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RESEARCH ARTICLE

Nursing Students' Perception of the Clinical Learning Environment

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Abstract:

Introduction:

Clinical learning environment placements provide opportunities for students to develop their skills, socialize to the profession and bridge the gap between academic and workplace learning. This study was conducted to investigate Saudi nursing students' perceptions of their clinical learning environment and supervision in the hospital setting.

Methods:

A sample of 90 final year student nurses completing practicums at a tertiary hospital in Riyadh was included in this cross-sectional study utilizing the Clinical Learning Environment and Supervision plus Nurse Teacher scale.

Results:

Overall, students perceived their clinical learning environment positively. Among sub-scores, that for the leadership style of ward manager was the highest. Supervision types, nursing-teacher teacher-visit frequency and grade point average positively and significantly impacted student's perceptions, while university type and practicum duration did not.

Conclusion:

Students confirmed the ward manager's leadership style as the most significant influencing their perceptions. However, the nursing teacher's role had the lowest mean score, suggesting the need for its enhancement and clarification and indicating the need for better communication and collaboration between nursing schools and the clinical training hospital.

Keywords: Nursing, Students, Clinical learning environment, Preceptor, Nursing teacher, Supervision.

1. INTRODUCTION

As shown by a plethora of studies, the quality of nursing learning environments is crucial to discovering how nursing students perceive their clinical learning environments (CLEs) [1 - 3]. Nursing students were found to engage smoothly in the practicum experience if they were motivated in the profession [4, 5]. The positive ward atmosphere and the supervisory relationship were factors that influenced students' perceptions of CLEs [2]. Conversely, the characteristics of challenging CLEs were unwelcoming nursing staff, clinical faculty's lack of expertise in the clinical area or a lack of fit between students' abilities and patient acuity [6]. In the last decade,

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significant changes in undergraduate nursing education have emphasized students' experiences and learning in the clinical environment [7, 8].

Certainly, classroom learning is insufficient for students to become competent nurses who can meet the healthcare workforce's expectations [9, 10]. Instead, practice in CLEs offers nursing students the opportunity to integrate their theoretical classroom knowledge with the practical skills required to make clinical decisions and provide care in the clinical ward [11]. Therefore, clinical practicum is a valuable learning tool for improving nursing students' academic knowledge and concepts through practical application [12]. In fact, the clinical practicum is essential for filling the gap between abstract, theoretical knowledge and development of practical skills and competence [13]. Within nursing education,

the CLE is well recognized for its importance in curricula because it provides a real-life context for nursing practice and supports meaningful learning, socialization and professional development opportunities for nursing students [14].

Teachers' (preceptors') attributes and positive relationships with students can be powerful motivators for students' learning [15]. Regular visits by preceptor have positive effects and fall into three categories: academic support, facilitation of the student-mentor relationship and emotional support [16].

The lack of published studies in the Arab world, in general, and in Saudi Arabia, in specific, on the clinical learning environment among nursing students justifies this study. The lack of knowledge, attitude, and practice of student involvement in the new clinical learning environment becomes important to be studied. Thus, this study tends to answer the following questions: 1) How do nursing students in Saudi Arabia perceive their CLEs' dimensions? and, 2) Is there a difference in the CLE based on different students' characteristics (duration of placement. GPA, students' perception of supervision, and frequency of nursing teacher visit)?

2. METHODS

2.1. Study Design

This study employed a descriptive cross-sectional design with a self-report, self-administered survey questionnaire, using a convenience sample of undergraduate nursing students.

2.2. Measures

In addition to the demographics and students' characteristics, the study used the Clinical Learning Environment and Supervision plus Nurse Teacher (CLES+T) evaluation scale to explore 'all the relevant constructs' to clinical nursing learning experiences [17]. The CLES+T has five dimensions: (1) pedagogical atmosphere, (2) leadership style of the ward manager, (3) premises of nursing on the ward, (4) supervisory relationship, and (5) the nursing teacher subscale. CLES+T's alpha coefficients have ranged from 0.77 to 0.96 [18]. The tool has 34 items rated on a 5-point Likert scale (1 = 'strongly disagree'; 5 = 'strongly agree').

