

Original article

Assessing the Learning Environment at Habib medical School, Islamic University in Uganda

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Abstract

Background: The learners' environment is crucial for development of professionals. In Uganda, there was no studies assessing the learning environment have been found.

Objective: This study was performed to assess the undergraduate students' perceptions of medical education in general and educational environment in a newly established faculty of medicine in Islamic University in Uganda. **Materials and Methods:** The Dundee Ready Education Environment Measure (DREEM), a validated inventory was distributed among undergraduate students in the first year of Bachelor of Medicine and Bachelor of Surgery study. This scale consists a 50 item inventory each of the 50 items is scored on a 5-point Likert scale (0 to 4). **Results:** The average total DREEM score was found to be 127.5 (maximum point is 200 in the scale) for the students. This score was interpreted according to the practical guide of McAleer and Roff those students' perceptions of their learning environment were more positive than negative. In addition, the descriptive values of 5 sub-dimensions of the scale were found as follows. The Perceptions of Learning dimension average is 33.69 ± 6.10 , the Perceptions of Teachers dimension average is 25.89 ± 4.44 , Students' Academic Self-Perception 23.35 ± 3.91 , Perceptions of Learning Atmosphere dimension average 29.83 ± 7.01 and Social self-perceptions dimension average 13.90 ± 3.92 . Only the mean Social Self Perceptions sub-dimension score were below the expected average score (maximum score/2), and all of the other mean of dimensions were higher than the expected average. The best score is obtained from Perceptions of Learning. The items with low scores (less than 2) on the DREEM questionnaires were identified as in need of rehabilitation. **Conclusion:** On the whole, the study showed that the students' perception of the educational environment and the teaching delivered were positive but the student's social self-perception was not good. Measures to improve student's social self-perception will be adopted.

Keywords: Medical educational environment, DREEM, student's perceptions, classroom environment

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Introduction

The learners' environment is very crucial to the development of professionals. The World Federation for Medical Education emphasized the learning environment as one of the targets for appraisal of medical education programs.¹Assessing the learning environment, provides a holistic, comprehensive, systematic

and detailed picture of the overall state of affairs in the education process. Students' perceptions of their environment has been shown to influence their behavior, progress and sense of wellbeing.²⁻⁴Research in the field of medical education can help to understand the learning process and the learning environment.

At least 15 tools have been developed to assess the

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learning environment of undergraduate medical school, but none provide strong validity evidence.⁵ The most widely-used learning environment assessment tool is the Dundee Ready Educational Environment Measure (DREEM) is an universal, validated instrument, which provides medical teachers, a diagnostic aid to measure the overall state of affairs in the learning environment of their college.⁶⁻⁸

Habib Medical School at Islamic University in Uganda, started in 2014. It gives a traditional 5-year course: the first 2 years are devoted to basic medical sciences and the last 3 are for clinical rotations. These parts are separate and the overcrowded curriculum depends heavily on the use of lectures. Some activities are teacher centered with few open discussions and some are problem-solving sessions. Current annual intake of students is approximately 100.

The aim of our study was to assess the educational environment at Habib medical school, using the DREEM inventory and to determine whether a high quality learning environment was established during the first 3 years of the implementation of the Habib medical school Islamic University in Uganda. We also aimed to identify the gaps and weaknesses in the existing educational environment in order to suggest feasible and appropriate remedies. Soon, the medical school will be reviewing its curriculum. This current study will produce baseline pre-change data.

To our knowledge this is the first study assessing the educational environment of a medical school using DREEM inventory in Uganda.

Materials and Methods

Participants and Scale

A copy of the original Dundee Education Environment Measure (DREEM) was obtained. A covering letter indicating the purpose of the study, the anonymity of respondents and the optional status of the response were attached to the questionnaire. The DREEM was given to all the students present in the class at the time of their lecture. A total of 82 students participated in the study.

The DREEM comprises 50 items, divided into 5 subscales: Students' perceptions of learning, 12 items, and maximum score 48; Students' perceptions of teachers, 11 items, and maximum score 44; Students' academic self-perception, 8 items, maximum score 32; Students' perceptions of atmosphere, 12 items, and maximum score 48; Students' social self-perception, 7 items,

maximum score 28. The total possible score is 200. Each item is scored 0–4 (4 = strongly agree, 3 = agree, 2 = unsure, 1 = disagree and 0 = strongly disagree). There are 9 negative items scored in reverse manner (items 4, 8, 9, 17, 25, 35, 39, 48, and 50). All items, should be presented so that the higher the score the more positive the reading (more favorable educational environment). A score of 0 is the minimum and would be a very worrying result for any medical educator. The overall score could be interpreted as 0-50 Very Poor; 51-100 Plenty of Problems; 101-150 More Positive than Negative; 151-200 Excellent. A score of 100 can be interpreted as an environment which is viewed with considerable ambivalence by the students and as such needs to be improved.

An approximate guide to interpreting the subscales is; Students' Perception of Learning; 0-12 Very Poor; 13-24 Teaching is viewed negatively; 25-36 A more positive perception; 37-48 Teaching is highly thought of. Students' Perception of teachers; 0-11 Abysmal; 12-22 In need of some retraining; 23-33 Moving in the right direction; 34-44 Model teachers. Students' Academic Self Perception; 0-8. Feelings of total failure; 9-16 Many negative aspects; 17-24. Feeling more on the positive side and 25-32 Confident.

For students' Perception of Atmosphere; 0-12 A terrible environment; 13-24 There are many issues which need changing; 25-36 A more positive attitude; 37-48 A good feeling overall.

