C11 Clinical skills training

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Clinical Skills Training in the Community: Lesson Learned from Diponegoro and Gadjah Mada University

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ABSTRACT

Background: *Community-based education (CBE) clerkship in Faculty of Medicine Diponegoro University (FMDU) is implemented after finishing clinical rotation in tertiary hospital, whereas in Gadjah Mada University (FMGMU), is a part of clinical rotation. To have insight information of this difference method, the CBE clerkship in FMDU and FMGMU were compared.*

Methods: *Close and open-ended students' questionnaires were administered in the end of CBE clerkship.*

Results: *Response rate to the questionnaire was 97.8% (n=286). FMDU students reported the most unprepared skills for CBE clerkship was blood smear of malaria, whereas FMGMU's students reported management of PHC centre. Both students perceived that they are well prepared in communication skills, management of communicable diseases, and several clinical skills, and also reported that they have frequent experience in outpatient department. FMDU' students perceived that CBE clerkship gave opportunity to work independently, and they felt more prepared to work as a doctor in the community. On the other hand, FMGMU students felt not so confident in patient management, and reported that supervisor did not give enough assistance. They suggested that CBE clerkship should be done at least after clinical rotation in two Departments, i.e.: Internal Medicine or Paediatric and Surgery or Ob-gyn.*

Conclusions: *CBE clinical clerkship required students' confidence and independency. Preparation should be done properly not only for the students but also supervisor in the community. Tertiary hospital, which has enough skillful supervisors, is important to train basic clinical skills to students before sending them to the community.*

Keywords: *Clerkships, clinical skills, medical students, CBE, community*

ABSTRAK

Kepaniteraan klinik di masyarakat: pembelajaran di Universitas Diponegoro dan Gadjah Mada

Latar belakang: *Kepaniteraan klinik di masyarakat di Fakultas Kedokteran Universitas Diponegoro diimplementasikan setelah mahasiswa kedokteran tingkat akhir menyelesaikan rotasi klinik di rumah sakit pendidikan tersier, sedangkan di Universitas Gadjah Mada kepaniteraan klinik di masyarakat menjadi bagian dari rotasi klinik. Dalam rangka mendapatkan informasi yang mendalam mengenai perbedaan metode tersebut, kepaniteraan klinik di masyarakat pada ke-2 institusi tersebut dievaluasi dan dibandingkan.*

Metode: *Penelitian kuesioner dengan pertanyaan tertutup dan terbuka, diberikan pada mahasiswa di akhir dari kepaniteraan klinik di masyarakat.*

Hasil: *Kuesioner yang dikembalikan sebesar 97,8% (n=286). Mahasiswa FK Undip melaporkan bahwa yang paling kurang dipersiapkan untuk kepaniteraan kinik di masyarakat adalah keterampilan dalam melakukan pemeriksaan darah hapus malaria, sedangkan mahasiswa FK UGM melaporkan bahwa mereka kurang dipersiapkan dalam hal manajemen puskesmas. Mahasiswa dari ke-2 institusi sama-sama merasa bahwa mereka cukup dipersiapkan dalam hal keterampilan komunikasi, manajemen penyakit infeksi, dan beberapa keterampilan klinik. Mereka juga sama-sama melaporkan pengalaman yang cukup sering di poliklinik. Mahasiswa FK Undip merasa bahwa kepaniteraan klinik di masyarakat memberi kesempatan pada mereka untuk bekerja secara independen, dan merasa lebih siap untuk bekerja sebagai dokter di masyarakat. Di lain pihak, mahasiswa FK UGM merasa kurang percaya diri dalam mengelola pasien dan melaporkan bahwa supervisor di puskesmas kurang memberikan supervisi. Mereka menyarankan agar kepaniteraan klinik di masyarakat dilakukan setelah minimal menjalani rotasi klinik di 2 departemen, misalnya: interna/pediatrik dan bedah/kebidanan.*

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Simpulan: *Mahasiswa membutuhkan rasa percaya diri dan independensi ketika menjalani kepaniteraan klinik di masyarakat. Oleh karena itu persiapan yang baik sangat diperlukan tidak hanya bagi mahasiswa tetapi juga supervisor di puskesmas/rumah sakit kabupaten. Rumah sakit pendidikan tipe tersier, yang memiliki banyak supervisor yang terampil, merupakan faktor penting untuk melatih keterampilan klinik dasar sebelum mengirim mahasiswa ke pelayanan kesehatan di masyarakat.*

