

ORIGINAL PAPER

EXPERIENCES OF HEALTHCARE STUDENTS AND THE CHALLENGES POSED BY THEIR CLINICAL LEARNING ENVIRONMENT

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Abstract

Aim: The aim of the study was to identify the challenges and problems faced by student nurses and paramedic students during the clinical practice stage of their education. **Design:** The current study utilized a cross-sectional research design. **Methods:** A sample of 259 students was selected through convenience sampling, comprising 127 student nurses and 132 paramedic students. An adapted self-administered questionnaire, the Clinical Learning Environment Supervision and Nurse Teacher (CLES+T) evaluation scale was used to collect data, with the permission of the author. Socio-demographic characteristics were shown in the form of frequency and percentages. Findings concerning the evaluation of clinical learning were calculated in the context of descriptive statistical analysis, such as mean and standard deviation. An independent sample t-test was applied to compare the findings. **Results:** The mean age of respondents was 21.39 years, of whom 60 (61.8%) were male and 99 (32.2%) were female. The highest mean score (3.87 ± 0.77) was awarded to Nursing Care Provided on the Ward, while the lowest mean score was achieved for Supervisory Relationships on the Ward (3.71 ± 0.84). **Conclusion:** The study showed overall satisfaction with the clinical environment. Male and paramedic students were least satisfied. Considerable improvement is needed in the context of Pedagogical Atmosphere and Supervisory Relationships on the ward.

Keywords: challenges, CLES+T, clinical learning, paramedic student, student nurse.

Introduction

Nursing education is a combination of theoretical learning and clinical experience (Makhlof et al., 2017; Nabolsi et al., 2012; Papastavrou et al., 2010). Therefore, early and extensive clinical exposure is crucial for healthcare students in their training (AlHaqwi & Taha, 2015). Initially, students receive theoretical knowledge, providing a foundation that contributes to learning during clinical placements (Warne et al., 2010). There is a general perception that clinical learning is of great importance to healthcare students (Kapucu & Bulut, 2011; Kurian & James, 2017; Levett-Jones et al., 2008; Makhlof et al., 2017; Stenberg & Carlson, 2015). It has previously been demonstrated that clinical practice helps to develop the confidence and competence in students of healthcare need to provide the services required by healthcare facilities (Phuma-Ngaiyaye et al., 2017). Previous studies have suggested that clinical practice increases problem-solving abilities,

affective, cognitive, and psychomotor skills (Kapucu & Bulut, 2011), and enables students to provide safe and quality patient care. A clinical learning environment may include everything that surrounds the students such as the clinical setting, clinical staff, and patients (Kurian & James, 2017).

However, learning objectives may not be successful due to lack of ability to control conditions in clinical placements (Terzioğlu et al., 2016). Students may be confronted with a range of issues, such as difficulties in using medical equipment, managing sudden changes in patients' conditions, dealing with the demands of patients' relatives, maintaining good relationships with clinical staff and instructors (Chan et al., 2009), possible criticism from peers, fear of making mistakes, and the negative attitudes and expectations of clinical staff (Kapucu & Bulut, 2011). Furthermore, negative criticism, limited opportunities for practice, shortage of clinical staff and clinical instructors, and the number of students affect the performance of students (Gemuhay et al., 2019). Previous studies have suggested that clinical environment can lead to anxiety and stress (Ahmad & Anwar, 2018; Meyer et al., 2016), resulting in negative feelings among students (Stenberg &

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Carlson, 2015). Stress may reduce the ability to think critically, affecting their experiences of academic learning and further impacting their lives as professionals (Meyer et al., 2016).

Thus, there is a pressing need for reliable evidence of the challenges faced by students during their clinical practice, in order to guide the development of the nursing curricula, to inform the policy makers behind clinical rotations, and to help with decision-making regarding clinical placements.

Nursing education in Pakistan currently consists of either a three-year diploma, or a four-year degree in nursing. However, as a result of a recent government decision, there will be no new admissions to diploma courses, and, thus, nursing education will consist solely of the four-year degree course. As part of the degree course, nursing students must spend a number of hours in clinical placements, specified by the curriculum. During clinical practice, students are supervised by a college faculty member and hospital nursing staff. Upon graduation, students are required to complete one year of practical training as an internee under the supervision of the hospital nursing management. During this hands-on practice, students face several challenges arising from their clinical setting, as well as from their educational institutions.

Aim

The overall aim of the study was to identify challenges and problems faced by student nurses and paramedic students during the clinical practice stage of their education. The purpose of the study was also to highlight the clinical problems of undergraduate students in order to aid the selection of appropriate interventions. Furthermore, the findings of the study could then be applied by teachers and educational institutions in the reorganization of clinical practice.

Methods

Design

A descriptive cross-sectional study design was adopted.

Sample

The data were collected from student nurses and paramedic students of the North-West Institute of Health Sciences, Rehman College of Nursing, and Pak International Nursing College, Peshawar, Pakistan. The sample comprised 259 students selected by convenience sampling. Of the total sample, 127 were student nurses and 132 were paramedic students of various disciplines.

