

EVALUATING RESULTS OF TRIAL APPLICATION OF SOME CLINICAL TEACHING - LEARNING METHODS FOR MEDICAL STUDENTS OF HAIPHONG UNIVERSITY OF MEDICINE AND PHARMACY

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SUMMARY

Objectives: To evaluate the effectiveness of intervention on 4 skills (communication with patients, taking history, taking previous-history and writing medical records) of medical students at Haiphong University of Medicine and Pharmacy in 2014 - 2016. Subjects: the 4th year students (93 in the intervention group and 94 in the control). Methods: Design of intervention study with control group. The intervention group was randomly selected in 2 classes A and B with 93 the 4th year students, were trained in 4 skills (communication with patients, taking history, taking previous-history and writing medical records). The control group was randomly selected in 2 classes E and F with 94 the 4th year students, were not trained on these skills. The research was conducted in Pediatric and Surgery Departments of Haiphong University of Medicine and Pharmacy. Results: 4 skills (communication with patients, taking history, taking previous-history and writing medical records) of the intervention group and the control group were very low and there was no difference between the two groups. After 9 weeks of the intervention, the mean score of the intervention group's skills was significantly higher than before intervention ($p < 0.05$) and in comparison with the control group. After 2 years of the intervention, 4 skills of the intervention group increased significantly compared to before intervention, after 9 weeks of the intervention and control group. Conclusions: After intervention, 4 skills of the students were significantly improved compared to the control group.

* *Keywords: Clinical; Communication with patients; Taking history; Taking previous-history; Writing medical records.*

INTRODUCTION

Clinical teaching - learning plays an important role in medical education. In our previous research, the skills of communication with patients, taking history, taking previous-history and writing medical records of medical students were very weak. What should be done to improve the clinical skills for medical students?. The objective of this study is: *To evaluate*

the effectiveness of intervention on 4 skills (communication with patients, taking history, taking previous-history and writing medical records) of medical students of Haiphong University of Medicine and Pharmacy in 2014 - 2016.

Hopefully, the obtained results will contribute to improve the quality of clinical teaching - learning at Haiphong University of Medicine and Pharmacy as well as at other medical universities of Vietnam.

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SUBJECTS AND METHODS

1. Subjects.

- The 4th year students (93 in the intervention group and 94 in the control).

2. Methods.

** Research design:*

Design of intervention study with control group. The intervention group was randomly selected in 2 classes A and B with 93 the 4th year students, they were trained in 4 skills (communication with patients, taking history, taking previous-history and writing medical records). The control group was randomly selected in 2 classes E and F with 94 4th-year students, they were not trained on these skills. The research was conducted in Pediatric and Surgery Departments of Haiphong University of Medicine and Pharmacy.

** Sample size:*

The intervention group was randomly selected in 2 classes A and B with 93 4th-year students. The control group was randomly selected in 2 classes E and F with 94 4th-year students.

** Interventional method:*

- Students of intervention group were trained in 4 skills (communication with patients, taking history, taking previous-history and writing medical records). Students of control group were not trained on these skills. The research was conducted in Pediatric and Surgery Departments of Haiphong University of Medicine and Pharmacy.

+ Assessment of 4 clinical skills: Communication with patients, taking history, taking previous-history and writing medical record by the checklist.

+ Time for assessment: Before intervention; after 9 weeks of intervention; after 2 years of intervention.

- To compare average score of 4 skills of intervention group before and after intervention 9 weeks, 2 years and compared with the control group.

* *Evaluation criteria:* Based on the checklist:

+ 0 points: Do not do.

+ 1 point: Wrong, incomplete.

+ 2 points: Master the skill.

+ % skill gained = total score achieved/ total score x 100%.

** Data processing:*

Data was collected, analyzed using SPSS 22.0 software. Research indicators are calculated in terms of frequency, percentage and mean value. For qualitative research classified and grouped by students, lecturers.

** Ethics in research:*

This research has been approved by the Research Council of the proposal of Haiphong University of Medicine and Pharmacy.

RESULTS AND DISCUSSION

Communication is an important starting skill for a professional relationship between a doctor and a patient to carry out health care for a patient. Feeling through initial communication is very important. When the sick person feels the doctor's friendliness and considerateness, the patient will get over the pain to cooperate with the doctor. If the patients does not feel the friendliness, safety when

communicating, surely the patients will refuse to participate in the next process in health care. Effective communication helps improve health care outcomes for patients; reducing the impact of factors affecting health, health care and

improving the effectiveness of health activities [4, 5, 6, 7].

Results of intervention on some clinical skills of medical students at Haiphong University of Medicine and Pharmacy as followed:

Table 1: Comparison of students' communication skill scores before, after intervention for 9 weeks, 2 years and with control group.

