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Bridging the Gap between Theory and Practice through Early Clinical Training in Nursing Program: Students' Perspectives

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Abstract

Background: Developing high-quality nursing curricula is essential in nursing schools. To prepare undergraduate nursing students for their future profession's requirements, it's essential to immerse them into a multi-dimensional educational journey through Early Clinical Experience (ECE), where they can bridge the gap between theoretical knowledge and competencies. **Aim of the Study:** This study aimed to assess the perspectives and satisfaction of undergraduate nursing students towards early clinical training to improve students' skills and ensure their readiness for future nursing careers. **Method:** Mixed-method study was conducted to determine the nursing students' perspectives on early clinical training. One hundred and twenty nursing students were selected from year 1 and year 2 as a convenient sample from a private nursing school. The used questionnaire consisted of four domains: organization and structure of early clinical training, implementation of early clinical training, the clinical instructor, and advantage of early clinical training. Moreover, qualitative part was conducted through focus group. **Results:** The majority of students reported high levels of satisfaction with implementing the early clinical training program with the four domains of the survey, in the across educational years comparison, year 1 nursing students were more satisfied with their pre-clinical preparation and orientation program, while year 2 students were more satisfied with their clinical instructors during the early clinical training program. Moreover, the qualitative analysis revealed five themes which are: The effect of ECE on professional identity development, Factors affecting the. implementation of ECE, the challenges of ECE implementation, Overcoming the challenge of the ECE implementation, Institutional organization to support ECE. **Conclusion:** undergraduate nursing students appreciate the opportunity given to them by assigning them to clinical settings in the early stages of their studies, they demonstrated high satisfaction rates and shed some light on areas for improvement that can overall enhance their early clinical training experience.

Major Findings: Students are provided with unique learning opportunities through early clinical experience. Early clinical experience enhances students' readiness and communication skills, not only with patients, but also with their peers, preceptors, and other healthcare team members. Active involvement in hands-on experience in the clinical settings develops professional identity and provides continuous observation, guidance, and feedback in the same settings.

Keywords: Early Clinical Training, Nursing, Nursing Education

1. Introduction

Clinical experience means that learning is an active personal process. Each student is unique in his/her way of converting this experience into data and schemas. That's why nursing educators must allow the opportunity to learn from authentic clinical experience[1]. Clinical practice requires critical thinking and problem-solving

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skills, specialized psychomotor and technical skills, and a professional value system. Clinical practice exposes students to the realities of professional practice that textbooks and simulations cannot convey[2].

Early clinical training provides nursing students with the opportunity to acquire a large set of skills due to the initial and repeated interactions with patients, hospital staff, and patients' families[3]. When nursing students are trained in the hospital, they encounter their future career real-life situations where they can benefit from the health professional team and be observed and instructed by their clinical instructors[4].

Many learning theories support the students' learning from a clinical context leading nursing educators to emphasize the following aspects when planning early clinical training for their undergraduate students[5]. First, the outline and objectives of the early clinical training must be systematically organized and aligned with theoretical content. Second, clinical training objectives must be suitable for the student's previous knowledge acquisition and tailored specifically for the stage of development throughout the nursing curriculum[6]. Finally, early clinical training is preferably applied in a variety of clinical settings so that students can build on their knowledge and link between theoretical nursing concepts and practical ones[7].

The nursing profession is usually practiced among multidisciplinary teams, early clinical training will allow nursing students to learn collaborative work with other health professionals, communication skills, and teamwork[8].

If early clinical training was carefully tailored for junior nursing students, after going through the observation and feedback, they would be able to develop high order thinking problem-solving, critical thinking, and clinical reasoning[9]. Effective preceptors and clinical instructors' feedback is also critical to the development of reflective practice in which students learn to analyze their performance and identify their individual learning needs, strengths, and weaknesses. It is a shared responsibility between students and educators to optimize the benefits of the clinical training experience[10].

