

# Perception of Nursing Students About Effective Clinical Teaching Environments: A Multi-Country Study

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Laila Al-Daken, PhD, MSN, RN<sup>1</sup>, Eilean R. Lazarus, PhD, MSN, RN<sup>1</sup>,  
Sulaiman D. Al Sabei, PhD, MSN, RN<sup>1</sup>, Maryam Alharrasi, PhD,  
MSN, RN<sup>1</sup>  and Mohammad Al Qadire, PhD, MSN, RN<sup>1,2</sup>

## Abstract

**Background:** The transition of nursing education from traditional methods to more advanced approaches is crucial for adequately preparing students to deliver competent care in tertiary care centers. Moreover, clinical faculty in nursing plays a key role in guiding nursing students through their clinical training in various healthcare settings.

**Purpose:** This study aims to describe the perceptions of undergraduate nursing students regarding the effectiveness of the learning environment and clinical teaching in clinical areas across various countries.

**Methods:** The study, conducted using a descriptive, cross-sectional research design, gathered data from 215 nursing students using the Clinical Learning Environment Inventory and Clinical Teaching Effectiveness Instrument. Data analysis included frequencies, percentages, mean, standard deviation, *t*-tests, analysis of variance, and correlation assessments to comprehend the impact of clinical teaching and learning environments.

**Results:** Nursing students' perceptions of the clinical learning environment produced mean scores between 2.03 and 3.38 on a scale from 1 to 4, resulting in an overall mean score of 2.72 across 42 items. This indicates a general satisfaction with their clinical learning experiences. Regarding effective clinical teaching, the mean student responses varied from 3.02 to 3.40 out of a possible 5 points, with a total mean of 3.22. The study revealed notable correlations in the context of effective clinical teaching, particularly with demographic variables and the clinical learning environment. Specifically, a significant correlation with age ( $r = .177, p = .009$ ) and the clinical learning environment ( $r = .572, p < .001$ ) was identified.

**Conclusion:** The study concludes that students expressed overall satisfaction with their clinical learning experiences. They recognized the importance of participating in clinical training, fulfilling clinical responsibilities for assigned patients, exerting extra effort for learning, receiving support from preceptors in clinical settings, and being attentive to communications from staff. The collaboration between clinical preceptors and academic nursing lecturers is crucial in providing a positive learning environment for students to complete clinical tasks effectively.

## Keywords

learning, Middle East, nursing students, teaching

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## Background

Nursing students increasingly seek clinical environments that foster the development of skills necessary for integrating theoretical knowledge into effective clinical practice (Hagqvist et al., 2020; Jamshidi et al., 2016). Various clinical areas provide opportunities for students to acquire essential skills, preparing them for clinical reasoning and professional development (Kavanagh & Szweda, 2017). While many nursing programs employ simulations to effectively facilitate learning, in some programs, simulation use is limited or

unavailable, making real clinical sites the primary learning environment (Roh et al., 2019).

<sup>1</sup>College of Nursing, Sultan Qaboos University, Muscat, Oman

<sup>2</sup>Adult Health Department, Faculty of Nursing, Al Al-Bayt University, Mafraq, Jordan

### Corresponding Author:

Maryam Al-Harrasi, College of Nursing, Sultan Qaboos University, Muscat, Oman.  
Email: Maryam22@squ.edu.om



## Literature Review

The clinical environment is a key component in nursing education, aiding students in engaging in authentic practice and enhancing the effectiveness of clinical teaching (Mackavey & Cron, 2019; Wu et al., 2020). Clinical experiences, recognized internationally as an essential component of nursing education, significantly shape both the teaching process and the learning outcomes of students, as evidenced by numerous studies (Clarke et al., 2016; Rafati et al., 2017; Rodríguez-García, 2021). Clinical settings offer students the opportunity to not only develop practical skills but also gain an understanding of the fundamental principles governing healthcare system processes (Bastable, 2021; Rafati et al., 2017). In these settings, nursing students typically work alongside a multidisciplinary healthcare team, which underscores the need for strong communication skills essential for professional nursing practice (Denneson et al., 2017; Ellis & Sevdalis, 2019). These environments are conducive to fostering therapeutic communication, thereby nurturing positive and trusting relationships during the training period (Abdolrahimi et al., 2017; Torous & Hsin, 2018). Effective communication facilitates essential interactions among students, clinical instructors, nurses, and other healthcare team members, enabling them to work collaboratively toward mutual goals and ensure optimal outcomes (Bastable, 2021; Rafati et al., 2017).

Clinical instructors are pivotal in fostering the development of students' professional skills, emphasizing practical skill-building rather than solely theoretical knowledge acquisition (Harden & Laidlaw, 2020; Jamshidi et al., 2016). The Clinical Teaching Effectiveness Instrument (CTEI; Gallivan, 2022) has been established as an effective measure for assessing the performance of clinical educators. This tool is also instrumental in helping healthcare educators effectively assign teaching roles, foster competency development, and deliver impactful feedback for enhancement Glatz et al. (2017) and Yang et al. (2018). Nursing students, particularly at the onset of their clinical training in hospitals, often experience significant stress. Thus, understanding their perceptions of the effectiveness of the clinical teaching environment is vital to positively influencing their knowledge acquisition, safe training practices, and professional growth. When designing an optimal clinical teaching environment, it is essential to consider various factors, including curriculum objectives, the learning environment, clinical instructor experience, and the individual characteristics of students (Soroush et al., 2021). Nursing educators need to recognize the importance of exploring these elements through students' perceptions, which can significantly impact their achievement and performance levels. Conducting these investigations is essential for equipping nursing students with the skills and knowledge needed to seamlessly integrate into healthcare systems at an early stage in their careers. This study also enables educational

systems to highlight the effectiveness of clinical teaching environments and conduct further research aimed at enhancing student engagement and clinical teaching.

