ORIGINAL ARTICLE

A Study of Learning Environments in the Kulliyyah (Faculty) of Nursing, International Islamic University Malaysia

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Abstract

Background: In a nursing programme, the main objective is to produce nursing graduates who can provide comprehensive care and treatment to the community. A good approach to the systematic design of a learning environment can lead to positive outcomes for graduates. The learning environment is more than student-teacher interaction, teaching and learning activities. Good physical structures and facilities provided by the university are important, too. Furthermore, the university must also be concerned about meeting students' psychosocial and emotional needs. The aim of this study is to measure the learning environment by administering the Dundee Ready Educational Environment Measure (DREEM) questionnaire to students across the four years of the Bachelor of Nursing programme at the Faculty of Nursing, IIUM, and to identify areas for change that may contribute to a more meaningful student learning experience.

Methods: The DREEM questionnaire was administered to 105 Bachelor of Nursing students at IIUM.

Results: The total mean score on the 50-item DREEM inventory was 120.12 out of a maximum of 200. Student perceptions of learning and their teachers, their academic self, social self and their perception of the atmosphere were all positive. Eight items with low mean scores (less than two) on the DREEM questionnaire were identified as requiring remediation.

Conclusion: The implications include the need to create and maintain a supportive environment, in addition to designing and implementing interventions to remedy unsatisfactory elements of the learning environment if effective and successful teaching and learning are to be realised. Thus, specific remedial steps to improve the student learning environment of the Faculty of Nursing, IIUM are described.

Keywords: learning environment, curriculum, nursing and DREEM, health sciences

Introduction

The learning environment is not limited to student-teacher interaction, teaching and learning activities, but also includes having good physical structures and facilities provided by the university (1). The university has to be concerned about students' psychosocial and emotional needs as well. By providing all these features, the university has the potential to offer a productive learning environment. Studying the learning environment is important in improving the quality of an educational programme (2). Many universities use a basic approach to determine students' needs by viewing students as main stakeholders in their own education (3).

In nursing education, teachers have paid particular attention to student perceptions of the learning environment (4). Moreover, students' perceptions of the learning environment should be studied over time. This is because of changes in student-body composition and the teacher population. Sometimes new innovative educational approaches can also give rise to different student perceptions.

The concept of the learning environment

Learning environment issues in higher education can be viewed through many perspectives. Each school has its own understanding about its learning environment. However, the concept of the learning environment must come from someone who is an expert in the education field. This is because historically, the learning environment is derived from educational practise. Therefore, in order to implement a good and appropriate learning environment, we need to understand the concept of the learning environment and implement it in our school appropriately. The concept of learning has been well-recognised in the educational literature but is a relatively new concept in nursing education (5–7).

Bloom (5) described the educational or learning environment concept as "the conditions, forces, and external stimuli which challenge on the individual. These forces may be physical, social, as well as intellectual forces and conditions". He conceived a range of environments from the most immediate social interactions to the more remote cultural and institutional forces. He regarded the environment as providing a network of "forces and factors which surround, engulf, and play on the individual". Therefore, it can be said that the learning environment is an interactive network of forces within the teaching and learning activities that influence students' learning outcomes. Specifically, in nursing education, the learning environment has to be integrated between theory and clinical practise in order to obtain balanced learning outcomes (6–8).

The DREEM instrument is able to assess both components—theory and clinical practise. It also includes all aspects involving teaching and learning in both the medical or health professional schools that are synonymous with the clinical environment. Although the learning environment is a subtle and intangible concept, considerable progress has been made over the last quarter of the twentieth century in its conceptualisation. The development of assessment inventories enables student perceptions of the learning environment to be quantified and compared, either longitudinally within a single health care institution or between institutions (9).

A British study clearly recognised the existence of a learning environment and identified several areas of importance in the characterisation of that environment. Organisational and attitudinal characteristics were major predictors of the learning environment. Organisational issues identified included: the ward routine, patient care, the structuring of teaching, and the matching of clinical and classroom procedures (curriculum). A ward attitude that recognises and values the students as learners provides a superior learning environment (8). Therefore, ward staff are the most influential participants, apart from the students themselves, in the learning environment. They are the gate keepers and guides to learning opportunities, and the students' most consistent link between the educational and workplace demands of the learning environment (10).