In this study, the CLES+T scale validity was assessed using the Content Validity Index (CVI), and the authors invited three expert nursing educators, certified in item writing, to rate item relevance using pre-established criteria of acceptability, clarity and appropriateness. The item-level CVI (I-CVI) was applied after each content expert rated an item on its relevance, with ratings ranging from 0.83 to 1. CVI was 0.99. In the present study, Cronbach alphas for each of the five sub-scales ranged from 0.70 to 0.89, and 0.92 for the total scale, confirming the scale's internal consistency.

2.3. Participants

The bachelor undergraduate nursing study in Saudi Arabia is a five-year program. Those who are in the final year are around 3,000 students. Nursing students take theoretical, practical, and clinical courses in the first four years; in the fifth

year, students are trained in a variety of clinical settings. All participants in this study had their practical training in the tertiary hospital setting, under the supervision of nursing education administration.

2.4. Sampling Process

A convenience sampling technique was used in inviting 101 students to participate.

The sample size was determined using the G*Power software [19]. According to the statistical power of 0.80, the use of conventional alpha of .05, and an effect size of 0.30 for One Way Analysis of Variance (ANOVA); the needed sample size was 101. This study had a total sample of 90 students who agreed to participate in a response rate of 89.1%. Criteria for students' inclusion were: (1) having practiced in the hospital for not less than six months, and (2) final year in the nursing study.

2.5. Data Collection

Since English was the language of instruction for the nursing students, the data were collected in the English questionnaire. The selected characteristics of participants included the duration of clinical placement, university type, Grade Point Average (GPA), students' perceptions of the type of supervision, and frequency of the nursing teacher's visits. Data collection took place over three weeks in January 2019. Data were collected by two volunteers, and not the researchers in order to limit researcher bias. The principal investigator has trained the two volunteers before they started the data collection. The data were collected from the nursing students who were completing practicums at a tertiary hospital in Riyadh, the capital of the Kingdom of Saudi Arabia.

2.6. Ethical Considerations

Prior to data collection, the hospital research centre's Institutional Review Board granted ethical approval (16-409) for the study. An information sheet was provided to all potential respondents who also were assured that their confidentiality would be maintained. Participants were informed of their right to withdraw from the study at any time, for any reason, without adverse consequences. Finally, those who agreed to participate were asked to sign a consent form attached to the questionnaire. All data were coded without personal identifiers.

3. RESULTS

Statistical analyses were conducted using Statistical Package for Social Sciences (SPSS), version 25 [20].

3.1. Respondents' Characteristics

As shown in Table **1**, of 101 questionnaires, 90 were returned; a response rate of 89.1%. The majority of respondents were female (55.6%). As for frequencies of types of supervision, 16 students (17.8%) reported unsuccessful supervisory experiences, 29 (32.2%) declared team supervision, while the majority (50%) had successful supervision experiences. Of all participants, 36.7% reported a clinical placement of 1–4 weeks; 42.2% reported a clinical

placement of 5 to 8 weeks; and 21.1% reported a clinical placement of more than 8 weeks. The majority of participants studied in government schools (81.1%). Regarding grade point averages, 25.6% had Grade 'A' GPA; 40% had Grade 'B'; 27.8% had Grade 'C'; and 6.6% had Grade 'D'. Nursing teacher visits were relatively infrequent, with only about 17.8% of nursing students receiving more than four visits. These student groupings were found to significantly influence their CLES+T reporting results, that is, students with successful supervisory experience, higher GPAs and more frequent nursing teacher visits rated their CLE higher on CLES+T.

As shown in Table **2**, all five dimensions of CLES+T are rated quite similarly. The leadership style of the ward manager has the highest mean (M=3.80, SD=0.86), while the role of the nursing teacher was the lowest (M=3.57, SD=.80). Cronbach's alpha coefficients for CLES+T and the subscales means out of 5 are presented in the table.