To the best of our knowledge, no published studies have simultaneously explored the perceptions of effective teaching environments among undergraduate nursing students in clinical settings across multiple countries. Our research aims to unravel the views of these students in diverse national contexts. The findings are intended to guide nurse educators in formulating strategies that will strengthen these educational aspects and enrich the overall clinical teaching environment.

## Research Questions

To further explore the landscape of nursing education, the following research questions were formulated:

1. What are undergraduate nursing students' perceptions of the effectiveness of the learning environment in clinical areas across different countries? This question seeks to understand students' views on the quality and impact of the clinical settings where they receive their practical training.
2. How do undergraduate nursing students perceive the effectiveness of clinical teaching in different countries? This inquiry focuses on students' opinions about the quality and impact of the teaching they receive during their clinical training in various geographical locations.
3. What is the relationship between students' perceptions of effective clinical teaching and demographic variables, as well as the clinical learning environment? This question aims to examine the connections between students' perceptions of effective clinical teaching and the influence of their demographic backgrounds, as well as the features of the clinical learning environments they encounter.

## Methodology

### Study Design

The study was conducted using a descriptive, cross-sectional design from June 2020 to December 2021.

### Sample and Setting

Questionnaires were distributed to undergraduate nursing students from various nursing schools across four countries. Participants were drawn from Sultan Qaboos University in Oman, Al al-Bayt University, Jordan University of Science and Technology, and Zarqa University in Jordan, as well as Taibah University in the Kingdom of Saudi Arabia and Al-Quds University in Palestine, specifically from their respective faculties of nursing. The required sample size was determined using a rule-of-thumb formula, calculated as  $22 \times 10 + 50$ , resulting in a minimum of 270 nursing

students (Ab Latif & Nor, 2019; Breytenbach et al., 2017). Those deemed eligible to participate in this study were requested to complete the questionnaires. Of these, 215 students submitted their responses, a number sufficient for the intended analysis.

Eligible participants met the following criteria: (a) enrollment as a nursing student in the Adult Health Nursing (I) course; (b) voluntary expression of intent to participate; and (c) ability to read and understand English. Both bridging and regular students were included in the study.

### Study Instruments

The self-reported questionnaire comprised three parts: (a) demographic characteristics, (b) Clinical Learning Environment Inventory (CLEI), and (c) CTEI. Demographic data included age, gender, nursing program type (bridging or regular students), year of study, country, nursing school, area of practice, accommodation, and GPA.

The CLEI (D. Chan, 2001, 2002; D. Chan, 2003) was utilized to measure nursing students' perceptions of their clinical learning environment. This instrument assesses three fundamental dimensions of human environments: the relational aspect, personal development, and system maintenance. Specifically, the CLEI assesses perceptions in real clinical learning environments and categorizes students' viewpoints across six areas concerning their psycho-social aspects during clinical practicums. The inventory comprises 42 items that characterize aspects of clinical experience, with seven items for each of the five scales. The first two scales address personalization and student involvement; the subsequent two focus on teachers' innovation and task orientation; and the fifth measures individualization. Additionally, a student clinical learning experience satisfaction scale, introduced by D. Chan (2001), evaluates overall student satisfaction.

Items in the CLEI were scored using a 4-point Likert scale, with responses ranging from 4 (*strongly agree*) to 1 (*strongly disagree*). Selected questions are scored in reverse order to ensure consistency, with all negative items adjusted to reflect the same directional interpretation. The CLEI has been applied in various studies across different countries, yielding comparable results that highlight its suitability for diverse cultural contexts (Ghahremani et al., 2022; Wong & Bressington, 2021). The instrument's validity has been established in previous research, with Cronbach's alpha values ranging from 0.6 to 0.88 (D. Chan, 2002; Wong & Bressington, 2021). An Iranian study reported Cronbach's alpha values ranging from 0.47 to 0.74, with higher values (0.63–0.76) noted in specific domains when the population was segmented by year of study (Yazdankhahfard et al., 2020). In the current study, the calculated Cronbach's alpha for the CLEI is 0.65. Permission to use the scales was sought from the primary authors.

The CTEI is a vital tool for gauging students' perspectives on the performance of clinical educators. This 15-item self-report questionnaire enables students to evaluate factors that either facilitate or impede their clinical learning experiences. The CTEI's reliability has been established in numerous studies, with Cronbach's alpha levels ranging from 0.74 to 0.95, indicating high internal consistency (D. Chan, 2001, 2002; D. S. Chan, 2003). Additional research has also reflected this high level of internal consistency, as evidenced by a Cronbach's alpha of 0.97 (Gallivan, 2019; Smith, 2020). Moreover, the CTEI's construct validity, which ensures its precision in measuring clinical educators' performance, has been validated by research, including Dunn et al.'s (2020) study. In the current study, the CTEI achieved a Cronbach's alpha of 0.80.

Respondents rated each item on the CTEI using a 5-point Likert scale, which ranged from 1 (*never/poor*) to 5 (*always/superb*), with an additional option for "don't know/not applicable." This scoring approach allows for a comprehensive assessment of each item. The mean scores from all 15 items were then calculated to determine an average rating for each student. Both the CLEI and CTEI were analyzed based on the mean scores obtained for each item, enabling a nuanced interpretation of the data collected.