Kulliyyah (Faculty) of Nursing, IIUM

The Kulliyyah of Nursing, the most recently established of the International Islamic University Malaysia (IIUM) kulliyyahs, admitted its first class of undergraduate degree programme students in June, 2004. The curriculum of the nursing kulliyyah at IIUM, as in all nursing schools in Malaysia, is still a mix of innovative and conventional practises that have been in existence for more than a decade. Although the nursing programme has changed from a hospital-based to a university-based education, the teaching styles remain the same. The main approach in teaching and learning activities is teacher-centred, in which information is provided via lecture to a large number of students, and the students fully depend on the information gathered in their lectures. In tutorial and practical sessions, students participate more actively but still expect their teachers to continue providing information. Interestingly, most of the nursing schools in Malaysia are now introducing some innovative approaches in their programmes, such as problem-based learning through subject-oriented practise. However, the goals of these approaches are difficult to achieve due to subject-based practises in the curriculum. For instance, problem-based learning is only effective if it is used with a multidisciplinary approach that is integrated into the curriculum (11).

As one of the newest faculties at IIUM, the Kulliyyah of Nursing aims to produce highly competent nursing graduates by introducing sophisticated teaching and learning environments. Hence, this study aims to determine nursing students' perceptions of the learning environment in their undergraduate nursing programme and identify areas for change. The objective is to use this information to critically evaluate the learning environment, with a view to enhancing the learning experience, after four years of running the programme. Therefore, the findings of this study will be used as baseline information for the curriculum review committee to inform changes to the current curriculum that will improve the quality of student life on campus, including

areas such as social atmosphere and effective administration. Moreover, the study findings may assist in developing guidelines to help teachers improve their teaching skills in relation to students' perceptions.

As at the commencement of the 2007/2008 academic year, the focus of the Kulliyyah's teaching activities are on the conduct of Years One, Two, Three and Four of its four-year undergraduate programme, which leads to the award of the Bachelor of Nursing (Honours) degree. This programme has been designed to prepare nurses for entry-level professional practise and, at the same time, provide a strong basis for postgraduate study. The programme is four years long and incorporates a substantial amount of guided clinical practice in hospitals and health care settings as well as a range of campus-based theoretical and laboratory-based teaching and learning activities. The objectives of this study are:
• to identify the overall score of nursing students' for the learning environment of the IIUM nursing programme
• to identify any differences between mean scores on the learning environment survey across the various years of the nursing programme

Materials and methods

This research used a quantitative, cross-sectional survey design. All nursing students from years one to four (n = 107) were eligible to participate as study respondents. The study took place at the Kulliyyah of Nursing, IIUM. The researchers sought ethical approval from the Kulliyyah of Nursing, IIUM and the Centre of Medical Education, Dundee University. The questionnaire was distributed each year of the Bachelor of Nursing programme. Participants provided their consent prior the completion of the questionnaire, after reading a summary of information regarding the purpose of the survey, and their confidentiality and anonymity were assured on at the front page. The total time required to answer the 50-item questionnaire was estimated at approximately 20 minutes. Participant return the completed questionnaire in the sealed box provided.

Instrument

The Dundee Ready Education Measure (DREEM) is an internationally validated, non-culturally specific inventory that provides medical and health profession educators with a diagnostic tool to measure the state of their school's learning and teaching climate (2). It can produce global readings and diagnostic analyses of an undergraduate learning environment in medical schools and other health profession institutes. It allows quality assurance comparisons between courses and even between components of a particular course. The items in DREEM are of such a nature that it is the environment of the entire curriculum is being assessed.

Roff et al. (12) developed the 50-item DREEM using a standard methodology utilising grounded theory and a Delphi panel of nearly 100 health profession educators from around the world, with validation by over 1 000 students in countries as diverse as Scotland, Argentina, Bangladesh and Ethiopia. Participants were asked to measure and 'diagnose' the undergraduate learning environments for the health professions. The instrument was designed to be a non-culturally specific instrument and was used in several settings including the Middle East, Oman, Thailand, Nepal, Nigeria, United Kingdom, Canada, Ireland, Indonesia, Malaysia, Norway, Sweden, Venezuela, the West Indies, Sri Lanka, and Yemen (13).