Group		Average score of communication skill with patients
Control group (n = 94)	Before intervention (a)	40.12 ± 10.23
	After 9 weeks of intervention (b)	43.01 ± 11.34
	After 2 years of intervention (c)	48.76 ± 13.07
Intervention group (n = 93)	Before intervention (d)	41.06 ± 9.75
	After 9 weeks of intervention (e)	47.12 ± 12.93
	After 2 years intervention (f)	60.07 ± 11.18
p	a/b	> 0.05
	d/e	< 0.001
	a/c	< 0.01
	d/f	< 0.001
	b/c	< 0.01
	e/f	< 0.001
	a/d	> 0.05
	b/e	< 0.01
c/f	< 0.001	

Before intervention, average score of communication skill with patients of the intervention group and the control group was very low and there was no difference between the two groups. After 9 weeks of the intervention, average score of the intervention group was significantly higher than before intervention ($p < 0.01$) and in comparison with the control group. After 2 years of the intervention, average score of the intervention group increased significantly

compared to pre-intervention and after 9 weeks of the intervention and in comparison with control group.

Our research results were consistent Nguyen Thi Anh Thu's study (2010), which showed that 41.5% of students did not greet the patients; 32.1% offered but not yet achieved; 26.4% were assessed as acquired; 52.8% of students did not introduce themselves; 28.3% had introduced but did not success, only 18.9% of the

students introduced themselves when contacting the patients. This showed that students had a huge shortage of communication skills while skills are considered to be the most basic and minimum things that all medical students should have. The average score of communication skills students achieved after intervention 9 weeks and 2 years in the intervention group increased by 4.11 points, 11.31 points respectively compared to post-intervention in the control group, the difference was statistically significant with $p < 0.05$; however, the average skill of communication was only moderate. Research results showed that the actual communication skills of students were not good. This is explained by the fact that communication skills was taught and

integrated in training programs, students have not been taught as a formal subject. Meanwhile at Masstricht University, the communication skill is trained every 2 weeks from the first year to the sixth year. Nguyen Bich Loan et al [2] evaluated communication skills on fourth-year medical students at Hochiminh City's University of Medicine and Pharmacy at the end of the training of communication skills, showed the average of communication skills of students was 6.7/10. The study applied active learning methods on 145 medical students divided into 15 groups, this study was followed up by 4 observers directly. The results showed that 64.86% of the students acquired communication skills through determined positive learning methods.

Table 2: Comparison of students' taking history skill scores before, after intervention for 9 weeks, 2 years and in comparison with control group.

Group		Average score of taking history skill
Control group (n = 94)	Before intervention (a)	49.78 ± 11.06
	After 9 weeks of intervention (b)	52.05 ± 10.43
	After 2 years of intervention (c)	64.62 ± 13.61
Intervention group (n = 93)	Before intervention (d)	50.46 ± 10.14
	After 9 weeks of intervention (e)	55.07 ± 9.42
	After 2 years intervention (f)	73.57 ± 12.08
p	a/b	> 0.05
	d/e	< 0.01
	a/c	< 0.001
	d/f	< 0.001
	b/c	< 0.001
	e/f	< 0.001
	a/d	> 0.05
	b/e	< 0.05
c/f	< 0.001	

Before intervention, average score of taking history skill of the intervention group and the control group was very low and there was no difference between the two groups. After 9 weeks of the intervention, average score of the intervention group was significantly higher than pre-intervention ($p < 0.01$) and in comparison with the control group. After 2 years of the intervention, average score of the intervention group increased significantly compared to before intervention and after 9 weeks of the intervention and in comparison with control group ($p < 0.01$).

Score of taking history after 9 weeks and after 2 years of intervention increased by 4.61 points and 23.21 points respectively

compared to pre-intervention, the difference was statistically significant.

Regarding to taking previous history skill, table 3 showed that before the intervention, the average score of both intervention and control groups was low and there was no difference between the two groups. After 9 weeks of intervention, the average score of the intervention group increased significantly compared to pre-intervention and compared with the control group. After 2 years of intervention, the skill score of the intervention group was significantly increased compared to pre-intervention, after 9 weeks of intervention and control group.

Table 3: Comparison of students' taking previous history skill scores before, after intervention for 9 weeks, 2 years and in comparison with control group.

Group		Average score of taking previous history skill
Control group (n = 94)	Before intervention (a)	51.17 ± 9.23
	After 9 weeks of intervention (b)	53.01 ± 12.01
	After 2 years of intervention (c)	60.17 ± 10.03
Intervention group (n = 93)	Before intervention (d)	50.96 ± 10.16
	After 9 weeks of intervention (e)	56.45 ± 13.05
	After 2 years intervention (f)	68.05 ± 11.07
p	a/b	> 0.05
	d/e	< 0.01
	a/c	< 0.001
	d/f	< 0.001
	b/c	< 0.001
	e/f	< 0.001
	a/d	> 0.05
	b/e	< 0.01
c/f	< 0.001	

Before intervention, average score of taking previous history skill in the intervention group and the control group was very low and there was no difference between the two groups. After 9 weeks of the intervention, average score of the intervention group was significantly higher than before intervention ($p < 0.01$) and in comparison with the control group. After 2 years of the intervention, average score of the intervention group increased significantly compared to pre-intervention and after 9 weeks of the intervention and in comparison with control group ($p < 0.01$).