### Data Collection Procedure

Communication letters outlining the study's details, including its title, purpose, nature, and an overview of potential benefits and risks, were sent to all nursing students at the selected sites. Following the identification of potential participants who met the eligibility criteria, written consent was obtained for their participation in the study.

To administer the questionnaires, a research assistant not affiliated with the faculty was employed to avoid potential coercion or bias in student responses. This assistant, possessing at least a BSc degree in nursing, distributed the questionnaires during the students' free time. Number-coded forms were stored securely to ensure confidentiality and kept separate from the corresponding number-coded files. Hard copy files were kept in a locked cabinet accessible only to the principal investigator, safeguarding the data from unauthorized disclosure.

Data analysis was conducted using SPSS version 23. Statistical procedures included calculating frequencies, means, and standard deviations for demographic variables and students' perceptions of effective clinical teaching and learning environments. The study employed *t*-tests and one-way analysis of variance (ANOVA) to assess the effectiveness of clinical teaching in relation to demographic variables with careful consideration of all underlying assumptions. Additionally, Pearson correlation analysis was utilized to examine the relationships between effective clinical teaching, interval-level variables, and the clinical learning environment.

## Ethical Considerations

Ethical approval was granted by the Research Ethics Committee at each participating institution. After receiving these approvals, data collection was initiated. At the outset of participation, the following critical information was disclosed to the participants: (a) A clear outline of their rights as participants; (b) an explanation of the potential benefits and/or risks associated with their involvement in the study; (c) detailed information about the nature of the study; (d) assurance of participant anonymity; (e) the option to withdraw from the study at any point without repercussions; and (f) a commitment to maintaining confidentiality throughout the research process.

Researchers secured informed consent from each participant, emphasizing the voluntary nature of participation, and ensuring that the decision to participate or decline would have no impact on their academic evaluation. The research assistants then distributed the questionnaires to the participants, who completed them and returned them upon completion.

## Results

### Participant Demographics

The study encompassed a total of 215 students, whose demographic characteristics are detailed in Table 1. Of these, 57.2% were female, with an average age of 23.55 years ( $SD=6.14$ ) and a GPA of 76.09 ( $SD=9.63$ ) out of 100.

**Table 1.** Socio-Demographic Characteristics ( $N=215$ ).

Variable	Mean (SD)
Age	23.55 (6.14)
GPA	76.09 (9.63)
Gender	N (%)
Male	92 (42.8)
Female	123 (57.2)
Country	N (%)
Jordan	94 (43.7)
Palestine	38 (17.7)
Saudi Arabia	38 (17.7)
Oman	45 (20.9)
Nursing school	N (%)
Government	172 (80)
Private	43 (20)
Year of study	N (%)
First	9 (4.2)
Second	20 (9.3)
Third	69 (32.1)
Fourth	101 (47.0)
Fifth	16 (7.4)
Type of admission	N (%)
Regular	176 (81.9)
Bridging	39 (18.1)

Most of the students (43.7%) were Jordanians, enrolled in governmental universities (80%), and in their fourth year of study (47%).

### Nursing Students' Perceptions of the Learning Environment

Students' perceptions of their clinical learning environment were assessed using 42 items, as detailed in Table 2. Responses were recorded on a Likert scale from 4 (*strongly agree*) to 1 (*strongly disagree*). Mean scores ranged from 2.03 to 3.38, resulting in an overall mean of 2.72. Notably, most participants (2.03) disagreed with the assertion that diverse teaching methods were seldom employed. Conversely, the data indicated a strong agreement among the participants (3.38) regarding their significant investment of effort in clinical learning activities.

### Perceptions of Effective Clinical Teaching Among Nursing Students

The study also measured effective clinical teaching using 15 questions, as illustrated in Table 3. Students evaluated this aspect on a Likert scale from 1 (*never/poor*) to 5 (*always/superb*). The mean responses varied from 3.02 to 3.40, with an overall mean of 3.22.

### Relationship Between Students' Perceptions of Effective Clinical Teaching, Demographic Characteristics, and the Clinical Learning Environment

An independent sample *t*-test, detailed in Table 4, revealed no significant gender-based differences in the mean scores for effective clinical teaching ( $t(213) = -1.37, p = .17$ ). Similarly, the comparison between students from governmental and private universities did not yield statistically significant results ( $t(213) = -0.30, p = .76$ ). However, notable distinctions were observed between regular and bridging students ( $t(213) = -3.76, p < .001$ ).

Furthermore, ANOVA results indicated no substantial impact of country ( $F(3, 211) = 1.94, p = .12$ ), year of study ( $F(3, 211) = 1.44, p = .23$ ), or area of practice ( $F(3, 210) = .41, p = .79$ ) on students' perceptions of effective clinical teaching (see Table 5).

Pearson correlation analysis was conducted to examine the relationship between effective clinical teaching and other variables, including age, GPA, and the clinical learning environment. The results showed a clear correlation between effective clinical teaching and age ( $r(213) = .177, p = .009$ ), as well as a strong association with the clinical learning environment ( $r(213) = .572, p < .001$ ). On the other hand, no significant correlation was found between effective clinical teaching and GPA ( $r(213) = -.004, p = .949$ ; see Table 6).

