Perception of Baccalaureate Nursing Students Towards Their Academic & Clinical Environment

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Abstract

Learning environment in nursing has been defined as everything that is happening in the classroom and clinical. The quality of an educational environment is indicative of the effectiveness of an educational programme on student learning, motivation and learning outcomes. The present study aimed to determine the perception of baccalaureate nursing students towards their educational environment. In this descriptive study 105 undergraduate nursing students at All India Institute of Medical Sciences (AIIMS) Rishikesh, Uttarakhand were enrolled using simple random sampling technique. The perceptions of nursing students to their educational environment were measured by using Dundee Ready Education Environment Measure (DREEM) and Clinical Learning Environment Inventory (CLEI). Appropriate descriptive & inferential statistics was applied to compute the results. The DREEM mean score (127±28.75) indicated more positive perception of students towards their academic environment. Students' perception of teachers (p= 0.014), academic self-perception (p=0.001), and perception of atmosphere (p=0.003) was found to be significantly associated with year of study. Similarly, year of study was found significantly associated with personalisation (p= 0.007), task orientation (p=0.013), innovation (p=0.002), individualisation (p=0.007) and student satisfaction (p=0.007) to clinical environment and learning. Work place assessment is crucial in improving the clinical teaching among nursing students.

Nursing is a profession that requires skill, special knowledge and preparation. Learning environment has been defined as everything that is happening in the classroom, department, faculty, or university (Rusban et al, 2010). The term encompasses the culture of a school or class and its presiding fundamental values and characteristics, including how students interact with and treat one another, as well as the ways in which teachers may organise an educational setting to facilitate learning.

The quality of an educational environment is indicative of the effectiveness of an educational programme on student learning, motivation and learning outcomes. Nursing addresses the challenges posed by globalisation, and to responds by forming international alliances that can facilitate knowledge sharing in order to improve human health.

Educational environment affects students' achievements, happiness, motivation and success. The quality of educational environment is indicative of the effectiveness of an educational programme (Hamid et al, 2012). The educational environment subscales correlate positively with academic success and satisfaction towards educational programme. As the learning environment effects students' motivation and achievement, it is important to elicit feedback from students on their perception of learning environment (Bakshialiabad et al, 2015).

In addition to formal classroom contact time, student nurses spent enormous amount of time in clinical practice. During clinical field placement, the students are expected to develop competencies in the application of knowledge, skills, attitudes and values inherent in the nursing profession. Arguably, the clinical environment is equivalent to a classroom for student nurses during their clinical field placement (Dominic, 2005).

According to Fraser & Fisher (1983) student outcomes during their clinical field experience might be improved by adjusting the clinical environment. Hence, there is a need to assess the students' perceptions of clinical learning environment in order to facilitate and maximise student nurses' field placement. Practical knowledge and personal experience are cornerstones for integrating theoretical knowledge and developing nursing skills and are a major reason for clinical placements during nursing education

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(Midgley, 2006).

A clinical learning environment can affect students' learning perceptions. Flott & Linden (2015) indicated that clinical learning environments are composed of physical space, psychosocial and interaction factors, the organisational culture, and teaching and learning components. Undergraduate nursing curriculum plays a pivotal role in shaping the behaviour of nursing students, academic progress and a sense of confidence. Therefore, the environment of learning has an impact on the experiences of students and consequences. Thus, the present study focused to take viewpoints of nursing students toward various aspects of their learning environment.

Objectives

The study objectives were:

1. To determine the perception of nursing students towards academic and clinical environment, and
2. To find out association of socio-demographic variables with academic & clinical environment.

Material and Methods

A descriptive cross-sectional design was used to randomly enroll 105 undergraduate nursing students at All India Institute of Medical Sciences (AIIMS) Rishikesh, Uttarakhand. The perceptions of nursing students to their educational environment were measured by using Dundee Ready Education Environment Measure (DREEM) and Clinical Learning Environment Inventory (CLEI).