INTRODUCTION

The principal reason of implementation of community-based education (CBE) programme in undergraduate medical programme is the considerable discrepancy between the types of patients seen by students in teaching hospitals (tertiary care), and the characteristics of patients visiting primary health care facilities.[1,2] The use of primary care settings for the CBE programme broadens students' definition of the scope of medical intervention, promotes inter-professional collaboration, alters the power relationship between the (medical) profession and the society it serves[3], and increases opportunities for understanding of environmental, socio-economical, psychological, and cultural aspects of health and disease and their implications for care.[4]

However, in most medical schools, the hands-on clinical experiences are predominantly done in tertiary hospital-based settings. Faculty of Medicine Diponegoro University (FMDU), Semarang and Faculty of Medicine Gadjah Mada University (FMGMU), Yogyakarta in Indonesia have implemented clinical clerkship with CBE approach. CBE clerkship in FMDU has implemented after finishing clinical rotation in tertiary teaching hospital, whereas in FMGMU as a part of clinical rotation. In order to have insight information of this difference method, the CBE clerkship in FMDU called as "comprehensive clerkship" and FMGMU called as "*kuliah kerja kesehatan masyarakat* (K3M)" meaning working and learning community health, were evaluated and compared.

Comprehensive clerkship in FMDU

This comprehensive clerkship was done after finishing clinical rotation in tertiary teaching hospital. The emphasis of the comprehensive clerkship is to enhance independent functioning; to apply acquired knowledge and skills to patient problems in the community settings; and to acquire deep understanding of environmental, socio-economic and cultural aspects of community health problems. Before this clerkship, as a part of their clinical rotation, students had also been posted in the community health centre (CHC) in rural area to study the management of CHC.[5,6]

Specific learning objectives of comprehensive clerkship are ability to (1) work in a variety of community health care settings (CHC, maternal and child health care units, district hospital); (2) provide disease prevention, health promotion, primary care, secondary care, and emergency care; (3) judge which patients need to be referred; (4) participate in health teams (with e.g. nurses, midwives, community health workers, etc).

Length of study is four (4) weeks in the CHC (primary care), including home visit to understanding community health problems with family medicine approach, and work in integrated post health for maternal and child health care, and four (4) weeks in the district hospital (secondary care).

"K3M" in FMGMU

CBE programme in this school called as "K3M", and it was done as a part of clinical rotation. The objectives of "K3M" is to acquired knowledge and skills to patient problems in primary care, and to acquire deep understanding of environmental, socio-economic and cultural aspects of community health problems. Students were posted for 6 weeks in the community health centre (CHC), including home visit to understanding community health problems with family medicine approach and to work in integrated post health for maternal and child health care.

METHODS

Close and open-ended questionnaires were administered to two groups of students at the end of their training in the community. They were told confidentiality and assured that their participation would not affect their academic record. Students were requested to rate statements in the questionnaire on a 5-point likert scale. The following questions were addressed in the questionnaire: which skills do they perceive are prepared for this clerkships; how much the skills are acquired during clerkships; what are their perceive about the quality of supervision; and what their suggestion for this clerkship are. Quantitative data were analysed using SPSS version 16. The non-parametric Mann-Whitney U-test was applied for comparison of ordinal data, and two-tailed *p*-values were used with $p<0.05$ as the criterion for statistical significance. Students' answers to open questions in the questionnaire were descriptively analysed by the first author.

RESULTS

Response rate to the questionnaire in FMDU was 96.5% (n=138/143), and 98.6% (148/150) in FMGMU, or

97.8% (n=286) in two schools. On average students from FMGMU rated the questionnaire about skills preparation for this clerkship higher compared with students in FMDU. Students from FMDU reported that the most unprepared skills with scale rating from 1-5 (very low – low – enough – good - very good) was blood smear of malaria, whereas students from FMGMU reported that the most unprepared skills for CBE clerkship was management of PHC centre (Table 1). Both students perceived that they are well prepared in the communication with patients and community member, management of communicable diseases, and several basic clinical skills.

During CBE activities (Table 2), both students perceived that they have frequent experience in outpatient department and maternal and child health care. However, students in FMDU perceived that they have more activities in clinical skills, but less activities in home visit compared to FMGMU' students.