Throughout the application of the nursing curriculum in undergraduate years, students go through a transition from novices to seniors to applicants in the aspects related to clinical training[11]. Such transition is advisable in curricula to guarantee that students are coping with the mind shift that occurs in students' perspectives from thinking that they are brought to the clinical setting to be educated to the full recognition that this experiential type of learning is more self-directed[12].

Moreover, the clinical organizational structure and culture may affect students learning, if the organization at all levels has a positive attitude toward nursing students, welcoming them into the hospital and engaging them in meaningful patient care practices, that will eventually result in a higher satisfaction rate than organizations that undervalue students' contributions to the patient care and their training and education process[13].

Literature shows that attitudes and behaviors demonstrated by role models play a vital role in shaping medical students' professional identities. In the clinical learning environment, not only can nursing students witness how nurses and physicians communicate with patients, but they can also have direct contact with patients. Such communication between healthcare providers and patients is a kind of professional communication, which is found to be critical for patient compliance and patient safety as well as professional identity[14].

It has been noticed that the literature lacks research exploring the perspective of undergraduate nursing students on early clinical experience and placement as part of their undergraduate nursing practice within nursing schools in the Kingdom of Saudi Arabia. From there the significance of this study is initiated and the study aims to assess the perspective and satisfaction of undergraduate nursing students when exposed to early clinical training to improve students' skills, ensure their readiness for future nursing careers, and contribute to their professional identity formation.

2. Subjects and Methods

This was a descriptive cross-sectional study conducted among undergraduate nursing students from a single private nursing institution in Jeddah, Saudi Arabia to determine the students' perspectives on early clinical training. A convenience sampling technique was used as the sample was taken from 120 undergraduate nursing students after undergoing clinical training as a part of their bachelor's degree requirements. Moreover, the qualitative arm of this study aimed to explore student Perspectives on their early clinical experience. Therefore, this approach is considered valuable in understanding

the student experiences associated with the early clinical experience and their readiness to practice.

3. Data Collection Tool

A questionnaire was used to collect the students' responses. It included two hard parts. Part A included gender and student level, and Part B had a 36-item questionnaire on a 5-point Likert scale. The questionnaire recorded nursing students' perspectives towards early clinical training, which were divided into four domains: (a) Organization and structure of Early Clinical Training (5 items), (b) Implementation of Early Clinical Training (10 items), (c) The Clinical Instructor (16 items) and (d) Advantage of Early Clinical Training (5 items). The questionnaire was pretested on 20 students, which showed excellent reliability (Cronbach's Alpha = 0.916). The questionnaire was tested for validity and reliability, and Exploratory Factor Analysis (EFA) was performed to interpret the questionnaire factors number that help explain most of the common variance. The reliability of the questionnaire was assessed by employing internal consistency tests such as Cronbach's coefficient alpha.

Students have explained the purpose and benefits of the study. Students who gave consent for participation were given a hard copy of the questionnaire. The interviewer/investigator was present with each participant till the questionnaire was completed. The returned questionnaire was checked by the investigator for completion of all the items.

As for qualitative data, a focus group was conducted on a sample of nursing students (10 Students), and thematic analysis was performed based on categorizing quotes into themes and subthemes.

4. Explaining the Early Clinical Experience

The nursing program faculty offered a well-defined, structured, and organized clinical experience for undergraduate nursing students in years 1 and 2. Students were deployed into clinical settings according to the nursing course aligned at that time and this was under continuous supervision and monitoring by nursing clinical instructors from the educational institution and the hospital. The study was conducted over 8 weeks. The structure of the early clinical experience was as follows:

Early clinical experiences for nursing students are crucial in laying the foundation for their practical skills and understanding of patient care. Here's a typical structure:

(i) *Orientation and Introduction:* Students first received a full-day orientation regarding the objectives and expectations of the early training, hospital policies, and a clarification of the clinical plan, rotation, and assignments. They were introduced to the clinical setting, hospital policies, and their roles as observers under supervision.