Socio-demographic Profile Sheet: It consisted personal and professional information age, gender, class, year of study, habitat, occupation of father, occupation of mother, education of father, education of mother, attitude towards nursing, and reason to join nursing. The tool sought validation from the experts in the field of nursing, administration and education.

The Dundee Ready Education Environment Measure (DREEM): The DREEM was designed to measure the educational environment specifically for medical schools and other health professions (Roff et al, 1997). The DREEM is a 50 statement closed questionnaire. In this educational environment refers to perception of learning (12 items), perception of course teacher (11 items), academic self-perception (8 items), perception of atmosphere (12 items), social self-perception (7 items). It has maximum score of 200 representing an ideal educational environment. The scale internal consistency was 0.92.

Clinical Learning Environment Inventory (CLEI): The CLE refers to the learning environment that offers nursing students exposure to real patients in actual health work places. It includes 6 dimensions; individualisation, personalisation, task orientation, involvement, innovation and satisfaction with 7 items in each dimension with a total of 46 questions (Dominic, 2003). The Cronbach's alpha coefficient value for six factors, ranging from 0.50 to 0.88.

Ethical consideration: Ethical permission was sought from Institutional Ethical Committee (IEC), All India Institute of Medical Sciences (AIIMS), Rishikesh, Uttarakhand. Confidentiality, consent, and anonymity was maintained during and after data collection and dissemination of findings.

Table 1: Socio-demographic variables of subjects (N=105)

Variables	f (%)
Age (years)	20.70±1.33
Gender	
• Female	105 (100)
Year of study	
• First year	25 (23.8)
• Second year	26 (24.8)
• Third year	28 (26.7)
• Fourth year	26 (24.8)
Religion	
• Hindu	85 (81.0)
• Others*	20 (39.1)
Marital status	
• Unmarried	101 (96.2)
• Married	4 (3.8)
Habitat	
• Rural	28 (26.7)
• Urban	77 (73.3)
Occupation of father	
• Business	31 (29.5)
• Government service	54 (51.4)
• Any other	20 (19.1)
Occupation of mother	
• Homemaker	84 (80.0)
• Any other**	21 (20.1)
Education of father	
• Up to senior secondary	32 (30.6)
• Graduate and others	73 (69.5)
Education of mother	
• Up to senior secondary	59 (56.2)
• Graduate and others	46 (43.8)
Reason to join nursing	
• Not getting admission in MBBS course	69 (65.7)
• Self-interest to become a nurse	7 (6.7)
• Other reason	29 (27.6)
Distance from home to campus (km)	
• Less than 500	88 (83.8)
• 501-1000	7 (6.7)
• More than 1001	10 (9.5)
Last education school	
• Government	42 (40.0)
• Private and others	63 (60.0)
Family member in nursing/medical field	
• Yes	51 (48.6)
• No	54 (51.4)

** Sikh, Christian and Muslim*;
***- Self-employed, daily workers*

Table 2: Descriptive statistics of Dundee Ready Education Environment Measure Inventory (N=105)

DREEM	Domains	Mean ± SD
DREEM 1	Students' perception of learning (SPoL)	31.96±7.69
DREEM 2	Students' perception of teachers (SPoT)	26.99± 6.00
DREEM 3	Students' academic self-perception (SASP)	21.42±5.08
DREEM 4	Students' perception of atmosphere (SPoA)	29.67±6.27
DREEM 5	Students' social self-perception (SSSP)	17.58±3.71
Mean ± SD		**127.62±28.75**

** DREEM: Dundee Ready Education Environment Measure Inventory*

Table 3. Descriptive statistics of Clinical Learning Environment Inventory (N=105)

CLEI	Domains	Mean ± SD
CLEI 1	Personalization	21.60 ± 3.64
CLEI 2	Student involvement	25.01 ± 3.35
CLEI 3	Task orientation	24.02 ± 3.79
CLEI 4	Innovation	22.45 ± 5.85
CLEI 5	Individualisation	23.00 ± 4.81
CLEI 6	Student satisfaction	22.15 ± 3.77

** CLEI -Clinical learning environment inventory*

Data collection: Students were approached in their respective classroom in presence of their class incharge. The students were explained well about scope and procedure of data collection. The students provided tools to furnish the required information one by one. Students were also given opportunity to ask or clarify any doubt while filling the tools. It took around 15-20 minutes to collect the data. Data was analysed using SPSS version 23 using descriptive & inferential statistics.