Skill score of taking previous history after 9 weeks and after 2 years of intervention increased by 5.49 points and 17.09 points, respectively, compared to pre-intervention, the difference was statistically significant. Thus, the average score of taking history and taking previous history after 2 years increased, the difference was statistically significant with $p < 0.001$. This is explained by the fact that these are basic skills, students have practiced regularly so they were more active in the process of implementation. Nguyen The Hien's findings [7] on the graduates at 8 medical universities of Vietnam showed that the average score of taking history skill was 3.10 on a scale of 4. Research by Josephine et al [8] on a third-year medical students, a pre-post-test and skills test was conducted to measure attitudes and proficiency in

applying EBM. The third year students volunteered to participate in surveys and skills tests were started and completed in 12 weeks in internal medicine. 88% of students participated in the pre-intervention survey, 68% of students participated in the survey after the intervention. Average score before intervention on clear clinical questioning, finding the best clinical evidence corresponding to taking history, taking previous history was about 3 scores and after intervention was 4 scores on a scale of 5 with $p < 0.05$. Wolpaw et al [9] conducted a study comparing the SNAPPS model with 19 cases and the group of traditional presentation of 41 cases. The results showed that the score of group presenting the SNAPPS model performed skills of taking history, taking previous history, giving concerns about signs and clinical symptoms that was not statistically significant different from the OMP group with $p = 0.64$ according to students' opinions; $p = 0.968$ according to the teacher's opinions. However, there was a study carried out from 2011 to 2013 by Seki et al [10], involving 71 resident students in 2 hospitals, randomly divided into 2 groups; one group using SNAPPS, one the group using OMP. The results showed that the members of the SNAPPS group raised questions and concerns about the case corresponding to taking history and previous history, which was higher than the OMP group with $p < 0.001$.

Table 4: Comparison of students' writing medical record skill scores before, after intervention for 9 weeks, 2 years and in comparison with control group.

Group		Average score of writing medical record skill
Control group (n = 94)	Before intervention (a)	48.76 ± 8.23
	After 9 weeks of intervention (b)	51.04 ± 11.65
	After 2 years of intervention (c)	65.07 ± 13.16
Intervention group (n = 93)	Before intervention (d)	49.85 ± 9.05
	After 9 weeks of intervention (e)	55.01 ± 12.73
	After 2 years of intervention (f)	76.09 ± 10.18
p	a/b	> 0.05
	d/e	< 0.01
	a/c	< 0.001
	d/f	< 0.001
	b/c	< 0.001
	e/f	< 0.001
	a/d	> 0.05
	b/e	< 0.05
c/f	< 0.001	

Before intervention, average score of writing medical record skill of the intervention group and the control group was very low and there was no difference between the two groups. After 9 weeks of the intervention, average score of the intervention group was significantly higher than before intervention ($p < 0.01$) and in comparison with the control group. After 2 years of the intervention, average score of the intervention group increased significantly compared to pre-intervention and after 9 weeks of the intervention and in comparison with control group ($p < 0.01$).

The skill score of writing medical record after 9 weeks and after 2 years of

intervention increased by 5.16 scores and 26.24 scores, respectively, the difference was statistically significant. Wolpaw et al [9] compared the SNAPPS group of 90 cases with the traditional group of 93 cases, the results showed that students gave an average of 1.81 differential diagnoses compared to the traditional group of 1.42; 6.67% of SNAPPS group raised concerns compared with 1.08% of the traditional group; gave an average of 2.39 basic characteristics to support differential diagnosis compared to 1.22 in the traditional group; 6.67% of students voluntarily chose related issues compared with 0% in traditional groups. The duration

of the case presentation was 12 minutes, which was not significantly different from the traditional group of 11.2 minutes.

CONCLUSIONS

- Before the intervention, the average score of the 4 skills (communicating with the patient, taking history, taking previous history and writing medical record) of the students in both the intervention group and the control group was very low and there was no difference between the 2 groups.

- After intervention for 9 weeks, 2 years, the average of 4 skills (communicating with patients, taking history, taking previous history and writing medical records) of the intervention group were improved compared to pre-intervention and compared to the control group, the difference was statistically significant.

RECOMMENDATION

To improve the quality of medical training, teaching - learning of the skills (communicating with patients, taking medical history, taking previous history and writing medical records must be applied regularly and continuously at Medical Universities.

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