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EXPERIENCE OF UNDERGRADUATE MEDICAL STUDENTS IN COMMUNITY FIELD TRAINING IN QASSIM, SAUDI ARABIA

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ABSTRACT

Background: A field training community based course was established to achieve the college's mission of imparting community oriented education. The main training locations were government primary health care (PHC) centers and governmental schools of all educational stages that distributed all over Qassim province geographical regions in the middle of Saudi-Arabia. **Objectives:** 1. To study and assess the satisfaction of the students by their performance in the course learning objectives and by the training environment determinants. **Methodology**: A structured questionnaire covered the study objectives used to collect data from 89 students. Students were selected through a systematic random sample from training groups by the end of the study year from March 2009 to May 2009. The students were classified into poor and good groups according to the performance satisfaction indicator 'PSI". The dependent variable was the performance satisfaction and the independent variables include training environment variables. Informed consent was taken and maintained confidentiality of the information. Data entered in the statistical package for social science (SPSS) software version 15 used for data analysis. **Results**: Most students rated unsatisfied by their performance in learning objectives health education (66.3%) and community service (58.5%). More than half of the students (52.8 %, 47/89) had poor "PSI" score, this group showed un-satisfaction by training schedule (64.0%), students' assessment (60.7 %) and patients' cooperation (55.1%) with significant difference from good group. Multivariate regression revealed that the un-satisfaction by the students' assessment was the strongest and most significant determinant of poor 'PSI" (Odds 12.8). **Conclusions:** There was students' poor "PSI" associated with un-satisfaction by individual variables of the training environment. Un-satisfaction by the students' assessment was the strongest and most significant determinant of poor "PSI". The findings suggested reevaluation of the course with specific attention to the determinants of students'poor "PSI". Similar Research studies with large sample is required to support the findings of this study.

KEYWORDS: Community based education–performance satisfaction- students' assessment, Qassim Region, Saudi Arabia.

INTRODUCTION

College of Medicine in Qassim University was established in the academic year 2000-2001. It`s Curriculum is: Hybrid Problem Based Learning, Community oriented, and Integrated Spiral**.** The curriculum is oriented towards training students to undertake the responsibilities of a physician of first contact who is capable of looking after preventive, promotion, curative and rehabilitative aspects of medicine. The program extends for five years, the first three years are focused on basic science and the last two years concerned clinical patient care curriculum. Integration of basic and clinical sciences as a main approach in the curriculum and starts from the first year.[1]

A community –oriented medical curriculum is a program whose content takes into account the major health

problems affecting the population served by the program graduates.[2] Community-oriented programs have several goals: to create more appropriate knowledge, skills and attitudes; to deepen trainees' understanding of health and illness; to enable trainees understand the health and social services; to promote interpersonal skills and multidisciplinary teamwork; and to deepen trainees' understanding of the contribution of social and environmental factors to causation and prevention of ill-health.[3]

A field training community based course was established to achieve the college's mission of imparting community oriented education. The course had the objectives of training the students outside the class room,[4] in community settings. The course starts from the first year and works longitudinally along the undergraduate basic three years in parallel and integration with the other academic activities. The two main components of the course are working in primary health care activities and the community settings.The main training locations were government primary health care (PHC) centers and governmental schools of all educational stages that distributed all over Qassim province geographical regions in the middle of Saudi-Arabia.

The course objectives focus on five main competencies: administrative, clinical work, prevention, health education and providing community service. Eight assignments were designed to cover the prior course objectives. The proposed duration for each assignment is two training sessions; each session extends for 3 hours. Students groups are formed of 6-8 students for each group. They assigned to work in collaborated community settings. Facilitators were recruited for the supervision and monitoring of the students during the course activities in PHC centers. They are physicians working in the collaborated centers. They oriented towards the schedule and contents of the assignments prior to the course. For the community tasks in the schools, a student leader was recruited for each group.

In order to improve the learning process and outcome, there is usually yearly continuous evaluation of the students' satisfaction of all faculty courses. The problem is the lack in the assessment of students'satisfaction by the specific elements of the course. Students' opinion in the forms of satisfaction feedback is recognized in educational institutions worldwide.[5] Measurement of students' satisfaction can be useful to the institutions to pin point their strengths as well as areas in need of improvement.[6]

The primary goal of this study was to explore students' satisfaction by their performance in the community field training course objectives. In this context, the objectives of this study were to assess the satisfaction of the students by their performance in the course learning objectives and by the training environment variables and to identify the most influential determinants. The results reported in this study may provide information about contributions that can be taken to maintain high levels of students' satisfaction by their performance and to improve the training environment.