For students' Social Self Perceptions; 0-7 Miserable; 8-14 Not a nice place; 15-21 Not too bad; 22-28 Very good socially.

Data management and statistical analysis

Data was entered and analyzed in SPSS, version 20. The mean and standard deviation were calculated for all of the items. For each of the five domains, scores were calculated as the cumulative total of individual responses for all of the items in that domain.

Ethical approval was taken prior the study.

Results

DREEM was administered to 83 students. The overall DREEM score, was 127.99 ± 19.6 out of a maximum possible score of 200 which indicates that students' perception was more positive than negative.

Out of the 50 items, 11 items scored above 3. Twenty-nine items scored between 2 and 3 and 10 items scored less than 2. The four most highly rated were '*I feel I am being well prepared for my profession, the teachers are knowledgeable, I*

am confident about my passing this year and the teaching helps to develop my competence'. Four items that students had the greatest problem with were; *the teachers get angry in class, I find the experience disappointing, I am too tired to enjoy the course, and my accommodation is pleasant*. The Cronach Alpha coefficient for internal consistency of this scale is 0.88.

The Students' Perception of Learning domain means score was 33.69 ± 6.10 which translated to a more positive perception. This domain has 12 items, maximum score is 48. The items that were highly scored was "the teaching helps to develop my competence" and "the teaching helps to develop my confidence". Only one item "The teaching is too teacher centered" received a less than 2 points.

The Students' Perception of teachers domain mean score was 25.89 ± 4.44 . This domain has 11 items, maximum score is 44. This score is interpreted as, "moving in the right direction". Items in this domain that scored less than 2 points pertained to the teacher's ridicule the students, the teachers get angry in class and the students irritate the teachers. The teacher's anger suggests that teachers in our institution, as elsewhere, are inclined towards traditional styles of teaching. It is important to remind teachers that respect for the student is critical to the learning process.

The Students' Academic Self-Perception domain mean score was 23.35 ± 3.91 which means that the perception was feeling more on the positive side. This domain scored the highest with no item scoring less than 2 points. The highest scoring item was "*I am confident about my passing this year*" with a mean of 3.4 and "much of what I have to learn seems relevant to a career in health care" with a mean of 3.23 out of a maximum of 4. This domain has 8 items, maximum score is 32.

All Items in **Students' Perception of Atmosphere domain** scored above 2 except for "I find the experience disappointing". Students reported that the atmosphere is relaxed during lectures, were happy with their friends and had a good social life. The overall mean score for the domain was 29.83 ± 7.01 which meant a more positive attitude. This domain has 12 items, maximum score is 48

The students' social self-perception domain mean score was 13.89 ± 3.92 which can be interpreted as their social self-perception was that this was "not a nice place". This domain has 7 items, maximum score is 28

Discussion

Educational environment is one of the most important factors in determining the success of an effective curriculum and effective learning. Assessing the educational environment is therefore of vital importance. This study originated from a desire to learn how students perceive the educational environment in this institution. Habib medical school, is a new medical school in Islamic University in Uganda. It is located in an urban area and has students from various ethnic backgrounds. DREEM was used, as it is appropriate for evaluating health professions and is also known to be culturally non-specific. The findings of the research indicated that overall mean DREEM score for our medical school was 127/200, which indicated that students' perceptions was more positive than negative. Being a new medical school, Habib scored better than some other new medical schools and also other existing medical schools.⁹⁻¹⁰

No item received a mean score ≥ 3.5 . Scores that are above 3.5 are considered to represent a positive aspect of the curriculum. It is hoped that future assessment will show more items scoring more than 3.5 after corrective intervention is applied. A number of our students scored some items above 3. These include items such as *the teaching helps to develop my competence; the teachers are knowledgeable, I am confident about my passing this year. I have learnt a lot about empathy in my profession*.

The scores whose performance was not good were the emphasis on factual learning. Habib medical school, practices a problem based learning method. It calls for more student-centered and student self-directed learning (SDL). The staff need to be more oriented, trained and motivated in the approach. It is suggested that this area be emphasized in our professional development.

The Students' Social Self Perceptions domain had the lowest scores. All the scores had less than 2 points apart from "*I have good friends on this course and my social life is good*". Many institutions globally report similar concerns. Some researchers (Kohli & Dhaliwal, 2013; Hasan & Gupta, 2013; Khursheed & Baig, 2014) have reported not having a good support system for students who get stressed.¹¹⁻¹³ Al-Kabbaa et al (2012) has reported that students are too tired to enjoy the course.¹⁴ These difficulties are not impossible to work on and interventions can be made to solve them.

More studies can be done taking into consideration demographics of the students like, nationality, religion, year of study. Some studies have shown differences in perception due to demographics. Al-Ayed & Sheik(2008) showed that the perception of first year is higher than other years. It could also be explained by the enthusiasm and the illusion of first year students on successfully gaining entry into medical college.¹⁵Roff (2005) reported that men had a mean score of 27.6/44 for their perception of teachers while for women this was 33.0/44; overall, the males' DREEM score was 129 and the women's was 135.⁶

Our results indicate a need for the creation of a supportive environment as well as designing and implementing interventions to remedy

unsatisfactory elements of the environment if effective and successful learning is to be realized.

Conclusion

The study showed that Habib medical school scored more than some other new medical schools. Some defects in the educational environment in the school were identified. The information obtained in the present study has identified areas for improvement and will enable the program leaders to facilitate changes. It will also provide other educational institutions with data on which they can make comparisons with their own programs.

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