Data collection

Data were collected by means of a structured adapted questionnaire, the Clinical Learning Environment Supervision and Nurse Teacher (CLES+T) evaluation scale. The period of data collection was from March, 2019 to August, 2019. The author of the scale was contacted by email, and granted permission to use the questionnaire, consisting of 34 items grouped into five sub-dimensions: 1) pedagogical atmosphere (nine items); 2) leadership style of ward manager (four items); 3) nursing care on the ward (four items); 4) supervisory relationships (eight items); and 5) role of the nursing teacher (nine items). Each item was evaluated on a five-point Likert Scale (1 – “strongly disagree”, 2 – “disagree”, 3 – “neutral”, 4 – “agree”, 5 – “strongly agree”). Cronbach alphas for each of the five subscales of the original tool ranged from 0.77 to 0.96 (Warne et al., 2010). The English version of the CLES+T was used.

Data analysis

Statistical Package for Social Sciences (SPSS) software version 22 was used for analysis of data. Demographic characteristics were presented in the form of frequency and percentages. Findings concerning the evaluation of clinical learning were calculated in the context of descriptive statistical analysis, such as mean and standard deviation. An independent sample t-test was applied to compare the findings for student nurses and paramedic students, and for male and female students. A p-value of < 0.05 was considered statistically significant.

Results

The mean age of the participating students was 21.39 years (SD = 1.63; range = 18–27). The majority of the participating students were male 160 (61.8%), while 99 (38.2%) were female. The gender ratio among the participants is notable owing to the low literacy rate and reduced job opportunities for women. The study included 127 (49%) student nurses and 132 (51%) paramedic students. One hundred and twenty-four (47.9%) were second-year students, 81 (31.3%) were third-year students, and 54 (20.9%) were fourth-year students (Table 1).

The overall mean score of the sub-dimensions is shown in Table 2. Students' ratings of the five sub-divisions had mean values of between 3.71 and 3.87. The highest mean score (3.87 ± 0.77) was awarded to nursing care provided on the ward. The lowest mean score was awarded to relationship with supervisors on the ward (3.71 ± 0.84). The evaluation received for pedagogical atmosphere was 3.77 ± 0.70 , for the

Table 1 Socio-Demographic characteristics of the participants

Demographic variables	n	%
Gender	160	61.8
male	99	38.2
female		
Field of study	127	49
nurses student	132	51
paramedics student		
The year of study	124	47.9
second year	81	31.3
third year	54	20.9
fourth year		

leadership style of the nursing manager of the ward it was 3.86 ± 0.78 , and for the role of the nursing teacher it was 3.80 ± 0.80 . Significant differences were found in the results for all dimensions and groups of students (male and female, student nurses, and paramedic students) after a t-test ($p < 0.001$) (Table 2).

Separate findings were identified for different groups of participants. The mean scores awarded by student nurses were higher than those of paramedic students for all sub-dimensions. Similarly, the mean scores awarded by female students were higher than those given by male students (Table 3).

Table 2 The overall mean scores of the sub-dimensions of the CLES+T scale

	mean n = 259	SD	t-test nurses students/ paramedic students	t-test male/female
pedagogical atmosphere on the ward	3.77	0.70	< 0.001	< 0.001
leadership style of nursing manager of the ward	3.86	0.78	< 0.001	< 0.001
nursing care on the ward	3.87	0.77	< 0.001	< 0.001
supervisory relationships	3.71	0.84	< 0.001	< 0.001
role of the nursing teacher	3.80	0.80	< 0.001	< 0.001

SD = standard deviation; p-value < 0.05

Table 3 Mean scores of the sub-dimensions of the CLES+T scale by the groups of the students

	Pedagogical atmosphere on the ward mean (SD)	Leadership style of nursing manager of the ward mean (SD)	Nursing care on the ward mean (SD)	Supervisory relationships mean (SD)	Role of the nursing teacher mean (SD)
Field of study					
nurses students (n = 127)	4.08 (0.60)	4.15 (0.59)	4.23 (0.61)	4.12 (0.59)	4.23 (0.60)
paramedic students (n = 132)	3.48 (0.67)	3.57 (0.83)	3.53 (0.76)	3.32 (0.87)	3.40 (0.77)
Gender					
male (n = 160)	3.62 (0.71)	3.67 (0.81)	3.75 (0.76)	3.58 (0.87)	3.63 (0.84)
female (n = 99)	4.03 (0.61)	4.15 (0.63)	4.07 (0.76)	3.93 (0.75)	4.0 (0.65)

SD – standard deviation

Discussion

The CLES+T instrument, whose validity and reliability are well-documented (Sundler et al., 2014), was chosen for the evaluation of students' experiences of the clinical learning environment. The findings obtained from the current study indicated overall satisfaction among healthcare students. The results further illustrated that levels of satisfaction were higher among student nurses than among paramedic students. Similarly, satisfaction among female students was higher than that among male students. A study conducted in China (Liu et al., 2017) also reported higher scores among female participants than among male participants, although

there was no significant difference between genders with regard to the CLES+T. Although students mostly had positive experiences regarding their clinical learning environment, results did not indicate a high level of satisfaction, with no item of the five sub-divisions achieving a mean score of four or above from participants.