MATERIALS AND METHODS

The present community based cross sectional study was conducted among undergraduate students of Qassim College of Medicine, who were enrolled for the field training course, using a self- administrated structured questionnaire at twelve primary health centres and ten Governament schools of Qassim region during the period from March 2009 to May 2009. Sample size was calculated using the equation of a single proportion[7] with anticipated population proportion of 35% with 95% confidence level (α error=0.05) and absolute precision 10%. Adding 10% drop out and non- response, the required sample size turned to be 89 students.

The questionnaire of this study was designed to fulfill the students' satisfaction by the training environment variables and their performance in the learning objectives. For the training environment variables, two main groups were studied 1. The structure group variables include i) training place condition, ii) training schedule; iii) assignments clarity and suitability to the proposed duration, 2. The training process group variables includes i) personnel cooperation (facilitator, medical staff, paramedical staff and the community) ii) students' assessment process. The studied learning objectives were on issues of health education, preventive services, clinical work, administrative activities and providing community service. All the variables rated on 0 to 10 interval scale and analyzed as dichotomous outcomes (unsatisfied and satisfied) with cut- off point (5), a student whose score for a particular variable was less than or equal to (5) was classified as unsatisfied.The output indicator is a composite variable labeled 'Performance Satisfaction Indicator "PSI". This indicator summarized the satisfaction of the students by their performance in the five learning objectives. Total satisfaction scores represented the sum of these scales and its values run from 0 to 50. Median was the cut- off point, a student with total score (25) or less was classified in the poor "PSI" group and the higher scale was classified in the good "PSI" group. Informed consent was taken and confidentiality maintained. Data entered in statistical package for social science (SPSS) software version 15 for data analysis. We applied descriptive and multivariate analyses using students as the unit of analysis.

RESULTS

Figure 1: Most students rated un-satisfaction in the learning objectives of the issues health education (66.3%) and providing community service (58.5%). Nearly the same lesser rates were responded for both the administration and prevention objectives (43.9, 43.8% respectively). Clinical work objective shown the least rate of un-satisfaction (39.4%).

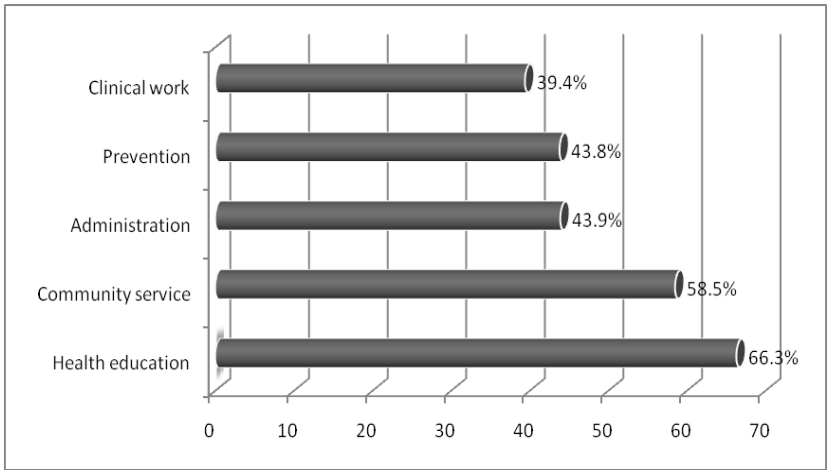

Fig: 1.Students' un-satisfaction by their performance in the learning objectives

Table 1: Illustrated the students' satisfaction by the training environment variables among the two "PSI"groups. Concerning the training environment structure variables, less than half of the participants considered the place of training unsatisfied (46.1%), however, the difference in between the two "PSI"groups was insignificant. Most participants rated unsatisfied response on the training schedule (64.0%), the poor "PSI"group showed significantly >triple times unsatisfied responses (OR3.3**) than the other group. Students' satisfaction of clear assignments was agreed by most of them (68.5%). Regarding the assignments duration, 38.2% reported satisfaction of their proposed duration.

Concerning the process of the training, the poor "PSI"group showed un-satisfaction by the cooperation of the facilitator twice more than the other group (OR 2.0). However, more than half of the participants (55.1 %) rated un-satisfied by the cooperation of the patients attending the training PHC centers, the poor "PSI" group showed significantly more unsatisfied rating than other group (OR 2.6**). The unsatisfied students by the students assessment process was 60.7%, the poor "PSI"group showed significantly seven times more unsatisfied rating than the other group (OR: 6.9***).

