

Research article

Nursing students' perceptions of their educational environment in the bachelor's programs of the Shifa College of Nursing, Pakistan

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Abstract

Purpose: The objective of this study was to evaluate nursing students' perceptions of their educational environment in a private college. Perceptions were compared between genders and 2 bachelor's programs. **Methods:** A total of 219 students participated in this study, drawn from the Generic Bachelor of Science in Nursing (GBSN) and the Post-Registered Nurse Bachelor of Science in Nursing (PRBSN) programs of the Shifa College of Nursing, Islamabad, Pakistan. The Dundee Ready Education Environment Measure was utilized for data collection. Descriptive statistics were used to calculate total scores, as well as means and standard deviations, and the t-test was applied for comparisons according to program and gender. **Results:** The overall total mean score (119 of 200) is suggestive of more positive than negative perceptions of the educational environment. The mean score of 13 of 28 on the social self-perception subscale suggests that the social environment was felt to be 'not a nice place.' The t-test revealed more positive perceptions among students enrolled in the PRBSN program ($P < 0.0001$) than among those enrolled in the GBSN program and more positive perceptions among female students than among male students ($P < 0.0001$). **Conclusion:** Commonalities and differences were found in the perceptions of the nursing students. Both positive and negative perceptions were reported; the overall sense of a positive environment was present, but the social component requires immediate attention, along with other unsatisfactory components. Establishing a supportive environment conducive to competence-based learning would play an important role in bringing desirable changes to the educational environment.

Keywords: Cross-sectional studies; Pakistan; Social environment; Social perception; Nursing students

Introduction

Nursing education in Pakistan has undergone a transformation from being diploma-based to being degree-based in the past few decades. This change has led to a shift from training to education in the preparation of nurses, accompanied by a paradigm shift from school education to university education in nursing. Minimal evidence is available to assess the strengths

and weaknesses of the educational environment in nursing colleges after this change. Hypothetically, a favorable environment may produce nurses who improve their patients' health and provide high-quality care. The objectives of this study were twofold: first, to evaluate nursing students' perceptions of the educational environment at the Shifa College of Nursing, Islamabad, Pakistan through a survey utilizing the Dundee Ready Education Environment Measure (DREEM) inventory, and second, to compare these perceptions according to gender and enrollment in the Generic Bachelor of Science in Nursing (GBSN) or Post-Registered Nurse Bachelor of Science in Nursing (PRBSN) programs.

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Methods

Study design

A cross-sectional study design was used.

Materials and subjects

This study was carried out at the Shifa College of Nursing, Islamabad, Pakistan from December 2014 to October 2015. A total of 247 students from the GBSN and PRBSN programs were enrolled in the study using a purposive sampling technique, of whom 219 (88.7%) participated in the study. Students returning after a month of leave, joining college after a period of time spent outside of the educational system, with a current illness, having had a death or major illness in the family, or who were on a probation period were excluded from the study. The structured self-administered DREEM inventory was used for data collection after written approval was obtained from the author [1].

The DREEM has been used in various educational programs around the world to analyze undergraduate programs, but its utilization in nursing studies has not yet been well established. It provides quality assurance comparisons between GBSN and PRBSN programs as well as within components of a DREEM. The DREEM tool consists of 5 components: perception of learning (PoL), perception of course teachers (PoCT), academic self-perception (ASP), perception of atmosphere (PoA), and social self-perception (SSP). The DREEM tool contains a total of 50 questions, and specific response patterns can reflect strengths and weaknesses in the climate of a college. The overall Cronbach alpha coefficient for the DREEM was reported in 2 national studies to be 0.895 and 0.91. The responses are rated on a Likert scale, ranging from a minimum score of 0 (strongly disagree) to a maximum of 4 (strongly agree). Descriptive and analytical tests were performed to calculate the mean scores, standard deviations, and P-values.

Statistics

The DREEM author guide was used to analyze the data. Mean values, standard deviations, and frequencies were obtained for the questionnaire subscales. The independent t-test was applied to analyze differences according to program and gender in the subscales of the questionnaire.

Ethical approval

Ethical approval was obtained from the ethical committee of the Shifa College of Nursing. The Institutional Review Board reference number is 434-283-2014. Written informed consent was obtained from the study participants. Their participation in the study was voluntary and no monetary or any other benefit was offered. The participants were free to leave the study

at any time they wanted. The data were coded and collected anonymously to ensure confidentiality. The questionnaires were kept in a locked container, and computer files were password-protected. Access was only granted to the primary researchers.

Results

Of the participants, 57.5% (126) were female and 42.5% (93) were male, and 140 (63.9%) were in the GBSN program, while the remaining 79 (36.1%) were in the PRBSN program. A total of 6 classes participated in the study: 4 from the GBSN and 2 from the PRBSN.

