Does learning environment differ in BSc. Nursing degree programmes in Sri Lankan state universities?

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Abstract. The optimum learning environment of the degree programme provides better indication of its quality. Therefore, the objective of the study is to assess the learning environment of BSc. Nursing degree programmes in Sri Lankan state universities. A descriptive cross-sectional study conducted among all 4th year nursing undergraduates who were studying in six Sri Lankan state universities; University of Sri Jayewardenepura, Peradeniya, Ruhuna, Jaffna, Eastern and General Sir John Kotelawala Defence University. These universities are mentioned anonymously in arbitrarily order. The sample size was 161 and the data was collected by already validated Dundee Ready Education Environment (DREEM) questionnaire. The questionnaire consisted of five domains; student's perception of learning, student's perception of teachers, student's academic self-perception, student's perception of atmosphere and student's self-perception. Overall scores of DREEM and subdomains scores were calculated and categorized into the very poor, significant problem, more positive than negative and excellent groups. The results revealed that the median score (±IQR) of DREEM were 127 ± 12, 130 ± 31, 127 ± 18, 133 ± 16, 129 ± 23, 126 ± 13 among universities out of 200. It showed that there was more positive than the negative environment in all BSc. Nursing degree programmes. Furthermore, the subdomains of DREEM also revealed that all median scores were within more positive than the negative group but moving to the lower margin. Therefore remedial actions should be taken to uplift the learning environment to improve the quality of all bachelor nursing degree programme in Sri Lanka in future.

Keywords: Learning environment, BSc. Nursing degree programmes, Sri Lankan state universities

Extended Abstract

Introduction

The environment is straightly connected to the attainment, happiness, fulfilment and favorable outcome of the students (Aamer et al., 2018). The quality of environment affects the educational programme effectively (Genn, 2001). The learning environment is one of the most essential element of learning procedure (Roff et al., 2001). Successful learning environment connects with the best results of the learning institute (Abdulrahman, 2013). The learning environment is an inescapable part of the syllabus, influencing the association between students, techniques, assessments and academic consequences. Learning environment refers to weather, atmosphere, and environment and has many different features such as personality, spirit, culture, family background (Palmgren and Chandrathilake, 2011). Development of values, views and professional performances of students are critical factors of the learning environment (Genn, 2001).

Currently, separate nursing schools and universities conduct nursing education programme in Sri Lanka (Jayasekara and Amarasekara, 2016). Nursing schools are joined to the Ministry of Health as governmental institutions. Universities are administered by the University Grants Commission (UGC) and the Ministry of Higher Education in Sri Lanka (Jayasekara and Amarasekara, 2016). Currently, pre-enrollment nursing education in Sri Lanka is based on a nursing programme at the level of a three-year diploma in nursing schools and four-year Bachelor of Science (BSc) degree programme during 2000-2002 (Jayasekara and Amarasekara, 2016).

Consequently, a four-year degree programme leading to B.Sc. in Nursing was started by the University Grants Commission (UGC) in Sri Lanka, in five universities (University of Sri-Jayewardenepura (2005), University of Peradeniya (2006), Eastern University. (2006), University of Jaffna (2006), and University of Ruhuna (2008) (Jayasekara and Amarasekara, 2016). Despite that, the UGC informed universities to remake a curriculum, general grade of three years with an additional year for those students who wish to obtain a special title (Jayasekara and Amarasekara, 2016). At present, two types of nursing degree programme are available in Sri Lanka. Such as direct entry B.Sc. degree programme in state universities and post-registration degree programme at Open University (Jayasekara and Amarasekara, 2016). Five standard universities in Sri Lanka have set up pre-registration degree programme leading to B.Sc. in Nursing, and the Open University offers a bachelor's degree in nursing for registered nurses of the Ministry of Health, Sri Lanka as a post-registration programme (Jayasekara and Amarasekara, 2016).

Current researches in the west revealed that the learning environment straightly impacts the learning process of nursing students (Aamer et al., 2018). However, in west majority universities have observed in positive aspects of learning environment as well as negative aspects have observed in some universities those who are delivering the nursing education curriculum (Aamer et al., 2018 and Aghamolaei and Fazel, 2010).

There were limited types of research findings available in the Sri Lankan context. However it has been done within the single universities to study learning environment among nursing undergraduates in individually in university of Ruhuna in 2012 and university of Eastern in 2016 almost four years (Hettiarachchi and Chandana, 2012 and Punithalingam and Sathaanathan, 2016). Now all the nursing faculties are matured, have enough facilities and staff. Therefore, it is needed to do more studies and best time to evaluate the learning environment of nursing undergraduates in universities, Sri Lanka to achieve best outcomes from nursing undergraduates.