Table: 1 Students' "PSI"groups related to satisfaction by the training environment variables- Bivariate chisquare analysis

Training environment items			PSI groups		OR (95 % CI)
	89		Poor T=47	Good T=42	
Structure			%	%	
▪ **Place condition**					
-Unsatisfied	41	46.1	56.1	43.9	1.3 (0.5-3.2)
-Satisfied	48	53.9	50.0	50.0	1.0#
▪ **Schedule**					
- Unsatisfied	57	64.0	63.2	36.8	3.3 (1.2-9.0)**
-Satisfied	32	36.0	34.4	65.6	1.0#
▪ **Assignments:**					
Clarity					
- Unsatisfied	28	31.5	60.7	39.3	1.6 (0.6-4.4)
-Satisfied	61	68.5	49.2	50.8	1.0#
Proposed duration					
-Unsatisfied	34	38.2	58.8	41.2	1.5(0.5-3.9)
-Satisfied	55	61.8	49.1	50.9	1.0#
Process					
▪ **Personnel cooperation**					
Facilitator					
- Unsatisfied	15	16.9	66.7	33.3	2.0 (0.6-7.5)
-Satisfied	74	83.1	50.0	50.0	1.0#
Medical staff					
-Unsatisfied	11	12.4	63.6	36.4	1.7 (0.4-7.5)
-Satisfied	78	87.6	46.0	54.0	1#

Paramedical staff Unsatisfied -Satisfied	 24 65	 27.0 73.0	 54.2 52.3	 45.8 47.7	 1.2 (0.4-3.4) 1.0#
Patients -Unsatisfied -Satisfied	 49 40	 55.1 44.9	 63.3 40.0	 36.7 60.0	 2.6 (1.0-6.7)** 1.0#
▪ **Students' assessment** -Unsatisfied -Satisfied	 54 35	 60.7 39.3	 70.4 25.7	 29.6 74.3	 6.9 (2.4- 20.2)*** 1.0#

*P < 0 .05 ** P < 0 .01 ***P < 0 .001 # Reference group

Table 2: Revealed that in module-1 the most significant determinant variable was the unsatisfied training time (Odds: 6.8*). In module-2, personnel variables were introduced to the variables of module-1, the analysis of results showed that students who were unsatisfied by cooperation of the medical staff had the strongest value and significant risk (Odds 9.5*). In the same module-1, the variable of unsatisfied students by training time kept its significant effect with reduces in Odds to 5.9*. In the last module-3, the students' assessment variable was introduced to variables in module-2. At this module the variable of students' unsatisfied by cooperation of the patients appeared to have a significant risk in poor "PSI" group with Odds 2.0*. TheOdds of the variable of unsatisfied training schedule, diminished to 5.7* with keeping its significant effect. On other hand, the Odds of the variable unsatisfied cooperation of the facilitator significantly raised from 3.8* in module-2 up to 10.3* and shift from the least strong to be the second most strong in the last equation. Finally, in the last module the variable of unsatisfied students'assessment was the most strongest and significant (OR: 12.8***) determinant of students' poor "PSI".

Table: 2 Relative Odds of students' poor"PSI" group related to unsatisfied training environment. Regression analysis modules

Unsatisfied training environment variables	**Poor "PSI" (n = 46)**		
	Module- 1	**Module- 2**	**Module- 3**
Structure			
▪ Place condition	1.5	1.6	1.0
▪ Schedule	6.8*	5.9*	5.7*
▪ Assignments			
- Clarity	1.4	1.9	2.1
- Proposed duration	1.6	2.6	2.9
Process			
▪ **Personnel cooperation**			
- Facilitator		3.8*	10.3*
- Medical staff		9.5*	9.2
- Paramedical staff		2.4	2.3
- Patients		3.6	2.0*
▪ **Students' assessment process**			12.8***
Modules significance	**	**	**

*P < 0 .05 ** P < 0 .01 ***P < 0 .001

DISCUSSION

The aim of this study was to assess the students' satisfaction indicator "PSI" and related to the students' satisfaction of the various training environment variables. In literature, trainees' satisfaction was an index for evaluation of medical education[8] but there were few researchers measuring this factor in the context of the community field training and community based education.[9],[10]

Unfortunately, the results of this study pointed out that more than half of the enrolled participants in this field training course had poor "PSI". It is not enough to know the degree to which students are satisfied, it is important to understand the factors that contributes to student satisfaction. The training environment was the study target for defining the determinants of poor satisfaction. Training environment was the learning environment in this course. In the literature, learning environment was the starting point for actually implementing and sustaining an effective learning study. It was one of the most important factors determining the success of an effective curriculum.[11] In this field training course,the students were exposed to learn outside the class[4], the training environment of this course was focused on two main components: firstly, the structure which includes the variables like the place of training, the schedule and the assignments. The second component was the ongoing

learning process includes the variables define the cooperation of personnel in the training places and the students' assessment process.

