of students said that their ability to write scientific papers is not good; more than 80% of them do not have any experience in doing qualitative research yet. The same goes with General Practitioners, these rates are 90.6% and 82.1%. This matches the objectives in the training block of public health: participate in scientific research, enrich knowledge to meet the needs of caring and protecting people's health and the needs of public health workers [4]. However, students of public health as well as Preventive Medicine block practice more research skills. Specifically, the basic sciences such as epidemiology, scientific research methods, public health block have more courses [1], especially with the subjects of Biostatistics and statistical software, only public health students and preventive medicine students had taught.

More than half of them have needs at all skills, especially the soft skills. Namely, 85.0% are short of presentation skills, 88.6% are short of working group skills, 91.6% are short of communication skills. Beside those above skills, the group doing thesis have such a very high needs of finding information as well as writing papers and analysing processing data (see in Table 3).

"Although there are a lot of English resources, our ability to translate them still doesn't reach 60%. which drives us to a great lack of information" (Group discussion, M, male, Y6 class, doing thesis). N, 3rd year of public health shared "the utmost skill that I need to build now is to analyse the data because data processing software as far as I know is too plain and before till now, we just apply it and did nothing like creativity." (N, female, 3rd year of public health, doing thesis).

As we can see in Table 4, students in Public Health-Preventive Medicine and General Medicine block have the needs for scientific research skills, especially the soft skills, analytical skills, information processing skills, finding documentation and writing papers skills. However, public health students and Preventive Medicine have higher demand and this is consistent with the goal of training and public health courses in those block.

While doing research, students have many advantages such as the caring of guiding teachers, funding, equipment, and legal issues as well as procedures [5]. In the other hand, there are still difficulties that they encounter, most is to analyse the data, writing report skills... However, in the group discussions, we found that the barriers making students not do research is the funding issue and experience. H said "If we have the idea, it can be suppressed due to lacking money, and we never thought it would be done since we have no experience" (H, male, 5th year of Preventive Medicine, do thesis). L shared "We do if the University ask us to do, if we have idea, those shut themselves off due to lack of money", (L, male, 5th year of Preventive Medicine, doing no thesis).

5. CONCLUSIONS

Through research we draw some conclusions as follows:

- Scientific research skills of students doing graduation theses is higher that of not doing graduation theses. It has statistic meaning ($p < 0.05$).

- The percentage of Public health and Preventive medicine with proficient research skills is higher

than that of students of General Practitioner. It has statistic meaning with $p < 0.05$.

- Students doing graduation theses with the need to know scientific research skills is higher than that of Students without graduation theses. It has statistic meaning with $p < 0.05$.

- The need of scientific research skills of Public Health, Prevent medicine students is higher than

that of General Practitioner students. It has statistic meaning with $p < 0.05$.

- Up to 36.4% of students face difficulties in data analysis.

6. RECOMMENDATION

Strengthening the time to practice the skills of scientific research in universities.

REFERENCES

1. Phong Dao tao Dai hoc, Truong DH Y Duoc Hue (2012) *Khung chuong trinh hoc cua doi tuong Bac si da khoa va Cu nhan YTCC, Bac si YHDP - mon dich te, phuong phap nghien cuu khoa hoc*,
2. International relation and Science office, Hue University of Medicine and Pharmacy (2012) *Statistics on the number of students to participate in scientific research from 2006 to 2010*,
3. Dinh Minh Quang (2009) *Study the situation scientific research in the 3rd year student at the University of Can Tho city in 2009*, Can Tho University.
4. Bo Giao duc va Dao tao (2001) *Chuong trinh dao tao cu nhan YTCC. Quyet dinh so:12/2001/QD-BGD&DT*.
5. Dang Thi Van (2006) "Scientific research activities of students of the University of Agriculture I and the common difficulties". *Journal of Psychological Medicine*, 3 (84), 55-59.
6. Pham Viet Vuong (Ed.) (1997) *The methodology of scientific research*, Hanoi National University Publisher.
7. Lopatto D (2007) "Survey of Undergraduate Research Experiences (SURE): first findings". *Cell Biol Educ*. 2004, 3, 270-277.
8. Laursen SL, Hunter AB, Seymour E (2006) "Becoming a scientist: the role of undergraduate research in students' cognitive, personal, and professional development". *Science Education*, 91, 36-74.
9. Hunter AB, Seymour E, Laursen SL, Deantoni T (2004) "Establishing the benefits of research experiences for undergraduates in the sciences: first findings from a three-year study". *Science Education*, 88, 493-534.
10. TuanV Nguyen, LyT Pham (2011) "Scientific output and its relationship to knowledge economy: an analysis of ASEAN countries". *Scientometrics*, 89 (1), 107-117.

ACKNOWLEDGMENTS

We would like to give our sincere thanks to the Netherlands-Vietnam Project at Hue University of Medicine and Pharmacy funded to complete this study.