The overall total average DREEM score was 119 of 200, indicating a more positive than negative educational environment in the college. The mean scores of the subscales were as follows: PoL, 30 of 48 ('a more positive PoL'); PoCT, 26 of 44 ('moving in the right direction'); ASP, 21 of 32 ('feeling more on the positive side'); and PoA, 29 of 48 ('a more positive attitude'). However, the SSP subscale score was 13 of 28, corresponding to the educational environment being 'not a nice place' (Table 1). Data file of the DREEM survey is available from Supplement 1.

The independent t-test results showed significant differences in the overall mean scores between the GBSN participants (113 ± 14.76) and the PRBSN participants (129 ± 12.05) ($P < 0.0001$). Significant differences were likewise found in the mean scores for PoL (28 ± 4.96 vs. 33 ± 3.69 , $P < 0.0001$), PoCT (25 ± 5.25 vs. 28 ± 4.46 , $P < 0.0001$), ASP (20 ± 4.27 vs. 23 ± 3.12 , $P < 0.0001$), and PoA (27 ± 5.39 vs. 31 ± 3.45 , $P < 0.0001$). In contrast, no significant difference was observed for SSP (13 ± 3.66 vs. 14 ± 3.58 , $P = 0.407$) (Table 2).

Mean scores of < 2.00 are reflective of problem areas in the educational environment. The italicized items are negative statements in the questionnaire. The following items had a mean score of < 2.00 from students in both programs: 'teaching helps to develop my competence,' '*teaching overemphasizes factual learning*,' '(I am) clear about the learning objectives,' '*course*

Table 1. Overall total average scores of the DREEM subscales from 219 students of the Shifa College of Nursing, Islamabad, Pakistan

DREEM subscales	Maximum score	Average score
Perception of learning	48	30
Perception of course teachers	44	26
Academic self-perception	32	21
Perception of atmosphere	48	29
Social self-perception	28	13
Overall	200	119

DREEM, Dundee Ready Education Environment Measure.

Table 2. Comparisons of the overall DREEM score and subscale scores between GBSN students and PRBSN students at the Shifa College of Nursing, Islamabad, Pakistan

DREEM subscales	GBSN	PRBSN	df	t-value	P-value
Perception of learning	28 ± 4.96	33 ± 3.69	201	-9.236	< 0.0001
Perception of course teachers	25 ± 5.25	28 ± 4.46	184	-4.359	< 0.0001
Academic self-perception	20 ± 4.27	23 ± 3.12	203	-6.577	< 0.0001
Perception of atmosphere	27 ± 5.39	31 ± 3.45	213	-7.473	< 0.0001
Social self-perception	13 ± 3.66	14 ± 3.58	165	-0.831	0.407
Overall	113 ± 14.76	129 ± 12.05	189	-8.996	< 0.0001

Values are presented as mean ± standard deviation.

DREEM, Dundee Ready Education Environment Measure; GBSN, Generic Bachelor of Science in Nursing; PRBSN, Post-Registered Nurse Bachelor of Science in Nursing.

Table 3. Mean scores of DREEM items among GBSN students and PRBSN students at the Shifa College of Nursing, Islamabad, Pakistan

DREEM subscales and their items	GBSN	PRBSN
Perception of learning		
The teaching helps to develop my competence.	1.46 ± 1.17	0.96 ± 1.10
The teaching overemphasizes factual learning. ^{a)}	1.52 ± 1.05	1.11 ± 1.03
I am clear about the learning objectives of the course.	1.44 ± 1.21	1.04 ± 1.07
The teaching is too teacher-centered. ^{a)}	1.95 ± 1.17	2.46 ± 1.11
Perception of course teachers		
The course teachers ridicule their students. ^{a)}	1.49 ± 1.34	1.10 ± 1.36
The course teachers appear to have effective communication skills.	1.27 ± 1.11	0.89 ± 0.98
The course teachers get angry in teaching sessions. ^{a)}	2.05 ± 1.24	1.54 ± 1.32
Academic self-perception		
I am confident about passing this year.	0.91 ± 1.09	0.76 ± 0.98
Perception of atmosphere		
Cheating is a problem in this course. ^{a)}	1.84 ± 1.36	2.14 ± 1.30
The atmosphere is relaxed during lectures.	1.89 ± 1.34	1.13 ± 1.04
The atmosphere is relaxed during seminars/tutorials.	1.74 ± 1.30	1.03 ± 0.99
I find the experience disappointing. ^{a)}	2.13 ± 1.17	1.71 ± 1.29
Social self-perception		
There is a good support system for students who get stressed.	1.31 ± 1.34	2.49 ± 1.29
I am rarely bored in this course.	1.97 ± 1.22	1.65 ± 1.18
My social life is good.	1.48 ± 1.42	0.96 ± 1.02
I seldom feel lonely.	1.99 ± 1.26	1.97 ± 1.19
My accommodations are pleasant.	1.56 ± 1.29	1.04 ± 1.07

Values are presented as mean ± standard deviation. Mean score of < 2.00 indicate problem areas in the educational environment.