(ii) *Training and skill development before the experience:* The students received practical training in specialized nursing labs involving most of the competencies related to the aligned nursing course. In the practical labs, they were trained on nursing competencies, history-taking techniques, and physical assessment processes.

(iii) *Observation Phase:* The students were allocated to different hospital units, medical units, surgical units, emergency departments, dialysis units, maternity and gynecology units, and pediatric units. Each student was assigned to one preceptor, students spent 4 hours shift in the unit, rotating between units, two days a week for eight weeks. Students were divided into groups consisting of 11 to 15 students per group per shift. Groups are divided into hospital units two to three students per unit. Clinical instructors from the nursing college were deployed to supervise students, allocate them, and follow up with them throughout the clinical day. One to two instructors were assigned to each group. First-year nursing students were undergoing the Fundamentals of Nursing course while second-year students were practicing the Adult Medical Surgical Nursing course. Initially, students observe nurses and healthcare professionals in action. They learn about patient interaction, bedside manners, and basic procedures.

(iv) *Skill Development:* Students begin to perform basic nursing skills under close direct supervision. This includes tasks like taking vital signs, administering medications (under supervision), and assisting with patient hygiene.

(v) *Integration with Theory:* Clinical experiences are integrated with classroom learning to reinforce

theoretical knowledge with practical application. Therefore, the students were assigned to clinical experience aligned with their theoretical course delivery.

(vi) *Professionalism and Ethics:* Students learn about ethical considerations, patient confidentiality, and professional conduct in clinical settings in the early clinical experience which affects their professional identity formation.

This structured approach ensures that nursing students develop both the practical skills and professional attitudes necessary for effective patient care.

5. Statistical Analysis and Data Management

5.1 For Quantitative Part

The collected information was entered on a Microsoft Excel sheet and then transferred to IBM Statistical Package for Social Sciences, Version 23 (SPSS Inc., Chicago, IL, USA) for data analysis. Descriptive statistics in the form of frequencies and percentages using suitable tables and figures were used to represent categorical data. Continuous variables were presented using mean and standard deviation. A comparison of continuous variables between categorical variables was tested using the students'-test. A $p<0.05$ was considered statistically significant.

5.2 For Assessing the Psychometric Properties of the Used Questionnaire

The scores obtained were analyzed to calculate Cronbach's alpha (using SPSS software version 23) (SPSS Inc., Chicago, IL, USA), which is a measure of internal construct reliability.

Internal consistency reliability for each scale was analyzed using Cronbach's α statistic. Testing the psychometric properties of the used questionnaire through EFA was performed.

EFA using Principal component analysis with varimax rotation, was carried out to identify the different factors. The number of factors that were extracted and used was based on: Kaiser's criterion, which considers factors with an eigenvalue greater than one as common factors, the Scree test criterion (the Cattell criterion): The point of inflexion displayed by the scree plot and the cumulative percent of variance extracted (in the humanities, the explained variance is commonly as low as 50-60%).

Factor solutions retained according to the psychometric criteria were then subjected to analysis according to the following interpretability criteria.

- A given factor contains at least three variables with significant loadings, with a loading of 0.30 being suggested as the cut-off point.
- Variables loading on the same factor share the same conceptual meaning.
- Variables loading on different factors appear to measure different constructs.
- The rotated factor pattern demonstrates a 'simple structure', which means that:
  - Most variables load relatively high on only one factor and low on the other factors.
  - Most factors have relatively high factor loadings for some variables and low loadings for the remaining ones.