**Table 2.** Students' Perception of Their Clinical Learning Environment.

Statement	Agree (%)	Disagree (%)
1. The preceptor(s) usually consider my feelings.	175 (81.3)	40 (18.6)
2. The preceptor(s) talk rather than listen to me.	100 (46.5)	115 (53.4)
3. I look forward to attending clinical placement.	<b>186 (86.5)**</b>	29 (13.4)
4. I know exactly what has to be done in this clinical setting	167 (77.6)	48 (22.3)
5. New ideas are seldom tried out.	63 (29.3)	21 (9.7)
6. I am expected to do work in the same way as other students.	154 (71.6)	61 (28.3)
7. The preceptor(s) talk with me personally.	137 (63.7)	78 (36.2)
8. I put effort into what I do.	<b>204 (94.8)**</b>	11 (5.11)
9. I am dissatisfied with what is done.	92 (42.7)	123 (57.2)
10. Getting work done is important in this setting.	<b>198 (92.0)**</b>	17 (7.9)
11. Different ways of teaching are seldom used.	44 (20.4)	<b>171 (79.5)*</b>
12. I am generally allowed to work at my own pace.	141 (65.5)	74 (34.4)
13. The preceptor(s) try his/her very best to help me.	183 (85.1)	32 (14.8)
14. I can't wait to the end of every shift.	113 (52.5)	102 (47.4)
15. I have a sense of satisfaction with this clinical placement.	164 (76.2)	53 (24.6)
16. The preceptor(s) instructions often get sidetracked.	78 (36.2)	<b>137 (63.7)*</b>
17. Innovative activities are always arranged for me.	140 (65.1)	75 (34.8)
18. I usually have a say in how the shift is spent.	169 (78.6)	46 (21.3)
19. The preceptor(s) help me whenever I have trouble.	<b>187 (86.9)**</b>	25 (11.6)
20. I pay attention to the communication among staff.	<b>197 (91.6)**</b>	18 (8.3)
21. This clinical placement is a waste of time.	142 (66.0)	73 (33.9)
22. This is a disorganized clinical placement.	118 (54.8)	87 (40.4)
23. The preceptor(s) used different teaching methods to guide me.	166 (77.2)	49 (22.7)
24. I am allowed to negotiate my workload.	143 (66.5)	72 (33.4)
25. The preceptor(s) seldom go around talking to me.	79 (36.7)	<b>136 (63.2)*</b>
26. I have little opportunity of handing over to the next shift.	72 (33.4)	<b>143 (66.5)*</b>
27. This clinical placement is boring.	121 (56.2)	94 (43.7)
28. Clinical tasks assigned to me are always clear.	159 (73.9)	56 (26.0)
29. My assigned clinical activities are always the same.	113 (52.5)	102 (47.4)
30. I am allowed to proceed at my own pace.	138 (64.1)	77 (35.8)
31. The preceptor(s) do not bother with my feelings.	91 (42.3)	124 (57.6)
32. I have the opportunity to express my opinions.	180 (83.7)	35 (16.2)
33. I enjoy coming to this clinical setting.	179 (83.2)	36 (16.7)
34. Routine activities are clearly explained.	184 (85.5)	31 (14.4)
35. The preceptor(s) often plan interesting activities.	72 (33.4)	<b>143 (65.5)*</b>
36. I have little opportunity to pursue my interests.	158 (73.4)	57 (26.5)
37. The preceptor(s) are inconsiderate towards me.	86 (40)	129 (60)
38. I seldom involve myself actively during debriefing sessions.	80 (37.2)	135 (62.7)
39. This clinical placement is interesting.	181 (84.1)	34 (15.8)
40. My assigned activities are carefully planned.	174 (80.9)	41 (19.0)
41. I do the same type of tasks in every shift.	68 (31.6)	133 (61.8)
42. The preceptor(s) do not negotiate when assigning my activities.	95 (44.1)	120 (55.8)

Notes. \*Top five disagreed statements.

\*\*Top five agreed statements.

## Discussion

The study's exploration of nursing students' perceptions of clinical learning in four countries revealed a general sense of satisfaction. A significant majority of students recognized the importance of diverse aspects of their training. Notably, 86.5% valued attending clinical sessions, and an even higher proportion, 94.8%, emphasized the necessity of fulfilling responsibilities with assigned patients. Additionally, a strong dedication to learning was evident, with 92% of

students making extra efforts and 91.6% understanding the importance of attentive communication with clinical staff. Support from preceptors in clinical settings was appreciated by 86.9% of the respondents.

The study also shed light on specific aspects of clinical education, revealing that 79.5% of students acknowledged the benefits of diverse teaching methods at clinical sites. Adherence to preceptors' instructions was highlighted by 63.7% of students, and 63.2% underscored the need for frequent communication with preceptors. Furthermore, 66.5%