3.2. Student Characteristics and the CLE

Results revealed statistically significant differences between CLES+T's overall score with GPA, students' perceptions of types of supervision methods, and frequency of meetings with the nursing teacher (Table **3**). We can see that students' perception of supervision and frequency of nursing teacher visits have shown significant differences in all the CLE scales. None of the CLE scales has shown a difference regarding the university type.

Table 1. Nursing student variables (n = 90).

Variable	N	%
Gender	-	-
Male	40	44.4
Female	50	55.6
Type of supervision	-	-
Successful supervision	45	50.0
Team supervision	16	17.8
Unsuccessful supervision	29	32.2
Duration of placement in the clinical setting*		
1–4 weeks	33	36.7
5–8 weeks	38	42.2
More than 8 weeks	19	21.1
University type	-	-
Governmental	73	81.1
Private	17	18.9
GPA	-	-
A (3.5-4.0)	30	33.4
B (3.0-3.49)	37	41.1
C (2.5-2.99)	11	12.2
D (2.0-2.49)	12	13.3
Nursing teacher visits	-	-
1–2 visits	29	32.2
3–4 visits	45	50.0
Frequent visits	16	17.8

* Indicates the length of nursing students' stay at the current unit or ward at the time of the survey. At survey initiation, all students had been practicing in the hospital for at least 6 months.

Table 2. Mean scores of the dimensions of the CLES+T (N = 90).

Dimensions	Mean	Standard Deviation	Cronbach's α
1. Pedagogical atmosphere	3.60	0.80	.86
2. The leadership style of the ward manager	3.80	0.86	.84
3. Premises of nursing on the ward	3.73	0.87	.70
4. The content of the supervisory relationship	3.65	0.84	.89
5. The role of the nursing teacher	3.57	0.80	.86
Overall CLES+T	3.67	0.70	.92

Table 3. Comparison between the clinical learning environment and students' characteristics.

Variables	Pedagogical atmosphere	The leadership style of the ward manager	Premises of nursing on the ward	The content of the supervisory relationship	The role of the nursing teacher	CLE total
-	**F-Statistics**					
Duration of Placement	0.92	3.32*	0.23	0.70	0.18	0.65
GPA	11.73***	6.70***	5.39**	9.85***	3.24*	15.18***
Students' Perceptions of Supervision	6.55**	4.19**	4.46**	5.11**	3.57*	9.13***
Frequency of Nursing Teacher Visit	3.57*	4.43*	2.47	4.01*	0.22	4.01*
-	**t-statistics**					
University type	0.07	0.73	1.21	1.69	0.95	0.52

*p<.05 **p<.01 ***p<.001

Post-hoc LSD comparisons were conducted to identify the exact differences between groups in the variables that showed significant differences. Students with GPAs showed that Grade 'A' students scored significantly highest, reflecting a more positive perception of their CLE, followed by Grade 'B' students. Nursing students who had more frequent meetings with nursing teachers reported higher CLE perception than students with one or two visits or three or four visits. Students with successful supervisory relationships reported significantly better CLE than students indicating group supervision or unsuccessful supervisory experience.

4. DISCUSSION

This study has examined the Saudi nursing students' experiences within the CLE and the supervision provided in hospital settings. The main findings of this study were that the majority of nursing students perceived their CLE positively, and having satisfaction in their clinical learning experience. This finding is consistent with that of Bjørk *et al.* [21], who reported that Norwegian nursing students were overall satisfied with their learning environment. Furthermore, other studies have summarized the nursing students need for a healthy learning environment, which fosters their confidence, progress in clinical skills and abilities in critical thinking and decision making [12, 22].

An interesting finding from this study was that nursing students rated the leadership style of the ward-manager as the highest. In particular, students considered the nurse manager the most important key resource helping them during clinical practice. Contradiction in the literature was found regarding our results. One study finding was consistent with our result that ward nurses were the most influential factors affecting nursing students' perceptions of the CLE [23]. However, a Norwegian study on nursing students' CLE experiences contradicted our findings, which indicated that ward managers are not directly involved in clinical teaching or supervision of nursing students [24].