Nursing care on the ward and leadership style were the most important sub-dimensions in the current study, receiving mean scores of 3.87 and 3.86, respectively. In the context of our study results, student nurses gave nursing care the highest mean score, analogous to participants in a previous study, who identified it as the most important

sub-dimension and awarding it high scores (Papastavrou et al., 2010). In the same way, nursing care on wards was awarded the highest score (3.61 ± 0.89) by British students and bachelor nursing students in Slovakia (3.61 ± 0.87) (Saarikoski et al., 2002).

Although nursing care in the country is, in general, less satisfactory, the students had their clinical practice in private hospitals, where the standard of nursing care is higher than in public sector hospitals. However, the current finding is not in line with results from Finnish students (Saarikoski et al., 2002).

The leadership style of the ward manager was awarded the second highest mean score. This finding is in agreement with a cross-sectional study in Slovakia in which students rated leadership style the second highest sub-dimension. In contrast to this finding, some previous studies reported it as having the lowest score (Papastavrou et al., 2010; Saarikoski et al., 2002; Warne et al., 2010). Another study carried out in Egypt on internship nurses saw leadership style rated as the least essential sub-dimension, with the highest percentage (74.8%) of students indicating dissatisfaction with the leadership style of the intensive care unit manager (Makhlof et al., 2017).

Nurse teacher refers to the role of a qualified nursing teacher employed by an educational institution to facilitate the integration of theory and practice in cooperation with the staff of a clinical placement (Johansson et al., 2010). The dimension of the role of nursing teacher received a mean score of 3.80 in the current study. Student nurses awarded nursing teacher the highest mean score (4.23 ± 0.60). In another study conducted in Cyprus, the role of nursing teacher also achieved the highest score (Dimitriadou et al., 2015).

Pedagogical atmosphere on the ward was the second least important sub-dimension in the current study (3.77 ± 0.70), a finding in line with that of another study conducted in Slovakia in which students ranked it as the least important sub-dimension (Gurková et al., 2016). A study conducted on internship nurses in Egypt found pedagogical atmosphere most important in terms of CLES+T score (81.7%) (Makhlof et al., 2017). Another study conducted in Italy also reported pedagogical atmosphere to be a highly important sub-dimension (Cremonini et al., 2015). The lower score in the current study may be due to the clinical environment being uncondusive to clinical learning.

Relationship with supervisors was the least important sub-dimension, receiving a mean score of 3.71 ± 0.84 . The result concurs with another study conducted in Cyprus in which students rated it as the least important sub-dimension, with a mean score of 3.27 (Papastavrou et al., 2010). Similarly another study using a different scale demonstrated that first and third year students considered Supervision the least satisfactory component of clinical environment (mean = 2.53/2.73) (Brynildsen et al., 2014). In the Pakistani nursing education system, nursing teachers from educational institutions monitor the clinical practice of the students. A nursing teacher is not always available, however. Therefore, students are mostly supervised by nursing staff, particularly senior staff. Relationship with supervisors is an essential element of clinical environment. The findings of the current study contradict previous findings. In a study conducted on student nurses in nine western European countries (Warne et al., 2010), students considered it the most important sub-dimension. Staff shortages and work burden could be cited as a valid reason for this contradiction. These factors prevent the effective performance of students in clinical practice (Gemuhay et al., 2019). The supervisor of the clinical practice might be unable to devote sufficient time to students.

Limitation of study

To the best of our knowledge, this is the first study of its kind in Pakistan in which the clinical challenges of nurses and paramedic students are discussed. In the absence of previous studies, the findings of the study may be used to reorganize clinical rotations of nursing and paramedic students. Regarding limitations of the study, it would have been more appropriate if the study had included students from a variety healthcare colleges. However, the overall sample is quiet sufficient, and there is still scope for larger representation.

Conclusion

The study findings reflected the evaluation of clinical environment through assessment of its sub-dimensions. The least important factors were found to be Pedagogical Atmosphere and Relationship with Supervisors – areas with much room for improvement. Educational institutes and hospitals should pay particular attention to improving the levels of satisfaction of male nursing and paramedic students. The findings of the current study may be used for further research and assessment of colleges and hospitals in terms of clinical environment.

Ethical aspects and conflict of interest

Permission was obtained from the North-West Institute of Health Sciences to conduct the study. Written informed consent was obtained from every participant, they were fully briefed on the purpose of the study, and they had the right to refuse to participate and withdraw from the study at any time. A researcher collected the data in person and was always available to answer any queries from participants. The authors declare that there is no conflict of interest regarding the contents of the study. The study received no financial support in any form, from either individuals or organizations.

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Author contributions

Conception and design (AK, HB), data collection (AUR), data analysis and interpretation (AK, HB, AIK), manuscript draft (AK, AIK), critical revision of the manuscript (AK, AUR, HB), final completion of the manuscript (AK, HB, AIK).

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