DREEM was used as an instrument to measure students' perceptions of their learning environment and allowed quality assurance comparisons between years as well as within the theoretical and clinical components of a particular programme. The response options for items on the DREEM inventory are: 4 for Strongly Agree (SA), 3 for Agree (A), 2 for Uncertain (U), 1 for Strongly Disagree (SD). However, nine of the 50 items (numbers 4, 8, 9, 17, 25, 35, 39, 48, and 50) are negative statements and therefore reverse coding is required. The 50 DREEM items add up to a maximum score of 200, which would be an 'ideal learning environment'. A score of 0 is the minimum and would be a worrying result for any medical or health institution. The instrument contains five domains, which are as follows (12):
1. Student perception of learning (SPoL) – 12 items / maximum score = 48
2. Student perception of teaching (SPoT) – 11 items / maximum score = 44
3. Student academic self-perception (SASP) – 8 items / maximum score = 32
4. Student perception of atmosphere (SPoA) – 12 items / maximum score = 48
5. Student social self-perception (SSSP) – 7 items / maximum score = 28

SPSS (version 12.0.1) was used to analyse the data in this study. Data were coded, entered, checked for data entry errors, explored and cleaned. The researcher used alphas of 0.05 and confident intervals of 95%. Frequencies for each items score were tabulated, and any missing records verified.

Statistical assumptions were tested prior to running the analyses, and all variables were found to satisfy the assumptions for the normal distribution, homogeneity of variance and independence of observations.

Participants

The response rate among the Bachelor of Nursing students at IIUM was 98.13%; 105 out of 107 students returned the completed survey forms. Eighteen (17.10%) were males and 87 (82.90%) were females. Ages ranged from 19 to 23 years, with a mean age of 21.18 (SD = 1.01) years. Year One students represented the largest cohort, making up (45.70%) of respondents. This was followed by Year Two (22.90%) and Year Three (20.00%) respondents. The lowest number of respondents was from the Year Four nursing students (11.40%), representing the first batch of nursing students to commence study at IIUM, in 2004 (Table 1). All the respondents underwent matriculation at the IIUM foundation centre prior to enrolling in the nursing bachelor program and were staying together in the same hostel accommodation provided by IIUM on campus.

Results

Total DREEM score for Bachelor of Nursing, IIUM

Table 1 shows the overall mean DREEM scores for IIUM Bachelor of Nursing respondents. The mean total score was 120.12 out of 200 for the 50 items, and this total score was in the range for 'positive' (rather than 'negative') learning environments. Eight items had mean scores of less than two, with an average of one to two items in each domain. The highest mean score was 3.18 (item 2), and the lowest mean score was 1.56 (item 12). Only three items had a real positive perception, from the respondents' point of view. A total of 39 items had aspects of the learning environment climate that could be enhanced.

Total of each domain score for the Bachelor of Nursing, IIUM

Table 2 illustrates the total mean scores for each of the five domains in the DREEM inventory. The total mean score for domain 1 was 28.54 out of 48.00. The highest score was 31.43, from Year One. The overall total score for this domain represents a 'positive' perception of the learning environment. For domain 2, the maximum attainable score was

Table 1: Single item mean scores for learning environment of the IIUM nursing students in each year, and overall scores.

Item	Year One (n=48)	Year Two (n=24)	Year Three (n=21)	Year Four (n=12)	Overall (n=105)
Students' perception of learning (SPoL)					
1. I am encouraged to participate in class	2.94	2.92	2.90	3.08	2.94
7. The teaching is often stimulating	3.05	2.25	2.48	2.42	2.69*
13. The teaching is student-centred	2.29	1.71	1.57	1.67	1.94*
16. The teacher is sufficiently concerned about developing my competence	2.85	2.08	1.86	1.92	2.37*
20. The teaching well-focused	2.60	2.08	1.90	1.92	2.27*
22. The teacher is sufficiently concerned about developing my confidence	2.81	2.08	1.71	1.92	2.32*
24. The teaching is put to good use	2.98	2.37	2.19	2.25	2.60*
25. *The teaching is over-emphasised, compared with factual learning*	1.92	1.83	2.14	1.83	1.93
38. I am clear about the learning objectives of the course	2.65	2.63	2.43	2.42	2.57
44. The teaching strategies encourage me to be an active learner	2.69	2.04	2.14	2.08	2.36*
47. Long-term learning is emphasised over short-term learning	2.58	2.83	2.71	2.17	2.62
48. *The teaching is too teacher-centred*	2.08	1.96	1.76	1.50	2.00

Students' perception of teaching (SPoT)