5.3 For the Qualitative Part

The focus group discussions were transcribed verbatim and analyzed manually following Braun and Clark's approach to thematic analysis[15]. Two researchers were engaged in independent coding of the transcripts. Any discrepancies between their codes were addressed through discussion and consensus, resulting in a final coding framework used for the analysis. The qualitative data analysis followed five stages: immersing in the data through repeated reading of transcripts, coding, combining preliminary codes into categories and subthemes, and formulating overarching themes that conveyed the meaning of the dataset, thereby facilitating the write-up of the qualitative data[15]. Throughout the study, researchers maintained reflexivity by engaging in notetaking. This served to recognize individual perceptions related to the study and to ensure that conclusions were grounded on the data derived from the study[16].

6. Results

The analysis included responses from 120 students, 86 students (71.7%) were from the first-year students, and 34 students (28.3%) were from the N2 level. Several 79 participants (65.8%) from the sample were females, while 41 participants (34.2) were male students. There were four

domains in the questionnaire, each domain consisted of a group of items. The scores for each item in each domain were summed up to determine the satisfaction level, where a higher score indicated higher satisfaction.

The result is divided into 4 sections:

(i) Descriptive statistics
(ii) Comparisons of satisfaction related to different domains between students' levels and Gender
(iii) Assessing the Psychometric properties of the used questionnaire.
(iv) Thematic analysis of the qualitative data gathered.

6.1 Descriptive Statistics

Table 1 shows that the highest agreement was observed for receiving a useful orientation about the clinical training process (95.8%) along with all practical training required in nursing skills labs (95.8%). All the items showed a mean score close to 5.

Table 2 shows that participants stated that early clinical training enhanced their ability to communicate with patients (95.8%), and also stimulated them to be active learners (95.8%). The item "The utilization of clinical manual/ portfolio/logbook during training was very helpful" was the one that showed comparatively lesser agreement (63.3%) with a mean score of 3.75 ± 1.32.

Table 3 revealed that participants believed that it is good to introduce ECE in the early years of the curriculum (95%) with a mean score of 4.66 ±0.72. Nevertheless, the results showed comparatively lower agreement for the item "I was satisfied with my overall clinical training experience," with a mean score of 4.28 ± 0.91.

6.2 Comparisons of satisfaction related to different domains between students' levels and Gender

Table 4 revealed that first-year students had showed significantly higher scores for 'Organization and structure of Early Clinical Training' (23.6 ± 2.35) compared to N2 (21.76 ± 2.63), p<0.001. There were no significant differences in satisfaction scores seen for 'Implementation

Table 1. Organization and structure of early clinical training

	Responses (n, %)			
	Disagree	**Neutral**	**Agree**	**Mean (SD)**
The objectives of the clinical training were clear to me.	2 (1.7)	10 (8.3)	108(90.0)	4.54 ±0.75
I received useful orientation about the clinical training process.	2 (1.7)	3 (2.5)	115 (95.8) *	4.74 ±0.59
I was encouraged to participate actively.	3 (2.5)	9 (7.5)	108 (90.0)	4.47 ±0.78
I received all practical training required in nursing skills labs	1 (0.8)	4 (3.3)	115 (95.8) *	4.71 ±0.57
I was ready to be placed in a clinical setting	1 (0.8)	9 (7.5)	110 (91.7)	4.63 ±0.66

Table 2. Implementation of early clinical training

	Responses (n,%)			
	Disagree	**Neutral**	**Agree**	**Mean (SD)**
The sessions were structured and well-conducted	4 (3.3)	11 (9.2)	105 (87.5)	4.38 ± 0.82
The skills taught in ECE were appropriate	2 (1.7)	14 (11.7)	104 (86.7)	4.40 ± 0.76
The Early clinical Training enhanced my ability to communicate with patients	0 (0)	5 (4.2)	115 (95.8)*	4.74 ± 0.53
There was adequate opportunity to practice the skills	7 (5.8)	23 (19.2)	90 (75.0)	4.17 1.02
The group size was appropriate	6 (5.0)	4 (3.3)	110 (91.7)	4.52 ± 0.79
The amount of time for Early Clinical Training was adequate	5 (5.0)	19 (15.8)	95 (79.2)	4.20 ± 0.94
The utilization of the clinical manual/ portfolio/logbook during training was very helpful	30 (25.0)	14 (11.7)	76 (63.3)*	3.75 ± 1.32
The Early Clinical Training stimulated my interest in basic sciences	1 (0.8)	8 (6.7)	111 (92.5)	4.57 ± 0.65
The Early Clinical Training stimulated me to be an active learner	1 (0.8)	4 (3.3)	115 (95.8)*	4.67 ± 0.58
The Early Clinical Training helped me to understand concepts and principles relevant to the curriculum	3 (2.5)	5 (4.2)	112 (93.3)	4.57 ± 0.73