It is important to note that the nursing teacher's role had the lowest mean score (3.57), suggesting the need to enhance and clarify it. Nurse lecturers are expected to engage in clinical practice and ensure the CLE's adequacy. However, nursing students rated cooperation between the hospital clinical department and lecturers even lower, indicating a need to

establish meetings between nursing schools and clinical training hospitals.

The majority of students reported that they had a successful type of supervision. This result is consistent with the findings of a study conducted in Greece [25]. Dimitriadou, *et al.* [25] reported that from the students' perspectives, the CLE's effectiveness was influenced by the type of supervision. Students with a named supervisor reported higher CLES+T's total scores than other students. Furthermore, the finding of another study on nursing students' satisfaction in the clinical learning environment by Papastavrou, *et al.* [26], stated that the highest satisfaction level among students toward the CLE was reported by those with successful supervision.

In contrast, the type of university did not influence CLES+T's total scores. A possible explanation might be that the hospital's clinical curriculum is delivered consistently among students, regardless of which types of curricula nursing schools pursue. However, in a study conducted in Greek, the university type was associated with student CLE satisfaction, whereas the students from private universities were less satisfied than those from government universities [26].

We found in this study that the students' GPA has influenced their perceptions of the CLE. Students with higher GPAs had higher CLES+T's total scores. Higher GPAs could reflect high engagement in the CLE, thus impacting students' clinical abilities positively. This finding is closely related to a study conducted in Saudi Arabia, which reported that academic achievement was a predictor for student performance and learning ability [27]. Furthermore, another study conducted on Libyan nursing students' academic and clinical performance found that a student performing well in academics is most likely to perform well in a clinical setting [28].

Nursing teachers are involved in the CLE through collaboration with the clinical team and regular visits. This study found that nursing students had higher CLES+T's total scores when they had frequent meetings with the nursing teacher. This finding is congruent with a previous study conducted in Greece [26].

In this study, CLES+T's total scores were not influenced by the duration of clinical placement. This finding is inconsistent with a study on nursing students in nine European countries, which found that students with more extended

placements were more satisfied [29]. Furthermore, Norwegian students with more than seven weeks' placement have reported greater satisfaction than those with fewer than seven weeks [30]. This contradiction could be attributed to the relatively small percentage (21%) of students in our study who spent eight weeks or more in the same clinical area.

5. RECOMMENDATIONS

It is of notable significance that the nursing teacher's role had the lowest mean score among students, suggesting the need to enhance and clarify it. The following question deserves continued investigation: What kinds of communication and collaboration between nursing schools and training hospitals would best serve nursing students at a time when hospitals are struggling globally to hire competent nursing staff for their patient populations' increasing numbers and complexity? Future research should also include challenges that prevent students' effective, up-to-date learning and development processes in the CLE, especially given the on-going medical and technological advances in patient care. Conducting further research with a larger sample size to overcome a possible type two error is recommended.

CONCLUSION

Of the five CLES+T dimensions, Saudi nursing students confirmed the ward manager's leadership style as the most significant determinant influencing their perceptions of the CLE. The students' GPAs, types of supervision, and especially, frequency of nursing teacher visits were associated with students' perceptions of the CLE. Nurse lecturers are expected to engage in clinical practice and ensure the CLE's adequacy. However, nursing students scored the cooperation between the hospital clinical department and lecturers the lowest, indicating a need to close the gaps between nursing schools and clinical training hospitals.

ETHICS APPROVAL AND CONSENT TO PARTI-CIPATE

Institutional Review Board, King Fahad Medical City, Saudi Arabia, granted ethical approval (16-409) for the study.

HUMAN AND ANIMAL RIGHTS

Not applicable.

CONSENT FOR PUBLICATION

Informed consent has been obtained from all the participants.

AVAILABILITY OF DATA AND MATERIAL

Not applicable.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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