2. The teachers are knowledgeable	3.77	2.50	2.86	2.75	3.18*
6. The teachers are patient with patients	3.11	2.37	2.67	2.33	2.77*
8. The teachers ridicule the students	3.19	2.29	2.33	2.17	2.70*
9. *The teachers are authoritarian*	1.50	1.79	1.57	1.50	1.58
18. The teachers have good communication skills with patients	3.04	2.17	2.81	2.25	2.70*
29. The teachers are good at providing feedback to students	2.92	1.79	1.57	2.17	2.30*
32. The teachers provide constructive criticism here	2.63	2.21	2.24	2.50	2.44
37. The teachers are approachable	2.96	2.46	2.48	2.50	2.70*
39. *The teachers get angry in class*	3.08	1.92	1.76	2.08	2.44*
40. The teachers are well-prepared for their classes	3.06	2.13	2.38	2.67	2.67*
50. The students irritate the teachers	2.71	2.75	2.67	2.25	2.66

Student academic self -perception (SSAP)

5. Learning strategies which worked for me before continue to work for me now	2.21	1.83	2.14	2.50	2.14
10. I am confident about passing this year	2.94	2.75	3.10	2.58	2.89
21. I feel I am being well-prepared for my profession	2.56	1.87	1.52	1.58	2.09*
26. Last year's work has been a good preparation for this year's work	2.29	2.25	1.52	1.92	2.09*
31. I have learned a lot about empathy in my profession	3.12	3.17	3.33	2.50	3.10*
41. My problem-solving skills are being well-developed here	2.60	2.29	2.19	2.17	2.40
45. Much of what I have to learn seems relevant to a career in nursing	3.21	2.88	2.86	2.83	3.02
27. I am able to memorise all I need	1.90	1.62	1.48	1.42	1.70

Students' perception of atmosphere (SPoA)

12. This kulliyyah is scheduled well	2.46	1.13	0.48	0.75	1.56*
17. *Cheating is a problem in the kulliyyah*	2.19	3.04	1.90	2.58	2.37*
23. The atmosphere is relaxed during lectures	2.77	2.13	2.24	1.92	2.42*
30. There are opportunities for me to develop interpersonal skills	3.23	2.96	2.67	2.50	2.97*
33. I feel comfortable in class, socially	2.94	2.79	2.67	2.17	2.76*
34. The atmosphere is relaxed during teaching sessions and tutorials	2.83	2.29	2.38	1.92	2.51*
35. *I find the experiences disappointing*	2.58	2.13	2.14	2.00	2.32
36. I am able to concentrate well	2.10	1.96	1.81	2.00	2.00
42. The enjoyment outweighs the stress of studying nursing	2.46	2.17	2.57	1.50	2.30*
43. The atmosphere motivates me as a learner	2.81	2.38	2.29	2.00	2.51*
49. I feel confident to ask the questions I want	2.12	2.38	2.10	2.33	2.20
11. The atmosphere is relaxed during the ward teaching	2.44	1.08	1.52	1.50	1.84*

Student social self-perception (SSSP)

4. I am too tired to enjoy this course	2.60	2.17	2.29	1.33	2.30*
14. I am rarely bored of this course	1.40	1.79	1.86	1.67	1.61
15. I have good peers in this kulliyyah	3.37	3.08	2.90	2.67	3.13*
19. My spiritual and social life are good	2.94	2.75	2.48	2.58	2.76
28. I seldom feel lonely and friendless	1.85	1.88	2.19	2.50	2.00
46. My accommodations are pleasant	2.50	2.58	2.76	2.50	2.57
3. There is a good support system for students who become stressed	2.19	1.71	1.52	1.58	1.88*
OVERALL	**132.06**	**112.20**	**110.05**	**105.83**	**120.12**

Note: * P < 0.05
Negative items are in italics

44, with 11 items included. This domain scores suggest that the respondents had a favourable impression of their teachers. For domain 3, there was not much difference in scores across years, and the mean overall scores fell to 19.42. Scores on domain 4 reveal positive perceptions of the atmosphere; the total mean score was 27.78. Lastly, domain 5 scores suggest that the respondents' social self-perceptions were in the category of average with the total mean of 16.23. This domain illustrates the students could tolerate their social environment, incorporate with their teaching and learning activities in the campus.

Differences of means in learning environment in the Bachelor of Nursing programme

Table 3 describes the mean differences in learning environment by year of study. The null hypothesis is rejected at the 5% significance level because a Bonferroni post hoc test shows a significant mean difference between mean Year One and mean Year Two scores [19.85 (9.33 – 30.38)], three [22.01 (11.00 – 33.03)] and four scores [26.22 (12.64 – 39.82)].