However there were scanty of data in the Sri Lankan context to compare with these results with the global context. And also there is no comparison between universities in globe. There is a paucity data available in learning environment in all state universities in the same time period. And also there is no limit available data in all state universities conducting the B.Sc. degree programmes to see whether the learning environment among these universities.

This study was conducted in all state universities to identify the learning environment and lacking areas of the DREEM questionnaire. Therefore this study is needed to be conducted to compare with all state universities and which may helpful to develop bench mark of the nursing in Sri Lankan context in future.

Methodology

It was a descriptive cross-sectional study conducted in all state universities who having B.Sc. nursing degree programme. These universities are mentioned anonymously based on privacy and confidentially in arbitrarily order (A-F). For this study, 161 fourth year nursing undergraduates who are studying in Sri Lankan state universities A (n=29), B(n=20), C(23), D(n=29), E(n=27) and F(n=43) were selected as

the study population. All lateral entry nursing undergraduates and foreign nursing undergraduates in 4th year in Sri Lankan universities are excluded from this study. Non probability sampling method was used to collect purposive samples from study population.

Firstly, an explanatory statement and consent form were given and described the study. Participants were notified that all data collected last unnamed. Study data were collected using a demographic questionnaire and Dundee Ready Education Environment Measure (DREEM). Self-administrated DREEM questionnaire was used to collect perception data from nursing undergraduates. All questionnaires were coded and entered into an electronic database. The scores for the statements relating to negative attributes were computes in the reverse manner. Statistical Package for the Social Sciences (SPSS) version 23.0 was used to analyze the data and descriptive statistic methods were performed. Kruskal wallis test was done to assess group effect of the five domains and Mann-Whitney U test was done to assess significant association between five domains in each universities keeping university D as the base line. Kruskal wallis test and Mann-Whitney U test were done for assess the group effect of demographic characteristics and five domains in DREEM questionnaire Spearman's correlation was done to assess the correlation between age and the five domains. Ethical approval was obtained from the Ethical Review Committee of the Faculty of Medicine, General Sir John Kotelawala Defence University and other universities in Sri Lanka

Table 1 Score Interpretation

Area	Score	Interpretation
Total score	0-50	Very poor
	51-100	Significant problem
	101-150	More positive than negative

	151-200	Excellent
Sub-domain score		
Perception of learning(SPL)	0-12	Very poor
	13-25	Negatively viewed teaching
	25-37	A more positive perception
	37-49	Teaching highly regarded
Perceptions of teaching/instructors	0-11	Very poor
	12-22	Needs re-education
	23-33	Moving in the right direction
	34-44	Model instructors
Academic self-perceptions(SASP)	0-8	Feelings of total failure
	9-16	Many negative aspects
	17-24	Feeling more on the positive site
	25-32	Confident
Perceptions of atmosphere(SPA)	0-12	Very poor environment
	13-24	Many issues need changing
	25-36	A more positive attitude
	37-48	A good feeling overall
Social self-perceptions(SSP)	0-7	Miserable

	8-14	Not a nice place
	15-21	Not too bad
	22-28	Very good socially

Results

A total of 161 students completed the questionnaire. The demographic data is shown in the table 4.1.1 majority of the students were in the university F (26.7%) and lowest number of students was in university D (11.8%). Their ages ranged from 22 to 27 years, with a mean age 24.7. Most students were female (68.9%). More than half of the study sample stayed in the hostels (53.4%) and most students arrived to the university on foot (40.4%). Most of the students in the study were having foods from boarding place (41.0%) and spend less than 15 minutes time duration from residence to faculty (40.4%). Majority of the students didn't work part time works (91.9%), extra-curricular activities (53.4%) and also extra diploma (70.2%).

Table 2 Baseline Characteristics of the Study Population (n=161)

Variables	frequency(n)	Percentage (%)
Name of the university		
• A	29	18.0
• B	20	12.4
• C	23	14.3
• D	19	11.8
• E	27	16.8
• F	43	26.7
Gender		
• Male	50	31.1
• Female	111	68.9
Living Arrangement		
• Living with parents	31	19.3
	44	47.3
	86	53.4

- Renting
- Hostel

Mode of transport		
• On foot	65	40.4
• By bus	55	34.2
• By bike	19	11.8
• Any other	22	13.7

Food get from		
• Home	53	21.7
• Boarding place	66	41.0
• Shop	60	37.3

Time duration from residence to faculty		
• Less than 15mins	65	40.4
	55	34.2
	19	11.8
	22	13.7
• Less than 30mins		
• Less than 1hours		
• More than 1hours		

The results of the current study revealed a median score of DREEM were in 6 universities in Sri Lanka, that 127 ±12 in university A, 130 ± 31 in university B, 127 ± 18 in university C, 133 ± 16 in university D, 129 ± 23 in university E, 126 ± 13 in university F of a total of the 200 points. According to the practical guide of MCAleer and Roff this indicated a more positive than negative environment in 6 universities having nursing undergraduates degree programme in Sri Lanka (Roff et al., 2005).

