

## A correlation between characteristics and students' perception with the last score of field experience study at community based medicine

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### Abstrak

*Pengalaman belajar lapangan (PBL) merupakan salah satu dari program pembelajaran berbasis masyarakat yang dilaksanakan di Fakultas Kedokteran Universitas Malahayati (FK UNIMAL). Tujuan penelitian ini untuk mengidentifikasi beberapa faktor yang paling mempengaruhi nilai akhir mata ajaran PBL. Kuesioner dibagikan kepada seluruh mahasiswa FK UNIMAL yang mengambil FES pada semester genap tahun 2007. Pengambilan data dilakukan pada tanggal 3 September 2007. Data dianalisis dengan STATA versi 9.0 menggunakan metode regresi Cox. Penelitian ini diikuti oleh semua mahasiswa FK UNIMAL sebanyak 108 orang. Gender, nilai kumulatif, dan ketepatan mahasiswa mengikuti PBL mempengaruhi nilai akhir PBL. Mahasiswa yang mempunyai nilai kumulatif sebelumnya yang tinggi dibandingkan dengan yang rendah berpeluang 72% untuk mendapat nilai akhir PBL yang tinggi [risiko relatif suaian (RRa) = 1,72; 95% interval kepercayaan (CI) = 1,22-2,43]. Sedangkan mahasiswa perempuan dibandingkan mahasiswa laki-laki mempunyai kemungkinan 39% mendapat nilai yang lebih besar (RRa = 1,39; 95% CI = 0,93-2,09; P = 0,111). Mahasiswa yang mengambil PBL tepat waktu dibandingkan dengan tidak tepat waktu mempunyai peluang 29% nilai FES lebih baik (RR = 1,29; CI = 0,96-1,73; P = 0,088). Pada PBL, perhatian khusus perlu diberikan kepada mahasiswa dengan nilai kumulatif sebelumnya yang kurang untuk meningkatkan nilai performa mereka. (Med J Indones 2008; 17: 64-7)*

### Abstract

*Field experience study (FES) is one of the Community Based Medicine Education Programs that has done in Faculty of Medicine University of Malahayati. The aims of this study were to identify several factors related to final FES score. The questionnaires were given for all field study participants. It consisted of students' characteristics and perception on field study. This FES was conducted on 3 September 2007. Cox regression was used to analyze data using STATA version 9.0. Gender, previous GPA, time of taking FES was dominant risk factors related to risk of FES score. The students who had higher cumulative Grade Point Average (GPA) had 72% higher on final FES score [adjusted relative risk (RRa) = 1.72; 95% Confidence interval (CI) = 1.22-2.43]. Female than male students had 39% higher final FES score (RRa = 1.39; 95% CI = 0.93-2.09; P = 0.111), and the students who took than who did not take FES on recommended year of study had 29% higher final FES score (RR = 1.29; 95% CI = 0.96-1.73; P = 0.088). While conducting FES, special attention should be given to students who had previous GPA in order to increase their final FES score. (Med J Indones 2008; 17: 64-7)*

**Keywords:** *community-based medicine, field experience study, student's performance*

The medical educational strategies applied in a competency based curriculum, among other, is community-based oriented. Medical education should be respond community needs and produce medical doctor who appropriate with health service needs in

the community served.<sup>1,2</sup> One of the ways to reach the goal of community based medicine which is known as *Pengalaman Belajar Lapangan* or *PBL* (Field Experience Study = FES). The students are encouraging to conduct FES appropriately.

The student final FES score was influenced by several factors, such as several student's characteristics, knowledge, skill, perception on FES. By identifying and controlling several dominant factors related to final score, it will improve the performance of the students. The objective of this research was to identify several risk factors related to FES final score.

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## METHODS

The Ethical Committee of the Medicine Faculty University of Indonesia approved this study. The study was a cross sectional design. The subjects were Unimal Medicine Faculty students who took FES session on even semester in 2006-2007. The data was taken at Unimal Medicine Faculty on September 3<sup>rd</sup> 2007 by using valid and reliable questioner. Informed consent was obtained from study participant, then students did not have to write their names in order to make questioner more objective.

The questioner was about some characteristics (gender, age, cumulative GPA when they took FES session and either taking FES session on time), and student's perception about FES lecture.

The perception was about provision theory, provision clearness, knowledge in research methodology, knowledge in epidemiology, skills in developing research proposal, skills in data entry, view about health problem, cooperative people, time to go to the field, role of lecturers in the field, duration to make report, and preference on FES lecture. The depth of theory, clearness of provision theory, view about health problem, knowledge in epidemiology and methodology were chosen because by having good provision would help students understand and achieve good results on FES exam.

With sufficient time for research, cooperative people involve in the research, sufficient skill in making proposal and data, it was hoped that the students were able to have good grades in the research as one of the components in FES score. The students' preferences to FES lecture also included in the list of questions since the grade would influenced by their preferences. The students gave score from 0 – 100 for each question. Zero was for the worst and 100 for the best.

The final FES score was a summation of final multiple choice question (MCQ) examination (weighted 60%), student's report (weighted 30%) and student oral presentation (weighted 10%). Good final FES score was considered if the student 75 or more final FES scores. Regression Cox by STATA version 9.0<sup>3</sup> was used to identify the risk of final FES score.