of Early Clinical Training' and 'Advantage of Early Clinical Training' between the two levels (p>0.05). At the same time, the N2 level showed significantly higher scores for satisfaction toward 'the clinical instructor' (71.32 ± 6.92) compared to the first-year students level (67.24 ± 9.14), p<0.021.

When the scores were compared between the two genders (male students vs female students) in Table 5, no significant results were found when analyzing the data, all domains scored a p-value greater than 0.05 (p>0.05), which indicates that first-year students and N2 female and male students are almost sharing a same opinion about all domain items.

6.3 Assessing the Psychometric Properties of the Used Questionnaire

The psychometric properties of the used questionnaire were tested through EFA and reliability analysis.

6.4 Reliability Analysis

The Cronbach's alpha coefficients shown in Table 6 including the 4 factors of nursing students' satisfaction

Table 3. Advantages of early clinical training

	Responses (n,%)			
	Disagree	**Neutral**	**Agree**	**Mean (SD)**
Clinical training has given me insight into my future career and I will pursue my profession as a nurse	2 (1.7)	5 (4.2)	84 (70.0)	4.61 ±0.68
Clinical training provided me with a context for theoretical learning	6 (5.0)	10 (8.3)	104 (86.7)	4.32 ±0.89
I was satisfied with my overall clinical training experience	7 (5.8)	10 (8.3)	103 (85.8)*	4.28 ±0.91
I enjoyed the early clinical training skills sessions	7 (5.8)	7(5.8)	106 (88.3)	4.41 ±0.98
It is good to introduce ECE in the early years of the curriculum	3 (2.5)	3 (2.5)	114 (95.0)*	4.66 ±0.72

Table 4. Comparisons of satisfaction related to different domains between student levels

		N	**Mean**	**Std. Deviation**	**p-value**
Organization and Structure of Early Clinical Training	First-year students *	86	23.60	2.35	<0.001*
	Second-year students	34	21.76	2.63	
Implementation of Early Clinical Training	First-year students	86	43.86	4.92	0.817
	Second-year students	34	44.09	4.68	
The Clinical Instructor	First-year students	86	67.24	9.14	0.021*
	Second-year students *	34	71.32	6.92	
Advantages of Early Clinical Training	First-year students	86	22.26	3.54	0.774
	Second-year students	34	22.44	1.97	

Table 5. Comparisons of satisfaction related to different domains between two genders (males and females)

		N	**Mean**	**Std. Deviation**	**p-value**
Organization and Structure of Early Clinical Training	Male	41	22.66	3.10	0.192
	Female	79	23.30	2.22	
Implementation of Early Clinical Training	Male	41	43.24	6.25	0.268
	Female	79	44.28	3.91	
The Clinical Instructor	Male	41	69.68	8.84	0.248
	Female	79	67.73	8.67	
Advantages of Early Clinical Training	Male	41	21.66	4.03	0.106
	Female	79	22.65	2.58	

Table 6. Reliability statistics of the used questionnaire using Cronbach's Alpha

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
0.916	0.923	36

regarding the early clinical experience questionnaire ranged between 0.85 and 0.90. The overall Cronbach's alpha for the total questionnaire items was 0.916. This result indicates high internal consistency (reliability). Alpha levels did not increase if any items were deleted.