Results

Table 1 depicts the socio-demographic variables of the subjects. The mean age of the subjects was 20.70 (±1.33) years. In terms year of study, 23.8 percent were first year followed by 24.8 percent second year, 26.7 percent third year and 24.8 percent were fourth year students. Majority (81.0%) of students belonged to Hindu religion.

Further, 96.2 percent students were unmarried and belong to urban area (73.3%). 51.4 percent fathers of nursing students were in government job and 29.5 percent were having their own business or work. Majority of mother of students (80%) were homemakers.

In respect of education of parents, 69.5 percent fathers were graduate and above while 43.8 percent mothers were having similar qualification. In terms of reason to join nursing, 65.7 percent students joined nursing because of not getting admission in MBBS course, and 27.6 percent joined nursing because of other reasons like better marriage opportunity and to settle abroad.

Further, 83.8 percent students came from a distance less than 500 kms and completed their secondary education from government school (40%). In contrast, 60 percent students completed their basic education from private and other types of schools; 51.4 percent students reported no one in medical or nursing field in their family.

Educational Environment Perceptions

DREEM mean score indicates (127±28.75) more positive perception of students towards educational environment. Further, mean score of students' perception of learning (31.96) indicates a more positive perception of students towards learning (Table 2). The findings revealed that mean score in perception of faculty/ course organisers was 26.99 indicating that students are moving in right direction. However, students mean score of academic self-perception was 21.42 indicating teaching to be more positive towards academic side. Similarly mean score of students' perception of atmosphere was 29.67, which indicates a more positive attitude among students. However mean score in domain of social self-perception was 17.58, which indicates a perception not too bad among nursing students.

Clinical Learning Environment

Table 3 depicts mean and standard deviation obtained by the nursing students in different domains of Clinical Learning Environment Inventory (CLEI).

There was higher mean score in student involvement (25.01±3.35) followed by task orientation (24.02±3.79), individualisation (23.00±4.81), innovation (22.45±5.85), student satisfaction (22.15±3.77) and lowest mean score in personalisation (21.60±3.64). The findings revealed that student involvement is the most important to improve upon clinical learning and better clinical environment in planning and implementation of clinical activities. However, role of organised clinical placement and knowing assignment in advance also have similar impact in clinical environment.

Findings revealed that students' perception of teachers (p=0.014), academic self-perception (p=0.001), perception of atmosphere (p=0.003) found significant association with year of study among nursing students (Table 4). It can be interpreted that first year nursing students have better perception towards teachers and self-perception as compare to their counterparts. However, first year and fourth year students equally have better perception of atmosphere as compare to other years of nursing students.

Table 4: Association of Academic Environment with socio-demographic variables (N=105)