**Table 3.** Students' Perception of Effective Clinical Teaching.

Item	Never/poor	Seldom/mediocre	Sometimes/good	Often/very good	Always/superb
1 Establishes a good learning environment (approachable, nonthreatening, enthusiastic, etc.)	17 (7.9)	30 (14)	109 (50.7)	37 (17.2)	22 (10.2)
2 Stimulates me to learn independently	19 (8.8)	34 (15.8)	85(39.5)	45 (20.9)	32(14.9)
3 Allows me autonomy appropriate to my level/experience/competence	20 (9.3)	40 (18.6)	92(42.8)	42 (19.5)	21 (9.8)
4 Organizes time to allow for both teaching and care giving	23 (10.7)	38 (17.7)	74 (34.4)	54 (25.1)	26 (12.1)
5 Offers regular feedback (both positive and negative)	32 (14.9)	53 (24.7)	83 (38.6)	29 (13.5)	18 (8.4)
6 Clearly specifies what I am expected to know and do during this training period	17 (7.9)	30 (14)	75 (34.9)	63 (29.3)	30 (14)
7 Adjusts teaching to my needs (experience, competence, interest, etc.)	14 (6.5)	33 (15.3)	82 (38.1)	61 (28.4)	25 (11.6)
8 Asks questions that promote learning (clarifications, probes, Socratic questions, reflective questions, etc.)	15 (7)	29 (13.5)	75 (34.9)	59 (27.4)	37 (17.2)
9 Gives clear explanations/reasons for opinions, advice, actions, etc.	12 (5.6)	28 (13)	78 (36.3)	56 (26)	41 (19.1)
10 Adjusts teaching to diverse settings (bedside, view box, OR, exam room, microscope, etc.)	17 (7.9)	38 (17.7)	70 (32.6)	62 (28.8)	28 (13)
11 Coaches me on my clinical/technical skills (interview, diagnostic, examination, procedural, lab, etc.)	17 (7.9)	27 (12.6)	79 (36.7)	62 (28.8)	30 (14)
12 Incorporates research data and/or practice guidelines into teaching	11 (5.1)	34 (15.8)	81 (37.7)	67 (31.2)	22 (10.2)
13 Teaches diagnostic skills (clinical reasoning, selection/interpretation of tests, etc.)	14 (6.5)	33 (15.3)	83 (38.6)	58 (27)	27 (12.6)
14 Teaches effective patient and/or family communication skills	24 (11.2)	25 (11.6)	69 (32.1)	56 (26)	41 (19.1)
15 Teaches principles of cost-appropriate care (resource utilization, etc.)	20 (9.3)	38 (17.7)	84 (39.1)	44 (20.5)	29 (13.5)

**Table 4.** Mean Differences in Effective Clinical Teaching by Gender, Type of Admission, and Type of School.

	Male vs female	Regular vs bridging	Governmental vs private
Effective clinical teaching (ECT)	Mean (SD) 3.13 (0.809) vs 3.28 (0.809)	3.122 (0.804) Vs 3.64 (0.703)	3.20 (0.810) Vs 3.25 (0.824)
	df 213	213	213
	t -1.37	-3.76	-0.300
	P 0.17	<0.001*	0.76
	CI -0.372 to 0.061	-0.799 to -0.250	-0.314 to 0.231

Note: \* Differences in mean are significant at the 0.01 level.

of students expressed a desire for more opportunities to participate in patient handoffs, demonstrating a profound desire for practical experience. These findings align with research conducted in Oman and Jordan, which also reported positive student perceptions of clinical practice and learning, interactions with faculty, students, and staff in clinical settings, and the feedback received on clinical performance. Notably, students reported feeling significantly more motivated in-patient care when nurses in the clinical setting included them as part of the team. Additionally, they perceived the teaching faculty as role models and highly valued the professional competencies of their clinical instructors.

However, areas for improvement were also identified. Students reported negative perceptions regarding interpersonal communication with faculty, the effectiveness of

clinical teaching behaviors among faculty members, student involvement during evaluations, and the adequacy of feedback from clinical instructors. Concerns were also raised about the preparedness of clinical faculty to meet students' needs in clinical environments (Al-Dweik et al., 2021; Al-Wazzan et al., 2022; Guraya et al., 2018; Hababeh & Lalithabai, 2020; Naeem et al., 2021a). However, alongside these identified areas for improvement, the study's findings also resonate with those of similar international studies that used comparable evaluation tools. Student satisfaction with frequent interactions with clinical instructors, the consistent presence of instructors in learning settings, and effective collaboration with preceptors has been attributed to have positive effect in clinical training (Nicolau et al., 2021)

**Table 5.** Mean Differences in Effective Clinical Teaching for the Country, Years of Study, and Area of Practice.

Independent variables	F, df	P	Mean	SD	CI
Country	1.94 (3,211)	.12			
Jordan			3.12	0.871	2.94–3.30
Oman			3.43	0.740	3.21–3.65
Saudi Arabia			3.09	0.768	2.84–3.34
Palestine			3.30	0.743	3.06–3.55
Year of study	1.44 (3,211)	.23			
Second			3.23	0.859	2.90–3.56
Third			3.13	0.895	2.91–3.34
Fourth			3.31	0.723	3.17–3.46
Fifth			2.93	0.834	2.48–3.37
Area of practice	.41 (2,210)	.79			
Medical and surgical wards			3.14	0.908	2.92–3.36
Pediatric wards			3.34	0.769	3.11–3.57
ER			3.21	0.792	2.86–3.56
ICU			3.18	0.808	2.92–3.44
Others			3.23	0.703	2.99–3.46

Note: \* differences in means are significant at the 0.01 level.

**Table 6.** Correlations Between the Effective Clinical Teaching with age, GPA, Clinical Learning Environment.

Variables		Age	GPA	CLE	ECT
Age	Pearson <i>r</i>		−0.105	0.063	0.177*
	<i>P</i>		0.124	0.360	0.009
GPA	Pearson <i>r</i>			0.029	−0.004
	<i>P</i>			0.676	0.949
CLE	Pearson <i>r</i>				0.572*
	<i>P</i>				<0.001

Note: \*Correlation is Significant at the .01 level (two-tailed).

Moreover, like the current study's results, research in other countries has highlighted concerns about the lack of clinical teaching competency among nursing instructors, identifying it as a major issue affecting students and negatively impacting the clinical learning environment (Al-Dweik et al., 2021).