Table 3 Assess the level of Student Perception of Learning in six universities (n = 161)

	AM+IQR	AM+IQR	AM+IQR	AM+IQR	AM+IQR	AM+IQR	X²	p	AM+IQR
SPOL	29 ±3	31.5 ±7	32 ±6	34 ±5	31 ±4	31 ±4	18.23	0.003	29 ±3
SPOT	27 ±5	26 ±7	26 ±4	29 ±5	28 ±9	25 ±4	18.992	0.0002	27 ±5
SASP	22 ±4	23 ±4	24 ±5	22 ±2	22 ±4	23 ±4	2.65	0.7554	22 ±4
SPOA	37 ±4	30 ±9	30 ±6	32 ±6	29 ±9	31 ±4	2.92	0.7111	37 ±4
SSSP	16 ±4	17 ±5	17 ±4	17 ±3	17 ±4	18 ±4	4.17	0.5255	16 ±4
Overall Perception	127± 12	130± 31	127± 18	133± 16	129± 23	126± 13	4.84	0.4355	127± 12

(M = Median, IQR = Inter-quartile Range, Kruskal wallis test)

The first domain of student perception of learning (SPOL) in all 6 universities (A, B, C, D, E, F) represented more positive status for student perception of learning. It indicates that in learner's opinion, the teaching practices in these universities were stimulating, dedicated and motivates students to become active and lifelong learners.

Student's perceptions of teachers was the second domains, there findings showed students believed their teachers are moving in the right direction. It indicates that student's perception that teachers are using the right techniques and methods. They have good communication skills with students & patients and secondly teachers provide constructive feedback to student. All of these factors contributes effectively in correct diagnosis and treatment planning of patients and enhances the patient care.

In student's academic self-perceptions was the third domain, the findings showed that feeling more on the positive site in learning environment. That indicates student's ideas and opinions regarding the implemented curriculum of each universities. In fourth and fifth subcategories, the median scores were high in student's perception to atmosphere and self-perception. These results clearly indicates the presence of positive learning environment in universities.

Discussion

This study revealed that overall student perception of learning environment all universities which are arbitrary named as A-F is more positive than negative environment. It is evident from comparison of our overall DREEM score with national and international nursing schools.

Results of previous studies conducted in Sri Lanka obtained scores less than our study. In our study all the universities scored higher than 100 out of 200. In similar studies were conducted in University of Ruhuna (109/200) and University of Eastern (111/200) (Hettiarachchi and Chandana, 2012 and Punithalingam and Sathaananthan, 2016). University of Ruhuna and University of Eastern are the universities included in this study which are anonymously named and it revealed similar kind results but it is higher than results of the previous studies. So that gives some positive impression after four years of their teaching methods, they are improving the learning environment than before.That means after four years they have a significant improvement in all aspects of learning environment. So that may be

positive of their teaching experts, staff recruitments and curriculum revisions.

In similar mean scores of DREEM reported in Korea 112/200 (Park KH, et al., 2015), Trinidad 106/200 (Bassaw B et al., 2003) , Iran 113/200 (Bakhialiabad et al., 2019), Nigeria 118/200 (Roff S et al.,2001) and Kuwait 106/200 (Bouhaimed M, et al.,2009).Achieving higher DREEM score for more student centered curricular in these universities and have modified problem-based learning will encourage students to combine available learning resources effectively (Al-Hazimi et al., 2004). These results are below the 120. But these scores implicates that learning environment is positive more than negative.Total mean score of DREEM which is higher than 120 were reported in Lahore at Pakistan, Karachi at Pakistan, Nepal, Indonesia, Eastern Nepal, Australia and Iran (Zafar et al., 2017, Farooq et al., 2016, Roff et al., 2001, Rochmawati et al., 2014, Shrestha et al., 2019 and Starman et al., 2018). There is a study that scored 157 which was conducted in Iran. It scored more than 150 out of 200. It shows that there is an excellent learning environment (Hassanian and Oshvand, 2018).

Conclusion

All the universities who are having B.Sc. nursing degree programme are within the optimum range which is more positive than negative. All are within the normal reference range but they are need to be improved in scores. None of the universities are in the excellent range. So, the next target is to get remedial actions to move all the universities in to the excellent range that may improve the bench mark of the nursing.

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