Table 1. Comparison of students' perception about preparation prior to CBE clerkship

Preparation (cognitive & skills)	FMDU		GMU		*p**
	Mean ± SD	Median	Mean ± SD	Median	
Management of CHC centre	2.60 (.67)	3.00	2.52 (.93)	2.00	.24
Referral system	3.05 (.80)	3.00	2.99 (.83)	3.00	.69
Communication with patient	3.51 (.79)	3.00	3.76 (.81)	4.00	.009 *
Communication with community member	3.30 (.83)	3.00	3.5 (.84)	4.00	.02 *
Management of communicable disease	3.22 (.94)	3.00	3.33 (.73)	3.00	.03 *
Therapy and follow up in-patient	3.28 (.86)	3.00	3.27 (.94)	3.00	.85
Ante natal care	3.27 (.72)	3.00	3.34 (.79)	3.00	.13
Help normal delivery	3.28 (.71)	3.00	3.31 (.91)	3.00	.39
Family planning	2.87 (.78)	3.00	3.11 (.90)	3.00	.01 *
Caring of newborn baby	2.79 (.71)	3.00	2.99 (.94)	3.00	.03 *
Perform immunization	3.05 (.75)	3.00	3.09 (1.04)	3.00	.49
Perform health education	3.33 (.82)	3.00	3.60 (.85)	4.00	.003 *
First aid and emergency care	3.29 (.73)	3.00	3.20 (.88)	3.00	.34
Minor surgery	3.09 (.83)	3.00	3.12 (.99)	3.00	.67
Basic clinical pathology examination	2.83 (.70)	3.00	2.86 (.01)	3.00	.95
Acid fast bacilli in sputum examination	2.72 (.91)	3.00	2.85 (.88)	3.00	.14
Blood smear of malaria	2.44 (.73)	2.00	2.65 (.81)	3.00	.018 *
School health	2.64 (.81)	3.00	3.00 (.93)	3.00	.001 *
Environmental health	2.85 (.93)	3.00	3.22 (.90)	3.00	.00 *
Statistic and report writing	2.60 (.83)	3.00	2.84 (.88)	3.00	.013 *

* Mann-Whitney U-test with sig .05

Table 2. Comparison of students' opinion about activities during CBE clerkship

Students' activities	FMDU		FMGMU		*p* *
	Mean ± SD	Median	Mean ± SD	Median	
Outpatient management	4.41 (0.86)	5.00	4.31 (0.81)	4.00	0.15
Maternal and child health care	3.73 (0.91)	4.00	3.50 (1.02)	4.00	0.07
Home visit	2.41 (1.08)	2.00	3.71 (0.93)	4.00	0.00 *
Follow up inpatient	4.29 (0.89)	5.00	2.93 (1.46)	3.00	0.00 *
Minor surgery	3.67 (1.02)	4.00	2.73 (1.13)	3.00	0.00 *
Emergency care	4.08 (0.80)	4.00	3.03 (1.08)	3.00	0.00 *
Closed fracture management	3.28 (0.97)	3.00	2.03 (1.05)	2.00	0.00 *
Seizure management	3.47 (0.93)	3.50	2.07 (1.11)	2.00	0.00 *
Combustion management	2.43 (1.01)	2.00	1.99 (1.11)	2.00	0.00 *
Intoxication management	2.73 (0.91)	3.00	2.22 (1.08)	2.00	0.00 *
Helping delivery baby	2.79 (1.07)	3.00	1.95 (1.23)	1.00	0.00 *

* Mann-Whitney U-test with sig .05 (1-5: never done - very frequently done)

Comments and answer

FMDU students

Most students perceived that comprehensive clerkship more applicable compare with clinical clerkship in the teaching hospital. Moreover, comprehensive clerkship give opportunity to work independently, so they felt they more prepared to work as a doctor in the community. Several students even ask to increase the length of comprehensive clerkship.

"Comprehensive clerkship is very useful for our maturity as a candidate medical doctor who will work in the community." It helps us to have correlation with the community and also increase our skills especially minor surgery, which honestly very little we got when we were clerkship in tertiary teaching hospital."

These were several suggestions given to increase the quality of comprehensive clerkship: (1) Prior to comprehensive clerkship, small lecture about diseases that are prevalence and the emergencies cases should be given, and tasks should be more clearly stated; (2) Work in the community health centre should be increased; (3) Increase working in policlinic and emergency care, whereas in wards should be reduced; (4) Evaluation should be more open to students and supervision should be more intensive.

FMGMU students

Most of FMDU students in this study reported that "K3M" was done before they have experiences in department of surgery and/or internal medicine/ obgyn/paediatric. They felt that their ability to manage patient's problems could not be optimal due to less experiences in such departments. Thus, most students from FMGMU felt unprepared for K3M because it was done as a part of clinical rotation, and most of them reported that they just have experience clinical rotation in 1 or 2 clinical department.

"I felt not optimal in the patient management. Moreover, doctor in the community health centre didn't give me enough assistance."

They suggested that "K3M" should be done at least after clinical rotation in 2 department such as Internal Medicine, Paediatric, Surgery and Ob-gyn.