Table 7. Factor structure of the Early Clinical Experience Satisfaction questionnaire, using principal components analysis

KMO and Bartlett's test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.815	
Bartlett's Test of Sphericity	Approx. Chi-Square		2231.025	
	df		630	
	Sig.		0.000	
Rotated Component Matrix[a]				
	Component			
	Factor I	Factor 2	Factor 3	Factor 4
The objectives of the clinical training were clear to me.		0.747		
I received useful orientation about the clinical training process.		0.660		
I was encouraged to participate actively.		0.612		
I received all the practical training required in nursing skills labs.		0.614		
I was ready to be placed in a clinical setting.		0.575		
The sessions were structured and well-conducted.		0.489		
The skills taught in ECE were appropriate.		0.415		
The Early clinical Training enhanced my ability to communicate with patients.		0.324		
There was adequate opportunity to practice the skills.		0.578		
The group size was appropriate.		0.622		
The amount of time for Early Clinical Training was adequate.		0.505		
The utilization of the clinical manual/ portfolio/logbook during training was very helpful.			0.344	
The Early Clinical Training stimulated my interest in basic sciences.			0.523	
The Early Clinical Training stimulated me to be an active learner.			0.593	
The Early Clinical Training helped me to understand concepts and principles relevant to the curriculum.			0.652	
Explained the information clearly.	0.678			
Remained accessible to students.	0.768			
Answered carefully and precisely questions raised by me.	0.472			
Asked me questions to elicit underlying clinical reasoning.	0.464			
Was a good role model	0.631			
Provided constructive feedback on my performance.	0.400			
Made specific suggestions for improvement.	0.613			
Gave me positive reinforcement for good contributions.	0.626			
Did not criticize me in front of my colleagues.	0.410			
Provided support and encouragement to me.	0.662			

Signed my logbook.	0.667			
evaluated my debriefing reports fairly	0.753			
Had appropriate quality of observation	0.676			
communicated knowledge effectively	0.749			
was available when students were performing clinical skills	0.362			
Encouraged a climate of mutual respect Clinical training has given me insight into my future career and I will pursue my profession as a nurse.				0.477
Clinical training provided me with a context for theoretical learning.				0.754
I was satisfied with my overall clinical training experience.				0.422
I enjoyed the early clinical training skills sessions.				0.630
It is good to introduce ECE in the early years of the curriculum.				0.718
Clinical training has given me insight into my future career and I will pursue my profession as a nurse.				0.798
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a denotes rotation converged in 8 iterations.				

6.5 Exploratory Factor Analysis

Checking the suitability of data for factor analysis:

Sample size: The sample size is 120 students, which is adequate for factor analysis.

Factorability of the correlation matrix: The correlation matrix reveals statistically significant, moderate correlations among the observed variables used in the analysis. None of the correlation coefficients are large; therefore, there is no need to eliminate any variables at this stage.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity: This test revealed that the KMO Measure of Sampling Adequacy was 0.815 (excellent). This value indicates that there were sufficient items predicted by each factor. Furthermore, Bartlett's test of sphericity was statistically significant ($p<0.001$) which indicates that the variables were significantly correlated. Therefore, this output indicated the appropriateness of the data for factor analysis.

Extraction of factors: Principal component analysis with varimax rotation was performed to identify and interpret the number of factors that could explain most of the common variance and to remove non-reflective or redundant items. The results revealed that the 36 items of the questionnaire resulted in four factors with an eigenvalue>1.00. The four factors that emerged from the factor analysis accounted for 85.46 % of the total variance. The number of factors was also confirmed with the visual inspection of the scree plot that indicated a sudden drop in the screen beginning with the Fourth factor.

Rotation of factors: Of the initial 36 items, no items were removed from the analysis.