DREEM, Dundee Ready Education Environment Measure; GBSN, Generic Bachelor of Science in Nursing; PRBSN, Post-Registered Nurse Bachelor of Science in Nursing.

^{a)}Negative statements in the DREEM questionnaire.

teachers ridicule their students, ‘course teachers appear to have effective communication skills,’ ‘I am confident about passing this year,’ ‘atmosphere is relaxed during lectures,’ ‘atmosphere is relaxed during seminars/tutorials,’ ‘I am rarely bored in this course,’ ‘my social life is good,’ ‘I seldom feel lonely,’ and ‘my accommodations are pleasant.’ PRBSN students reported better scores than GBSN students for the following items: ‘*teaching is too teacher-centered*’ (2.46 ± 1.11 vs. 1.95 ± 1.17), ‘*cheating is a problem in this course*’ (2.14 ± 1.30 vs. 1.84 ± 1.36), and ‘there is a good support system for students who get stressed’ (2.49 ± 1.29 vs. 1.31 ± 1.34). In contrast, GBSN students reported bet-

ter scores for ‘*course teachers get angry in teaching sessions*’ (2.05 ± 1.24 vs. 1.54 ± 1.32) and ‘*I find the experience disappointing*’ (2.13 ± 1.17 vs. 1.71 ± 1.29) (Table 3).

Significant differences in the overall mean scores were found between male students (114 ± 16.01) and female students (122 ± 3.64) (P < 0.0001), suggesting that female students had more positive perceptions. Significant gender differences were likewise found in the mean scores of PoL (28 ± 5.23 vs. 31 ± 5.25, P = 0.004), PoCT (24 ± 5.15 vs. 27 ± 5.17, P = 0.004), ASP (20 ± 4.22 vs. 22 ± 4.21, P = 0.001), and PoA (27 ± 5.28 vs. 30 ± 5.25, P = 0.001). However, no significant difference was observed

Table 4. Independent t-test results comparing the overall DREEM and subscale scores by gender among GBSN students and PRBSN students at the Shifa College of Nursing, Islamabad, Pakistan

DREEM subscales	Male	Female	df	t-value	P-value
Perception of learning	28 ± 5.23	31 ± 5.25	184.0	-2.951	0.004
Perception of course teachers	24 ± 5.15	27 ± 5.17	196.0	-2.932	0.004
Academic self-perception	20 ± 4.22	22 ± 4.21	177.0	-3.346	0.001
Perception of atmosphere	27 ± 5.28	30 ± 5.25	177.0	-3.457	0.001
Social self-perception	13 ± 3.62	13 ± 3.64	178.0	0.201	0.841
Overall	114 ± 16.01	122 ± 3.64	189.0	-3.959	0.000

Values are presented as mean ± standard deviation.

DREEM, Dundee Ready Education Environment Measure; GBSN, Generic Bachelor of Science in Nursing; PRBSN, Post-Registered Nurse Bachelor of Science in Nursing.

for SSP (13 ± 3.62 vs. 13 ± 3.64, P = 0.841) (Table 4).

Discussion

The GBSN and PRBSN degree programs are 2 major programs offered at the Shifa College of Nursing. The degrees of these programs are given equal weight professionally and academically. The GBSN is an entry-level program, whereas the PRBSN is offered to nurses with a general nursing diploma with the goal of equalizing them at the bachelor's level. Class sessions are often combined due to the similarities in the courses. Knowledge is commonly imparted in large groups through the lecture method. The problem-based and integrated approach is rarely used in the college. Generally, females are assumed to be predominant in the field of nursing, which was evident in the PRBSN program. However, more of the GBSN students were male (54%) than female (46%). These demographic data are contradictory to the national guidelines of the Pakistan Nursing Council, which recommends male-to-female ratios of 1:10 for GBSN programs and 1:1 for PRBSN programs [2].

The overall average total score (119 of 200) reflects an educational environment that is more positive than negative. A relatively low average score (13 of 28) was found in the SSP subscale, corresponding to the educational environment being 'not a nice place.' The students may experience academic stress that leads to negative perceptions of the social environment in the nursing college. The presence of significant academic stress raises serious concerns about low academic performance [3] and decreased empathy [4] in nursing education, which is a blend of theory and practice.