Student responses regarding effective teaching in clinical areas varied, with mean scores ranging from 3.02 to 3.40 out of a possible 5 points. A significant difference was observed between bridging and regular nursing students in this study. Furthermore, a correlation was found between effective clinical teaching and factors such as the age and clinical learning environment of the students. However, no statistical differences were noted in relation to the type of institution, gender, country, year of study, or area of practice in effective teaching.

Supporting these findings, studies from Oman, Jordan, Saudi Arabia, and Palestine also highlighted differences between bridging and regular nursing students (Al-Dweik et al., 2021; Hababeh & Lalihabai, 2020). In contrast, similar studies from developed countries like the United Kingdom, the United States, and Australia did not

demonstrate the same results. This discrepancy may be attributed to the variation in the available technology in laboratories and clinical settings between developed and developing countries (Al-Faris et al., 2021; Hajibabae et al., 2021). The study revealed that the prior clinical experience of bridging nursing students, particularly in their roles as staff nurses, and their familiarity with clinical settings significantly shaped their perception of teaching, contrasting with that of regular nursing students. Influential factors impacting the perceptions of regular students in clinical settings included a lack of personalized attention from clinical instructors and a noticeable discrepancy in clinical competencies between instructors and preceptors (Khairat et al., 2021). The results of this investigation align with other studies conducted in Saudi Arabia (Aboshaiqah, 2016). In terms of competency development and the accomplishment of high learning outcomes, bridging students faced fewer challenges in clinical environments than their counterparts in standard curricula.

Student nurses experience a hierarchical educational journey, with competencies progressively becoming more complex through their academic phases. Those in their junior and senior years often face greater challenges, necessitating advanced mentoring strategies in clinical teaching. After obtaining an associate degree or diploma in nursing, students typically have prior exposure to and experience in real-world clinical settings. This background tends to reduce their stress levels associated with clinical duties and challenges compared to those enrolled in bachelor's programs.

Consistent with our research findings, students emphasize the importance of communication and support from their preceptor, aligning with previous studies that highlight the significant role of clinical instructors in providing encouragement

and support for continued learning (Naeem et al., 2021 b). Effective communication also plays a crucial role in fostering connections between students and clinical instructors and achieving overall learning objectives (Ekstedt et al., 2019).

Interestingly, most participants reported being assigned the same tasks during each clinical rotation day. This observation mirrors the findings by Woo and Li (2020) and Ekstedt et al. (2019), where nursing students in Singapore and North America expressed a desire for greater autonomy in their clinical experiences, which often remained unfulfilled. In contrast, students in China, as reported by Tang (2021), showed a preference for consistent supervision and hesitance toward performing tasks independently. These insights indicate that nursing students in the studied countries frequently lack the freedom to tailor their learning to their needs and preferences. Additionally, the findings imply that nursing educators may not fully recognize the importance of incorporating creative approaches in clinical training.

### Strengths and Limitations

This study marks a pioneering exploration into the perceptions of nursing students regarding clinical learning environments across four distinct countries. A notable strength lies in its integration of data from culturally, economically, and socially diverse regions, thereby enhancing its applicability and potential generalizability to a global context. However, the study's cross-sectional design presents limitations, primarily in its capacity to establish causative relationships, as data collection occurred at a single point in time. Furthermore, the evolution of students' perceptions over the course of their academic and clinical maturation remains undetermined. Future research endeavors, particularly those employing longitudinal or experimental designs, are warranted to elucidate these aspects. The insights gained here offer valuable insights for nursing educators, providing a foundation for the development and implementation of targeted interventions aimed at optimizing the clinical educational experience for nursing students.

### Implications for Practice

The findings suggest that enhancing communication and feedback could significantly improve the learning environment. There is a clear need for collaborative efforts between clinicians and academic nurses to maximize the clinical educational opportunities for students in regular programs.

### Conclusion

Overall, students in the current study expressed satisfaction with their clinical learning experience. They recognized the importance of participating in clinical training, fulfilling clinical responsibilities with assigned patients,

exerting extra effort in learning, receiving support from preceptors, and paying attention to staff communications in clinical settings. Effective collaboration between clinical preceptors and academic nursing lecturers is vital to creating a positive learning environment for students engaged in clinical tasks.

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### ORCID iD

Maryam Alharrasi  <https://orcid.org/0000-0002-8168-025X>

### References

- Abdollahimi, M., Ghiyasvandian, S., Zakerimoghadam, M., & Ebadi, A. (2017). Therapeutic communication in nursing students: A walker & avant concept analysis. *Electronic Physician*, 9(8), 4968–4977. <https://doi.org/10.19082/4968>
- Ab Latif, R., & Nor, M. Z. M. (2019). Stressors and coping strategies during clinical practice among diploma nursing students. *The Malaysian Journal Of Medical Sciences: MJMS*, 26(2), 88. <https://doi.org/10.21315/mjms2019.26.2.10>
- Aboshaiqah, A. (2016). Strategies to address the nursing shortage in Saudi Arabia. *International Nursing Review*, 63(3), 499–506. <https://doi.org/10.1111/inr.12271>
- Al-Dweik, G., Khalil, H., Atout, M., Al Zaghmouri, A., & AbuRuz, M. E. (2021). Undergraduate nursing student perspectives about challenges in clinical education in Jordan: A cross-sectional descriptive study. *The Open Nursing Journal*, 15(1) p 285–290. <https://doi.org/10.2174/1874434602115010285>
- Al-Faris, E. A., Naeem, N., Irfan, F. B., Qureshi, R., Van der Vleuten, C., & Alsheikh, G. (2021). The effectiveness of the clinical teaching model in improving the clinical skills of undergraduate medical students. *BMC Medical Education*, 21(1), 148. <https://doi.org/10.1186/s12909-021-02568-0>
- Al-Wazzan, L., AlMakadma, Y., AlRashdan, A., AlShawabkeh, M., Al-Balushi, N., & Al-Balushi, R. (2022). Nursing students' perceptions of clinical learning: A multinational study. *Journal of Nursing Education*, 61(1), 36–44. <https://doi.org/10.3928/01484834-20211130-02>
- Bastable, S. B. (2021). *Nurse as educator: Principles of teaching and learning for nursing practice*. Jones & Bartlett Learning.
- Breytenbach, C., ten Ham-Baloyi, W., & Jordan, P. J. (2017). An integrative literature review of evidence-based teaching strategies for nurse educators. *Nursing Education Perspectives*, 38(4), 193–197. <https://doi.org/10.1097/01.NEP.0000000000000181>