DISCUSSIONS

Students from FMDU reported that the most unprepared skill was blood smear of malaria, whereas students from FMGMU reported that the most unprepared skills for CBE clerkship was management of PHC centre. This result was not surprising, because FMDU students had been posted in the community to study the management of CHC centre as a part of their clinical rotation, whereas in FMGMU can be considered as their first learning experiences. However, there are several skills in which FMGMU significantly gave higher score than FMDU students, i.e. communication with patient, communication with community member, and perform health education. Since, most of FMGMU students in this study, just finishing clinical rotation in 1 or 2 department, this differences can probably be explained as the differences of the two schools in the preparation of clinical skills training during preclinical year.

On average both students also scored less for basic skills of procedural laboratory. CBE clerkship, in which have limitation in the health facilities but the students are encouraged to work independently, need to be prepared properly. Therefore, learning activities that can be acquired during CBE clerkship should be identified, and the students should be prepared based on those identified activities. Based on students' opinion, seem that they have to be prepared more adequately in the basic skills of procedural laboratory.

Thus, in order to increase student's confidence when they have to manage patient problem in the community,[7,8] several factors should be considered, such as: students training of the foundation for clinical skills that provided during the clinical clerkship (predominantly in hospital-based settings).[9-11] In the case, like CBE clerkship that conducted for FMGMU students, training of local supervisors (doctor in CHC centre) should probably be considered as an important factor.

Table 2 showed that FMDU students significantly rated highly (more) activities in the management of several patient problems compared to FMGMU students. This probably can be explained in term of slightly differences in learning objectives of the 2 schools (FMGMU more in public health, whereas FMDU students more in clinical aspects). Moreover, FMDU students were also posted in districts hospital, in which have more chance to see more variety of cases including practice clinical skills.

A limitation of this study, is that we assessed only students' self-perceived preparation of CBE clerkship, which may not fully reflect the similarity of students' expectation in the two schools of study. An obvious follow-up would be to correlate perceptions of their preparation and educational environment to more objective measures of clinical competence, such as observed performance of clinical skills. Moreover, the differences of clinical activities in both schools might affect the whole result of this study.

CONCLUSION

CBE clinical clerkship requires students' confidence and independency. Preparation should be done properly not only for the students but also for supervisor in the community. Tertiary hospital, which has enough skillful supervisors, is important factor to train basic clinical skills before sending students to the community.

Ethical consideration

There are no conflicts of interest for any authors and the students.

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REFERENCES

1. Bor D. Position paper. 2001. Community-based education for health professionals. http://www.network.unimaas.nl/pp_cbe.htm
2. Gordon J, Hazlett C, Ten Cate O, Mann K, Kilminster S, Prince K, O'Driscoll E, Snell L, & Newble D. Strategic planning in medical education: enhancing the learning environment for students in clinical settings. *Medical Education;* 2000:34,841-850.
3. Albert M, Hodges B, Regehr G. Research in medical education: balancing service and science. Adv Health Sci Educ Theory Pract; 2007:12:103-15.
4. Chumley H, Olney C, Usatine R, & Dobbie A. A short transitional course can help medical students prepare for clinical learning. *Family Medicine*; 2005:37,496-501.
5. Tri Nur Kristina, GD Majoor, CPM Van der Vleuten. Does CBE come close to what it should be? A case study from the developing world. Evaluating a programme in action against objectives on paper. *Education for Health;* 2005;18:194-208.
6. Tri Nur Kristina, GD Majoor GD, CPM Van der Vleuten CPM. Does CBE come close to what it should be? A case study from the developing world. Students' opinion. *Education for Health;* 2006;19:188-198.
7. O'Brien B, Cooke M, and Irby DM. Perceptions and attributions of third-year student struggles in clerkships: do students and clerkship directors agree? *Academic Medicine;* 2007:82,970-8.
8. Radcliffe C, and Leste H. Perceived stress during undergraduate medical training: a qualitative study. *Medical Education;* 2003:37,32-38.
9. Prince KJAH, Van De Wiel MWJ, Scherpbier AJJA, van Der Vleuten CPM, & Boshuizen HPA. A qualitative analysis of the transition from theory to practice in undergraduate training in a PBL-medical school, *Advances in Health Sciences Education;* 2000:5,105-116.
10. Prince KJAH, Boshuizen HPA, van Der Vleuten CPM, and Scherpbier AJJA. Students' opinions about their preparation for clinical practice. *Medical Education*; 2005:39,704-712.
11. Van Gesse E, Nendaz MR, Vermeulen B, Junod A, & Vu NV. Development of clinical reasoning from the basic sciences to the clerkships: a longitudinal assessment of medical students' needs and self-perception after a transitional learning unit. *Medical Education*; 2003:37,966-974.

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