Independent variable	DREEM 1	DREEM 2	DREEM 3	DREEM 4	DREEM 5
Year of Study					
First Year	35.16 ± 7.64	29.72 ± 6.13	24.20 ± 3.41	31.96 ± 5.47	17.64 ±4.10
Second Year	30.23 ± 8.26	24.46 ± 5.84	18.77 ± 4.87	26.96 ± 5.78	16.92 ± 3.24
Third Year	30.10 ± 6.20	26.35 ± 5.28	20.57 ± 5.53	28.03 ± 5.78	16.75 ± 3.56
Fourth Year	32.62 ± 7.93	27.58 ± 5.88	22.34 ± 4.78	31.96 ± 6.66	19.07 ± 3.65
***p* value**	0.56	**0.014***	**0.001***	**0.003***	0.90
Type of school					
Private and others	33.65 ± 6.63	27.50 ± 5.76	21.94 ± 4.17	30.01 ± 5.39	18.52 ± 3.30
Government	30.17 ± 8.38	26.45 ± 6.26	20.88 ± 5.90	29.31 ± 7.14	16.59 ± 3.89
***p* value**	**0.020***	0.373	0.287	0.568	**0.007***
Religion					
Hindus	32.03 ± 7.82	27.32 ± 6.30	21.39 ± 4.78	29.50 ± 5.85	17.19 ± 3.44
Non-Hindus	31.65 ± 7.34	25.55 ± 4.40	21.60 ± 6.39	30.40 ± 7.98	19.25 ± 4.42
***p* value**	0.841	0.235	0.868	0.569	**0.025***
Father's occupation					
Professional	32.21 ± 7.60	27.41 ± 6.10	21.54 ± 4.68	29.89 ± 5.85	18.01 ± 3.22
Unprofessional	30.95 ± 8.17	25.29 ± 5.33	20.95 ± 6.61	28.85 ± 7.85	15.86 ± 4.98
***p* value**	0.504	0.146	0.634	0.506	**0.017***
Education of father					
Up to 10+2	33.41 ± 8.46	27.32 ± 6.49	21.98 ± 5.07	29.36 ± 5.22	18.19 ± 3.00
Graduate & others	30.11 ± 6.20	26.56 ± 5.34	20.72 ± 5.08	30.09 ± 7.46	16.80 ± 4.37
***p* value**	**0.029***	0.524	0.207	0.556	0.058
Distance* (km)					
<500	31.19 ± 7.54	26.60 ± 6.10	21.13 ± 5.22	29.13 ± 6.36	17.19 ± 3.64
501-1000	37.71 ± 9.84	28.43 ± 6.37	21.71 ± 4.15	31.14 ± 2.73	19.30 ± 2.42
>1001	34.70 ± 5.43	29.40 ± 4.78	23.90 ± 4.07	33.40 ± 2.64	19.80 ± 4.26
***p* value**	**0.047**	0.307	0.262	0.102	**0.048***

** DREEM: Dundee Ready Education Environment Measure Inventory; Distance: home to campus distance;*
** Significant at p<0.05*

Students' perception of learning (p=0.020) and social self-perception (p=0.007) was found significant with type of educational school of nursing students. It can be interpreted that students who had studied in private and other types of schools have better social self-perception as compared to the students studied in government schools.

The findings revealed that students' social self-perception have significant association with religion (p=0.025) and occupation of father (p=0.017) respectively. It can be interpreted that students who belong to non-Hindu religion and whose father were professional in occupation have better perception as compared to others.

Students' perception of learning was found significant with education of father (p=0.029). It can be interpreted that students whose father have completed secondary education have better perception as compared to others. Also, students' perception towards learning (p=0.047) and social life (p=0.048) found significant with distance from home to college students commuting a distance between 501-1000 km from home have better perception of learning whereas students who commuted to more than 1001km distance have better social self-perception.

The year of study was significantly associated with personalisation (p=0.007), task orientation (p=0.013), innovation (p=0.002), individualisation (p=0.007), student satisfaction (p=0.007) to clinical environment and learning (Table 5). Further, it can be interpreted that first year nursing students have better perception towards personal interest of teacher/faculty visit and teacher in clinical, one to one discussion, punctuality of ward shift, daily work assignment, work load in clinical, innovative clinical teaching ideas, appropriate teaching, interesting clinical activities, clinical teaching approaches, decision in assignment of clinical activities to nursing students and overall satisfaction to clinical environment and learning.

It was also revealed that habitat (p=0.043) and type of educational schools (p=0.049) of students found significant association with individualisation. Students belonging to urban areas and having studied in private and other types of educational institutes have better perception towards staff timing in clinical, pace of working, teaching approaches, opportunities to work in interested clinical activities, and activities selection by the clinical teachers.