- Chan, D. (2001). Development of an innovative tool to assess hospital learning environments. *Nurse Education Today*, 21(8), 624–631. <https://doi.org/10.1054/nedt.2001.0595>
- Chan, D. (2002). Development of the clinical learning environment inventory: Using the theoretical framework of learning environment studies to assess nursing students' perceptions of the hospital as a learning environment. *Journal of Nursing Education*, 41(2), 69–75. <https://doi.org/10.3928/0148-4834-20020201-06>
- Chan, D. S. (2003). Validation of the clinical learning environment inventory. *Western Journal Of Nursing Research*, 25(5), 519–532. <https://doi.org/10.1177/0193945903253161>
- Clarke, M. J., Marks, A. D., & Lykins, A. D. (2016). Bridging the gap: The effect of gender normativity on differences in empathy and emotional intelligence. *Journal of Gender Studies*, 25(5), 522–539. <https://doi.org/10.1080/09589236.2015.1049246>
- Cross-Sectional Descriptive Study. *The Open Nursing Journal*, 15(1).
- Denneson, L. M., Cromer, R., Williams, H. B., Pisciotta, M., & Dobscha, S. K. (2017). A qualitative analysis of how online access to mental health notes is changing clinician perceptions of power and the therapeutic relationship. *Journal Of Medical Internet Research*, 19(6), e208. <https://doi.org/10.2196/jmir.6915>
- Dunn, L. S., Arias, S., Beyer, A., Hermes, E., & Radcliff, S. (2020). Student perspectives of the effective behaviors of occupational therapy level II fieldwork educators. *Journal of Occupational Therapy Education*, 4(4), 8. <https://doi.org/10.26681/jote.2020.040408>
- Ekstedt, M., Lindblad, M., & Löfmark, A. (2019). Nursing students' perception of the clinical learning environment and supervision in relation to two different supervision models—a comparative cross-sectional study. *BMC Nursing*, 18(1), 1–12. <https://doi.org/10.1186/s12912-019-0375-6>
- Ellis, G., & Sevdalis, N. (2019). Understanding and improving multidisciplinary team working in geriatric medicine. *Age and Ageing*, 48(4), 498–505. <https://doi.org/10.1093/ageing/afz021>
- Gallivan, S. (2022). Construct validity and internal consistency of the physical therapist student evaluation of clinical experience and clinical instruction. *Journal of Physical Therapy Education*, 36(4), 283–292. <https://doi.org/10.1097/JTE.0000000000000259>
- Ghahremani, Z., Moqaddam, M., Asgari, M., Ebrahimi, S. M., & Amini, K. (2022). The clinical learning environments of undergraduate nursing students in Iran context: A cross-sectional multicenter study. *Preventive Care in Nursing & Midwifery Journal*, 12(4), 43–53. <https://doi.org/10.52547/pcnm.12.4.43>
- Glatz, P., Sandin, R. H., Pedersen, N. L., Bonamy, A. K., Eriksson, L. I., & Granath, F. (2017). Association of anesthesia and surgery during childhood with long-term academic performance. *JAMA Pediatrics*, 171(1), e163470–e163470. <https://doi.org/10.1001/jamapediatrics.2016.3470>
- Guraya, S. Y., Guraya, S. S., & Habib, F. (2018). Nursing students' perception of the academic and clinical learning environments in Oman: A cross-sectional study. *Journal of Education and Health Promotion*, 7, 95. [https://doi.org/10.4103/jehp.jehp\\_45\\_18](https://doi.org/10.4103/jehp.jehp_45_18)
- Hababeh, M. O., & Lalithabai, D. S. (2020). Nurse trainees' perception of effective clinical instructor characteristics. *International Journal Of Nursing Sciences*, 7(3), 285–290. <https://doi.org/10.1016/j.ijnss.2020.06.006>
- Haggqvist, P., Oikarainen, A., Tuomikoski, A. M., Juntunen, J., & Mikkonen, K. (2020). Clinical mentors' experiences of their intercultural communication competence in mentoring culturally and linguistically diverse nursing students: A qualitative study. *Nurse Education Today*, 87, 104348. <https://doi.org/10.1016/j.nedt.2020.104348>
- Hajjibabae, F., Mirhaghi, A., & Ebrahimi, M. (2021). Evaluating the effectiveness of preceptorship on nursing students' clinical learning and satisfaction: A quasi-experimental study. *Nurse Education Today*, 101, 104925.
- Harden, R. M., & Laidlaw, J. M. (2020). *Essential skills for a medical teacher: an introduction to teaching and learning in medicine*. Elsevier Health Sciences.
- Jamshidi, N., Molazem, Z., Sharif, F., Torabizadeh, C., & Najafi Kalyani, M. (2016). The challenges of nursing students in the clinical learning environment: A qualitative study. *The Scientific World Journal*, 2016 1846178, 1–7. <https://doi.org/10.1155/2016/1846178>
- Kavanagh, J. M., & Szweda, C. (2017). A crisis in competency: The strategic and ethical imperative to assessing new graduate nurses' clinical reasoning. *Nursing Education Perspectives*, 38(2), 57–62. <https://doi.org/10.1097/01.NEP.000000000000112>
- Khairat, S. A., El-Sayed, S. H., & Amin, G. E. (2021). Factors affecting the quality of clinical education from the perspective of nursing students. *Nurse Education Today*, 104, 104990. <https://doi.org/10.1016/j.nedt.2021.104990>
- Mackavey, C., & Cron, S. (2019). Innovative strategies: Increased engagement and synthesis in online advanced practice nursing education. *Nurse Education Today*, 76, 85–88. <https://doi.org/10.1016/j.nedt.2019.01.010>
- Naeem, N., Al Qadire, M., & Al-Shdayfat, N. (2021a). Challenges and opportunities of bridging nursing programs in developing countries. *Journal of Education and Health Promotion*, 10, 18. [https://doi.org/10.4103/jehp.jehp\\_914\\_20](https://doi.org/10.4103/jehp.jehp_914_20)
- Naeem, N., Al-Qahtani, M. F., & Al-Hussaini, H. (2021b). Nursing students' perceived preparedness to practice: A qualitative study. *Nurse Education in Practice*, 51, 102990. <https://doi.org/10.1016/j.nepr.2021.102990>
- Nicolaou, M., Savva-Bordbar, N., & Angelopoulos, N. (2021). Nursing students' perceptions of the clinical learning environment in Cyprus: A cross-sectional study. *Nurse Education in Practice*, 51, 102997. <https://doi.org/10.1016/j.nepr.2021.102997>
- Rafati, F., E Nouhi., S Sabzehvari., & N Dehghan-Nayyeri. (2017). Iranian Nursing students' experience of stressors in their first clinical experience. *Journal of Professional Nursing*, 33(3), 250–257. <https://doi.org/10.1016/j.profnurs.2016.09.003>
- Rodríguez-García, M. C., Márquez-Hernández, V. V., Granados-Gómez, G., Aguilera-Manrique, G., & Gutiérrez-Puertas, L. (2021). Magnet hospital attributes in nursing work environment and its relationship to nursing students' clinical learning environment and satisfaction. *Journal of Advanced Nursing*, 77(2), 787–794. <https://doi.org/10.1111/jan.14629>
- Roh, Y. S., Kim, M., & Issenberg, S. B. (2019). Perceived competence and training priorities of Korean nursing simulation instructors. *Clinical Simulation in Nursing*, 26, 54–63. <https://doi.org/10.1016/j.ecns.2018.08.001>