## RESULTS

All of the students (108) having joined FES lecture participated this study and filled the questioners. The bad and good scores were similarly distributed in term of Age group, knowledge, skills, perception, and

preference. Most of students liked FES lecture, and it was not varied [coefficient variation of 10.4% (9.52/90.43)]. The students suggested that the provision from the lecturer was clear enough and the handbook was, too. Besides, the epidemiology provision should be improved. The extra on FES lecture at Medicine Faculty of Unimal were give to role of advisor who helped the students in the field (Table 1).

Table 2 shows that gender, previous GPA, time of taking FES was dominant risk factors related to risk of FES score. Those who had high than low previous GPA had 72% risk to be FES good score. In term of gender, female than male students had a 39% higher risk to be FES good score (P = 0.111). Furthermore, in term of taking FES session on time, those who took than on time than did not on time had 29% higher risk to be FES good score (P = 0.088).

## DISCUSSION

There were some limitations in this study. The questioner was done at the end of FES program. It was done in order to make all of the students would participate in the research. Since all of the lecturers of FES came to "the questioner session", there was a tendency that the students did not fill the questioner freely. Because of this weakness, the students did not write their names on the questioner.

Our study reveals that students who had high GPA had better final score. This is in accordance with previous studies that GPA influenced by the final score.<sup>5,6</sup>

Our study showed, it could be seen that female students had more chances to get better score, and the results was similar with previous studies.<sup>7,8,9</sup> Students who took FES lecture on time had 29% better grade on FES (RR = 1.29; CI = 0.96 – 1.73; P= 0.088). The reasons for chances of this smart students usually take FES lecture on time, and usually the ones who are less smart took FES lecture in the last semester because they had to take prerequisite lectures first.

The interesting part of the research which was done at Medicine Faculty of Unimal was age did not influence the last grade of FES lecture. However, several previous studies found that age influenced the last grade.<sup>7,10,11</sup> There was a difference in age division. In this study, perception did not influence the time score. And it was contradicted with this study theory which mentioned perception influenced students performance.<sup>7</sup> It seems that the average of students perception was good enough (average = 78.4).

Table 1. Age group, knowledge, skill, perception, preference and risk of FES score

	Score of FES				Crude relative risk	95% Confidence intervals	P
	Bad score [N=44]		Good score [N=64]				
	n	%	n	%			
Age							
22.-26 years	24	45.3	29	54.7	1.00	Reference	
19 -22.5 years	20	36.4	35	63.6	1.16	0.71-1.90	0.548
Provision theory							
Poor	23	43.4	30	56.6	1.00	Reference	
Good	21	38.2	34	61.8	1.09	0.66-1.78	0.725
Provision clearness							
Poor	8	34.8	15	65.2	1.00	Reference	
Good	36	42.4	49	57.7	0.88	0.50-1.58	0.676
Knowledge in research methodology							
Poor	33	42.3	45	57.7	1.00	Reference	
Good	11	36.7	19	63.3	1.10	0.64-1.88	0.733
Knowledge in epidemiology							
Poor	33	39.3	51	60.7	1.00	Reference	
Good	11	45.8	13	54.2	0.89	0.49-1.64	0.713
Skills in making proposal							
Poor	30	39.0	47	61.0	1.00	Reference	
Good	14	45.2	17	54.8	0.99	0.51-1.56	0.705
Skills in doing the data							
Poor	32	40.5	47	59.5	1.00	Reference	
Good	12	41.4	17	58.6	0.99	0.57-1.72	0.958
View about health problem							
Poor	22	39.3	34	60.7	1.00	Reference	
Good	22	42.3	30	57.7	0.95	0.58-1.55	0.838
Cooperative people							
Not cooperative	13	37.1	22	62.9	1.00	Reference	
Cooperative	31	42.5	42	57.5	0.92	0.55-1.53	0.737
Duration of the field study							
Poor	23	44.2	29	55.8	1.00	Reference	
Good	21	37.5	35	62.5	1.12	0.69-1.83	0.650
Role of lecturers in the field							
Poor	10	47.6	11	52.4	1.00	Reference	
Good	34	39.1	53	60.9	1.16	0.61-2.22	0.649
Preference on FES lecture							
No	4	40.0	6	60.0	1.00	Reference	
Yes	40	40.9	58	59.3	0.99	0.42-2.29	0.975

Table 2. Relationship between gender, previous GPA, time of taking FES and risk of FES score

	Score of FES				Adjusted relative risk*	95% Confidence intervals	P
	Bad score [N=44]		Good score [N=64]				
	n	%	n	%			
Gender							
Male	20	57.1	15	42.9	1.00	Reference	
Female	24	32.9	49	67.1	1.39	0.93-2.09	0.111
Previous GPA							
Low	32	58.2	23	41.8	1.00	Reference	
High	12	22.6	41	77.4	1.72	1.22-2.43	0.002
Taking FES session on time							
No	28	50.0	28	50.0	1.00	Reference	
Yes	16	30.8	36	69.2	1.29	0.96-1.73	0.088

\* Adjusted each others to risk factors listed on this Table

Based on the last research on the influence of characteristics on *FES* model, the most influenced factor on the last grade was the previous GPA, and research was also done at University of Michigan, The Faculty of Public Health.<sup>5,6</sup>

In conclusion, the most influenced factor on Field Experience Study was the previous GPA. While the taking time of *FES* and gender more likely to influenced the score of *FES*. There was no correlation between perception and the last grade. It was found there was lack of epidemiology provision.

We suggest that lecture should give more attention to the group of students whose low GPA, male students, and students who do not take the *FES* lecture on time, in order to encourage them to get better grade. It is also advisable that students take *FES* lecture on time that is in semester eight from Medicine Education Program. The epidemiology provision handbook should be improved.

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