Discussion

The survey results suggest that the Kulliyyah of Nursing, IIUM has achieved a more positive than negative status, which is just a level below the highest category of achievable scores. Students of the innovative curricula tend to show more satisfaction with their educational environments, compared to students of the traditional curricula (13). Higher DREEM scores tend to indicate more student-centred curricula, while those offering conventional curricula commonly score less than 120 out of 200 (13). Even though the IIUM's

total mean scores are above 200, many students perceive that IIUM does not have a student-centred approach; scores were low (mean = 1.93) for item 13 (The teaching is student-centred). This is possibly because there is no integration between subjects, which may cause them much difficulty in utilising available learning resources effectively. An integrated curriculum is one of the strategies that could be introduced to enhance student-centred education (1). In another study, it was found that among three medical schools in the Middle East (King Faisal University (KFU) in Saudi Arabia, which has a traditional curriculum; and Arab Gulf University (AGU) in Bahrain and United Arab Emirate University (UAE), which have innovative curricula) students at AGU and UAE perceived their learning environment as more satisfactory compared with students at KFU. This was reflected in the mean total DREEM scores of 127.00 for AGU, 125.00 for UAE and 111.00 for KFU respectively.

In the present study, the overall DREEM score is 120.12 out of a maximum 200, from four groups of nursing students at the Kulliyyah of Nursing, IIUM. The Year One group had the highest score, with a mean of 132.06. The Year Two, Three and Four group students' overall mean DREEM scores were in the range of 105.83 to 112.20. The findings are in line with those of Hla et al. (14), who noted a trend for reduced scores in the senior years. It was suggested that this trend could be due to the fact that students genuinely believed that the learning environment was deteriorating, and thus were psychologically tired of being a student and looking forward to leaving student life. The students' perceptions in Year One could have been high initially, and dissatisfaction may have crept in as the novelty of joining a nursing student body wore off.

Table 2: Total of each domain score across all years of the Bachelor of Nursing programme at IIUM

Domain	Year	(n)	Mean (SD)
Domain 1			
Students' Perception of Learning (SPoL) – 12 items	1	(48)	31.43 (3.994)
	2	(24)	26.79 (5.500)
	3	(21)	25.48 (4.966)
	4	(12)	25.17 (3.857)
Overall: **28.54 / 48.00**			
Domain 2			
Students' Perception of Teaching (SPoT) – 11 items	1	(48)	31.98 (3.629)
	2	(24)	24.38 (4.490)
	3	(21)	25.33 (5.072)
	4	(12)	25.12 (3.157)
Overall: **28.13 / 44.00**			
Domain 3			
Student Academic Self – Perceptions (SASP) – 8 items	1	(48)	20.83 (3.117)
	2	(24)	18.67 (4.498)
	3	(21)	18.14 (3.610)
	4	(12)	17.50 (2.393)
Overall: **19.42 / 32.00**			
Domain 4			
Students' Perception of Atmosphere (SPoA) – 12 items	1	(48)	30.94(4.304)
	2	(24)	26.42(5.241)
	3	(21)	24.76(5.029)
	4	(12)	23.17(2.552)
Overall: **27.78 / 48.00**			
Domain 5			
Students' Social Self -Perception (SSSP) – 7 items	1	(48)	16.85(3.390)
	2	(24)	15.96(4.154)
	3	(21)	16.00(3.178)
	4	(12)	14.83(2.125)
Overall: **16.23 / 28.00**			

Table 3: Mean differences in learning environment by year of study

Variable	(n)	Mean (SD)	F stat (df)	P-value
Year One	48	132.06 (14.18)		
Year Two	24	112.20 (19.40)	17.61(3, 103)	<0.001
Year Three	21	110.05 (16.89)		
Year Four	12	105.83 (9.27)		

Two local studies assessing students' learning environments using the DREEM questionnaire were from the International Medical University, which recorded a mean score of 129.30 (14), and the Dental Training Institute of Malaysia, which cited a mean DREEM score of 121.50 (15). A study of final year medical students in Trinidad reported an overall mean DREEM score of 109.9 (16). A large-scale study, involving medical students from both final and earlier undergraduate training years, showed a mean DREEM score of 118.00 in a Nigerian medical school and 129.00 in a Nepalese medical school. Interestingly, the Nigerian study had been analysed according to gender and academic year and was found to have statistically significant differences for gender and academic year (17). One of the largest samples (n = 968) reported an overall mean DREEM score of 128.80 for medical students in the UK (18).