- Smith, D. D. (2020). *Impact of 5-Minute Preceptor Training on the Senior Nursing Student Perception of Clinical Preceptor Feedback Effectiveness* [Dissertation]. American Sentinel University.
- Soroush, A., Andaieshgar, B., Vahdat, A., & Khatony, A. (2021). The characteristics of an effective clinical instructor from the perspective of nursing students: A qualitative descriptive study in Iran. *BMC Nursing, 20*, 1–9. <https://doi.org/10.1186/s12912-021-00556-9>
- Tam, W. K., & Pang, B. (2021). Nursing students' perception of clinical teaching and readiness for practice. *Nurse Education Today, 100*, 104947.
- Tang, C.-Y. (2021). Learning experience of Chinese nursing students during clinical practicum: A descriptive qualitative study. *Nursing Reports, 11*(2), 495–505. <https://doi.org/10.3390/nursrep11020046>
- Torous, J., & Hsin, H. (2018). Empowering the digital therapeutic relationship: Virtual clinics for digital health interventions. *NPJ digital Medicine, 1*(1), 16. <https://doi.org/10.1038/s41746-018-0028-2>
- Wong, W. K., & Bressington, D. T. (2021). Psychometric properties of the clinical learning environment, supervision and nurse teacher scale (CLES+ T) for undergraduate nursing students in Hong Kong. *Nurse Education in Practice, 52*, 103007. <https://doi.org/10.1016/j.nepr.2021.103007>
- Woo, M. W. J., & Li, W. (2020). Nursing students' views and satisfaction of their clinical learning environment in Singapore. *Nursing Open, 7*(6), 1909–1919. <https://doi.org/10.1002/nop2.581>
- Wu, X. V., Chi, Y., Panneer Selvam, U., Devi, M. K., Wang, W., Chan, Y. S., & Ang, N. K. E. (2020). A clinical teaching blended learning program to enhance registered nurse preceptors' teaching competencies: Pretest and posttest study. *Journal Of Medical Internet Research, 22*(4), e18604. <https://doi.org/10.2196/18604>
- Yang, Y., Shields, G. S., Guo, C., & Liu, Y. (2018). Executive function performance in obesity and overweight individuals: A meta-analysis and review. *Neuroscience & Biobehavioral Reviews, 84*, 225–244. <https://doi.org/10.1016/j.neubiorev.2017.11.020>
- Yazdankhahfard, M., Ravanipour, M., & Mirzaei, K. (2020). The gap in the clinical learning environment The viewpoints of nursing students. *Journal of Education and Health Promotion, 9*(1), 311–311. [https://doi.org/10.4103/jehp.jehp\\_438\\_20](https://doi.org/10.4103/jehp.jehp_438_20)