Discussion

Present cross-sectional survey on randomly selected 105 nursing students at a tertiary care public hospital was conducted to determine perception towards their educational environment. Overall mean score of DREEM scale was 127 (± 28.75) which is parallel to the study conducted by Farooq S et al (2018) on 442 undergraduate nursing students having average DREEM score of 129.92 (±19.97) which shows better perception of nursing students. Present study findings are also parallel to the study conducted by Pai PG et al (2014) on 696 undergraduate medical students and having overall mean score was 123 out of 200.

In present study, mean of students' perception of learning (31.96), perception of teachers (26.99), academic self-perception (21.42), perception of atmosphere (29.67), and social self-perception (17.58) respectively. These findings are in consensus with study conducted by Patil AA et al (2018) having mean of students' perception of learning (28.99), perception of teachers (26.71), academic self-perception (21.24), perception of atmosphere (29.21), and social self-perception (17.48) respectively.

The mean score of DREEM scale was 127.92(±28.75) which was consistent with the study conducted by Victor G et al (2016) on 219 nursing students which shows a mean score of 119 out of 200. Present study results are somewhat similar to study conducted by Nouh T et al (2016) on 193 students and having overall mean score of 117.9(±27).

In present study, overall mean score for six dimensions of CLEI; personalization (21.60), task orientation (24.02), student satisfaction (22.15), innovation (22.45), individualization (23.00) and student involvement (25.01) respectively. These findings are in line with the study conducted by Papathanasiou IV et al (2014)[45] on 196 nursing students having overall mean score of six dimensions was personalisation (23.97), task orientation (23.31), student satisfaction (26.82), innovation (19.21), individualisation (19.24) and student involvement (24.31) respectively.

Present study showed that there was significant association between students' perception of teachers (p=0.014), academic self-perception (p=0.001), perception of atmosphere (p=0.003) with year of study among nursing students which is parallel to the study conducted by Farooq S et al (2018) on 442 undergraduate nursing students in which it was found that first year nursing students attained the significant highest score in all aspects (p< 0.05) while the least scores were received by 3rd year nursing students in DREEM scale and sub-scale except in perception towards learning environment.

In present study, findings of Clinical Learning Environment Inventory revealed that the most important domain is student involvement (25.01) and least important domain is personalisation (21.60) and these study findings are inconsistence with the study conducted by Ali WG et al (2015)[51] on 75 nursing students which shows that satisfaction subscale is the most important domain (29.6) and least important domain is individualisation (14.8).

In present study, mean score of DREEM scale 127.92 which is inconsistent with the study conducted by Edgren G et al (2010) on 503 students in which the result shows overall DREEM scale score of 145 which is higher than other published results.

Present study showed significant association of year of study with personalisation (p= 0.007), task orientation (p=0.013), innovation (p=0.002), individualization (p=0.007) and student satisfaction (p=0.007) to clinical environment and learning these findings are in line with the study conducted by Ahmad N et al (2018) on 118 undergraduate nursing students which shows that there is significant relationship between level of study and area of posting for students and perception levels (p<0.05) indicates that there is positive perception of the clinical learning environment, supervision and nurse teacher.

Further, there was significant association of year of study with personalisation (p=0.007), task orientation (p=0.013), innovation (p=0.002), individualisation (p=0.007) and student satisfaction (p=0.007) to clinical environment and learning which is somewhat parallel to the findings of the study which is conducted by Berntsen K et al (2017) on 499 undergraduate nursing students which shows that first year nursing students had significantly higher scores on the total scale and on four of the subscales:

Table 5: Association of Clinical Learning Environment with socio-demographic variables (N=105)