There are also a few studies which have demonstrated higher overall mean DREEM mean scores. In Malaysia, a study by Intan (19) reported a high mean DREEM score of 134.42. Intan's study was carried out in one of the private nursing colleges in Kota Bahru. In a series of UK learning environment studies, Miles and Leinster (20) recorded the highest mean DREEM score—142.91. Their study measured medical students' perceptions of the learning environment by asking about their expected and actual perceptions. Interestingly, the expected mean DREEM mean score was much higher (152.46) when compared to the actual DREEM mean score. Roff et al. (17) reported (in another study in the UK which attempted to measure whether the learning environment perceived by students varied at different teaching hospital centres) a relatively high mean DREEM score of 139.00.

Differences of means in the learning environment

It is interesting to note that from the overall DREEM score in the study, we can summarise that there are significant differences between the DREEM scores across the four-year nursing programme at IIUM. Mean responses of the four groups were compared to determine which year-groups significantly differed from one another. The results of these comparisons indicated large differences between all the years (mean differences were in the range of 19.85 to 26.22). Obvious differences were clearly seen between Year One and Year Four. It is possible that Year One students' scores were influenced by their expectations and knowledge that they were coming to a new nursing school (20). First year students' scores might have been higher due to the fact that they had only been at the Kulliyyah of Nursing for six months when they were asked to complete the questionnaire and they had therefore not yet experienced many stressful aspects of the learning environment, such as relating theoretical knowledge to the clinical practise environment. Moreover, the apparent differences in how the different groups experienced the learning environment at the institution highlight differences in their degree of experience in both the institution and the curriculum. For instance, it is possible to identify some stress points among final year students due to their more challenging teaching and learning activities (17).

This feedback from our students will inform a revised curriculum aimed at enhancing the quality of the learning environment in this Bachelor of Nursing programme. Issues will be addressed by the Curriculum Review Committee in 2010. Notwithstanding, a short-term strategic plan has been implemented in order to deliver an optimally conducive learning environment for junior nursing students at all year levels.

The researchers would like to investigate students' insights relating to the items that were scored as unsatisfactory by conducting focus groups in the near future. The focal elements are those items with a mean score of less than two. This is because any items with a mean of less than two represent poor learning environments, and by conducting focus groups, we may learn what the main problems are and how they might be addressed

Recommendations

Nursing students in the Kulliyyah of Nursing value theory and clinical practise and the possibilities they offer in the process of becoming a nurse and a professional. First and foremost, it is important to recognise and accept the negative viewpoints of the students, with regard to features of their learning environment. The Kulliyyah should be able to provide a suitable, conducive and harmonious learning environment at the right time, so that theory and practice can complement each other.

Based on the study findings, we suggest specific plans of action in order to provide a quality learning environment for Bachelor of Nursing students. The recommendations are as follows:

1. Prepare detailed documentation for the Curriculum Committee on the findings of the DREEM inventory as baseline information for the next curriculum review.

2. Provide information on student perceptions of their learning environment to each Kulliyyah member. This will potentially influence each member in facilitating the planning and implementation of student-centred (rather than teacher-dominated) curriculum.

3. Plan and implement a strategic faculty development programme to focus on student-centred learning for academic staff members.

4. Provide strong student support facilities for counselling, sporting and cultural activities on the campus. The Kulliyyah should be aware that students need to not only focus on their studies but should also have the opportunity to experience extra-curricular activities and meaningful experiences on campus.

5. Improve scheduling so students are kept informed and prepared for their learning activities.

6. Create a harmonious learning environment during students' clinical postings and provide them with detailed, clinical learning objectives.

7. Stimulate and facilitate students' efforts at integrating theory components with practice and help them to approach learning as a lifelong process, rather than as mere factual learning.

8. Reward teachers for excellence in teaching and leadership so that they are motivated in their careers.

Conclusion

This small study has provided useful information on student perceptions of their learning environment by using the DREEM inventory. The study identified mean overall DREEM scores of 120.12/200 from four groups of IIUM Bachelor of Nursing students. Although the overall learning environment score of this Kulliyyah was observed to be just one step below 'excellent', there were eight items out of the 50 that showed mean scores of less than 2.00 that should be examined more closely, as they indicate problem areas. Subsequently, a focus group discussion should be performed as a follow-up to explore further the actual learning environment problems in the Kulliyyah of Nursing. These findings need to be interpreted with caution, as the size of the sample from each year was quite different, as previously discussed. The recommendations arising from this DREEM study at IIUM include the need for the creation of a supportive environment, in addition to designing and implementing interventions to remedy unsatisfactorily elements of the learning environment for more effective and successful teaching and learning.

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Conception and design, data collection, analysis and interpretation, drafting of article, obtaining funding: NMS

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