Regarding the structure component of the training environment, the study results illustrated the linkage between the students, poor "PSI" group and the un-satisfaction of the individual variables: the condition of the place and the training schedule. Nearly half of study participants reported unsatisfied with the condition of the place of training which could be attributed to the large number of the training places which were mainly the PHC centers and schools.The majority of the PHC centers were newly built and others were in renewing stage nearly half of study participants,[12] also, not all the schools shared in the field training course was accommodated for students training. This condition could explain the students' un-satisfaction of the place of training. These results were consistent with some studies established the relationship between place and learning process and the possible harm in achievement and satisfaction levels.[13],[14] Concerning the training schedule, it was a significant determinant of students' poor "PSI". This was true in the bivariate description and in a multivariate assessment of relative associations between training environment variables and satisfaction indicator "PSI". The training schedule in this course planned to be organized with the activities of the collaborated community settings (ministry of health and schools), with the large number of the training places, the shortage in organization is suspected which could lead to an imperfect schedule and consequently negative impact on the students' performance and satisfaction. The influence of organization on the students' satisfaction was critical, in literature; training can induce positive or negative impressions and attitudes.[15] The result of this study consistent with the report on Iran changes in health care system and the organizational structure in educational hospitals that lead to low overall satisfaction with clinical education.[9] However, in a survey of physiotherapy students performed in a private college in Washington, a low relationship between satisfaction with clinical education and organizational structure was found.[16]

The participants'satisfaction by the structure of the assignments either their clarity or the proposed duration could be attributed to the briefing pre-field discussion session for every field visit moderated by the faculty staff members. This explanation was consistent with the belief that in higher education,learning depends not only upon how teachers have planned their courses and subjects, but also upon how their students understand this planning.[17] However, students' participation and practice was more important than time of teaching.[18]

Concerning the process of learning, two main points were studied, the personnel in contact with the students during the training process and the process of assessment of the students' performance. The results pointed to the major significant role of the facilitator cooperation in influencing the students'poor performance satisfaction (PSI), this could be attributed to the over commitment of the facilitators in PHC centers who share in the training process beside their official duties. This coincides with Hutchinson[13] who reported that unhelpful attitudes of teachers will prompt learners to disengage. On the other hand, the significant influence of in-cooperated medical personnel other than the facilitator in poor students' "PSI" points to their alternate role in training process. Results of this study indicated that the most significant and strongest determinant of students' poor "PSI"was the students' performance assessment process. This assessment depends on an individual supervisory checklist filled and signed by the facilitator. The checklist documented the student's attendance and exposure to the assignments items.The responsibility of the facilitator in this assessment could explain the significant evolution of the relative Odds of the variable'satisfaction of facilitator cooperation' in the last regression module.[19] However, the students, assessment in the community settings represents problem for medical teachers like difficulties in assessing the contribution of the individual members to group work and lack of test standardization due to varying field conditions with great debate about the suitable mode of assessment.[20]

Poor students'"PSI" for the learning objectives of issues health education and providing community services could be attributed to the students'un-satisfaction by patients'cooperation. Un-satisfaction by the providing community service could be attributed to the shortage in the health professional facilitators, this coincides with the literature pointed that the successful community based education program need health professional with skills in applied health promotion and disease prevention.[21]

The development of physician satisfaction starts from the stage at which physician training starts. Students would undoubtedly be inclined to favor specialties in which satisfaction was high for a large proportion of its current incumbents.[22] Dissatisfaction arises from unmet expectations.[23] If students are un-satisfied of the field training course, they will be less interested in the issues of the targeted objectives which constitute a main part of the faculty's mission.

CONCLUSIONS

The study indicated poor students'PSI of the field training course. This poor satisfaction was significantly related to the students'un-satisfaction of individual training environment variablesas the schedule of the training, patients'cooperation, and thestudents' assessment process which was the most significant determinant. The findings of the study suggested reevaluation of the field training course with specific attention to the significant variables related to poor PSI specially the process of students' assessment, the

cooperation of facilitators and other medical staff to get more students' satisfaction.

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Conflict of interest
None.

Ethical clearance
Taken from the institute.

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