Independent Variable	CLEI 1	CLEI 2	CLEI 3	CLEI 4	CLEI 5	CLEI 6
Year of study						
First year	23.76 ± 4.47	25.48±3.95	25.88 ± 3.93	26.12± 5.35	25.20 ± 5.88	23.64 ± 4.42
Second year	20.96 ± 2.37	24.54±2.50	22.80 ± 2.78	21.53± 4.78	22.88 ± 3.81	21.34 ± 2.57
Third year	20.71 ± 3.02	25.14±2.92	23.14 ± 3.86	20.35± 5.11	20.71 ± 4.18	20.60 ± 3.15
Fourth year	21.12 ± 3.81	24.92±3.98	24.42 ± 3.89	22.11± 6.68	23.50 ± 4.31	23.19 ± 4.04
p value	**0.007***	0.790	**0.013***	**0.002***	**0.007***	**0.007***
Marital Status						
Unmarried	20.29 ± 4.19	24.86±2.98	23.36±4.33	22.11±6.15	22.50±4.95	21.54±2.67
Married	22.08 ± 3.34	25.08±3.49	24.27±3.57	22.58±5.78	23.19±4.78	22.38±4.09
p value	**0.025***	0.767	0.276	0.714	0.515	0.315
Mother's occupation						
Housewife	21.07±3.44	26.13±3.47	24.43±3.93	23.10±4.84	23.70±5.24	21.80±3.34
Working women	21.81±3.73	24.57±3.22	23.87±3.75	22.20±6.23	22.73±4.64	22.29±3.95
p value	0.346	**0.030***	0.492	0.479	0.355	0.548
Education of father						
Up to secondary education	21.15±3.97	25.44±3.25	24.29±3.93	23.05±5.79	23.88±4.61	22.17±3.60
Graduate & above	22.17±3.14	24.48±3.44	23.70±3.63	21.70±5.91	21.89±4.88	22.13±4.03
p value	0.156	0.145	0.430	0.241	**0.035***	0.958
Type of school						
Private & others	21.67±3.80	24.91±3.21	24.17±3.44	23.33±5.51	23.91±4.54	22.70±4.10
Government	21.53±3.43	25.14±3.52	23.89±4.16	21.53±6.2	22.06± 4.95	21.57±3.34
p value	0.848	0.727	0.703	0.115	**0.049***	0.124
Habitat						
Rural	21.59±3.81	24.89±3.41	23.78±3.47	21.61±5.67	22.11± 5.01	21.86±3.64
Urban	21.48±3.60	24.88±3.41	24.71±3.96	22.87±5.55	23.13± 4.16	22.00±3.86
p value	0.956	0.694	0.493	0.242	**0.043***	0.384

** CLEI -Clinical learning environment inventory; * Significant at p<0.05*

personalisation (p=0.001), individualization (p=0.009), innovation (p=0.005), and satisfaction (p=0.001) respectively.

Present study showed that students feel satisfied with their clinical environment, staff interaction, interest in doing things and time utilisation which is parallel to the study conducted by Mokgele EL (2015) on 30 pupil enrolled nurses which was an exploratory, descriptive, contextual qualitative research approach used to explore and describe the experiences of pupil enrolled nurses in the military health clinical learning environment and within public health settings. The study showed that students felt safe to practice when they are supported by the clinical staff. They felt a sense of belongingness when the staff showed an interest in and welcomed them.

Implications

Our findings suggest to empower academic as well clinical learning environment for better future nursing products. Academic climate need to improvise by inculcating traits of good interpersonal relationship among nursing faculty. A healthy student-faculty relationship helps in better learning in students. Similarly, involvement of students in planning their role assignment and independency built them a better future nurse for tomorrow.

Recommendations

Academic and clinical environment are the key factor need attention of nurse administrator and manager at academic and nursing service in health care institutions. Academic and clinical, both aspects need equal attention for better future nursing products. A human leader can be a role model and example for his/her subordinate to make healthy relationship with students. Simultaneously, nurse administrator at hospital side should involve students in planning of ward and allow them to work shoulder to shoulder in order to develop independent skills and improvising technical knowledge.

Conclusion

The present study was on attempt in the current setup to study perception of baccalaureate nursing students of their educational environment. Concluded that nursing students had more positive perception towards their educational environment. Similarly, student involvement in clinical activities empowers clinical learning and improves perception towards faculty and clinical teachers.

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