The educational environment was compared between the programs using the independent t-test. A statistically significant difference was found in the overall mean scores of GBSN and PRBSN students, with more positive perceptions reported by PRBSN students (P < 0.0001). Significant variations were also found in PoL (P < 0.0001) ('a more positive perception'), PoCT (P < 0.0001) ('moving in the right direction'), ASP (P < 0.0001) ('feeling more on the positive side'), and PoA (P < 0.0001) ('more positive attitude'). In contrast, for both groups, the SSP

subscale indicated that the social environment in the college was 'not a nice place' (P = 0.407). The variations in perceptions may have been due to differences in the characteristics of the students of these programs. The PRBSN students had obtained a basic diploma in nursing, whereas the GBSN students were entry-level nursing students. Learning together in a new social environment may also have contributed to the development of negative perceptions [5]. Moreover, students are exposed to different levels and types of courses as they progress in their program. These curriculum changes could also influence the perceptions of students in an undesirable manner [6].

The GBSN and PRBSN programs were further compared according to the mean scores of the DREEM subscale items. Mean scores of < 2.00 are suggestive of problem areas in the education environment. The PoL items with a mean score of < 2.00 from both programs were 'the teaching helps to develop my competence,' 'the teaching overemphasizes factual learning,' and 'I am clear about the learning objectives of the course.' In contrast, the mean score for 'teaching is too teacher-centered' was greater among PRBSN students than among GBSN students, indicating that the teaching was perceived to be more teacher-centered in the GBSN program. Mean scores of < 2.00 in PoCT from both programs were found for 'course teachers ridicule their students' and 'course teachers appear to have effective communication skills.' However, the mean score of the 'course teachers get angry in teaching sessions' item was higher among the PRBSN students than among those in the GBSN program. These negative perceptions about teachers could compromise the students' learning. Therefore, it is suggested that professional development measures should be designed for teachers [7]. Only 1 item in the ASP subscale was perceived negatively by students in both programs: 'I am confident about passing this year.' The problem areas in the PoA subscale were 'atmosphere is relaxed during lectures' and 'atmosphere is relaxed during seminars/tutorials.' The mean score for the GBSN students was lower than that of the PRBSN students for 'cheating is a problem in this course.' For another item ('I find the experience disappointing'), the mean score of the PRBSN students

was lower than that of the GBSN students. These issues are linked with stress and strain in students' desire to learn independently. The items indicating problems in the SSP subscale for students in both programs were 'I am rarely bored in this course,' 'my social life is good,' 'I seldom feel lonely,' and 'my accommodations are pleasant.' The mean score of the GBSN students was lower than that of the PRBSN students, suggesting the absence of a support system among GBSN students. Negative social elements may lead to stress and could affect the students' learning. On the contrary, social support has a moderating effect and is also positively correlated with students' academic achievement [8].

The educational environment was compared between the genders using the independent t-test. A significant difference was found in the overall mean scores between male and female students ($P < 0.0001$), with more positive perceptions found among female students. Significant differences were found in PoL ($P = 0.004$), PoCT ($P = 0.004$), ASP ($P = 0.001$), and PoA ($P = 0.001$), whereas no significant difference was reported in SSP ($P = 0.841$). These results indicate significantly more positive perceptions among female students in the PoL, PoCT, ASP, and PoA subscales, while similar SSP findings of the educational environment being 'not a nice place' were found in both genders. The presence of more positive perceptions among the female students in the current study may have been due to the fact that there are more female nurses in Pakistan [8]. A study reported differences in learning style among male and female nursing students, with female students scoring high at academic self-management [9]. Gender bias could also affect the perception of the educational and professional environment [10]. Most nursing colleges in Pakistan do not offer co-education. A similar pattern is followed in the basic education system as well. In this scenario, coeducation could be a source of negative perceptions in nursing education programs where it is present [11].

This study was from a single institution, which limits its generalizability. The most important limitation of the study is the use of a questionnaire to assess perceptions of the learning environment, because questionnaires may omit some context-specific components.

In conclusion, the environment was perceived to be more positive by students in the PRBSN program and by female students. Students from both the GBSN and PRBSN programs and of both genders perceived the social environment to be 'not a nice place.' Most of the items in the descriptive results were positive, but students also pointed out the need for improvements in the degree to which teaching helped students develop their competence, the extent to which teaching over-emphasized factual learning, the ridicule of students by course teachers, effective communication skills, social life, student-

centered teaching, and support for students. It is necessary to establish a supportive environment conducive to competence-based learning and to implement faculty development programs that focus on the unsatisfactory components highlighted in the study to bring desirable changes to the educational environment of the college.

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Conflict of interest

No potential conflict of interest relevant to this article was reported.

Supplementary materials

Supplement 1. Data file of the DREEM survey.

Supplement 2. Audio recording of the abstract.

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