Finally, the questionnaire contained 4 factors and 36 items as shown in (Table 7). Factor 1 included 11 items, factor 2 included 4 items, factor 15 included 6 items, and factor 4 included 8 items.

6.6 Thematic Analysis of the Qualitative Data Gathered

The analysis of focus group discussions revealed five themes that encapsulated participants' experiences of early clinical exposure and their role in improving students' readiness and professional identity development. The findings are presented in Table 8 according to these five main themes.

Theme 1: The effect of ECE on professional identity development

This theme describes the effect of early clinical experience on their professionalism, behaviour, and professional identity development.

Theme 2: Factors affecting the implementation of ECE

This describes the factors affecting the implementation and delivery of the clinical experience.

Theme 3: The challenges of ECE implementation

This theme identified the difficulties of the ECE implementation.

Table 8. Thematic analysis of the qualitative data

Themes	Subthemes
Effect of ECE on developing professional identity	**Understanding nursing profession** **Professionalism of nurses** **Communication with patients** **Interest in learning and future career** **"***seeing my instructor managing patients competently made me proud and eager to be a part of this noble profession"* *Contacting patients from day one with the supervision of my instructors helped me develop communication skills with the patients as well as relatives and made me realize how important our profession is, I am motivated more and more each day to start my career"* *The experience I had from early clinical training gave me perspective of how I should behave professionally and that is something I wouldn't have achieved only by having classes and laboratory sessions."* *Being in the clinical environment helped me develop professionalism"*
Factors affecting the implementation of ECE	**Commitment of clinical instructors** **Appropriate group distribution and dynamics** **Proper allocated time** **Logbook** *"My preceptor was keen on attending our shifts on time"* *"We had 2 days a week that I believe was appropriate to have the clinical exposure we need."* *"My group consisted of 11 students and we had no trouble communicating with each other and practice peer assisted learning"* *"We had different rotations that helped us practice clinical training in various settings and specialties"* *"The number of preceptors was enough to allow us to gain the most benefit of this experience"* *"Logbook allowed me to document my experience and reflect on it"*
Challenges of ECE implementation	**Clinical files requirements** **Quality of preceptors** *"logbook was overwhelming for me to fill in"* *"logbook had too much paperwork to be done, I'd rather spend that time focusing on hands-on training"* *"Some nurse preceptors are too busy resulting in ignoring our training needs"* *"I had one preceptor that couldn't manage workload and training undergraduate students at the same time"* *"Some clinical instructors have difficulties communicating with the students."*
Overcoming challenges of ECE implementation	**Simplifying paperwork** **Training preceptors** *"logbook needs to be simplified and assignments must be reduced to allow us to focus more on the hands-on experience rather than spending time filling clinical file requirements."* *"I suggest improving the quality of preceptors chosen for us and providing more training to make sure they possess the needed skills"*
Institutional organization to support ECE	**Infrastructure** **Coordination** **Monitoring** **Mentoring and Supervision** *"There were appropriate preparations, facilities, and resources for our rotations to go as smoothly as possible"* *"We were allocated to various units that were able to accommodate us and provide the clinical training we needed"* *"There was hardly overlap or coordination mistakes during the transition from one unit to the other"* *"We were closely monitored by our preceptors the whole time"*

Theme 4: Overcoming the challenge of the ECE implementation

The theme identifies the solutions and opportunities to overcome the challenges of ECE implementation.

Theme 5: Institutional organization to support ECE

This theme describes how the program was structured, and well implemented and reflects good coordination between the college and hospital".

7. Discussion

The focus of the study was to gain an inside perspective and satisfaction of such an experience for students who are facing it for the first time. That's why we excluded bridging students because they have been exposed to similar experiences.

Regarding the students' perspective towards the process of implementation of the early clinical experience, it received an average satisfaction of 85.7%. It was revealed that students were most satisfied with their experience with the skills gained communicating with patients. The communication skills were strengthened while performing history taking and collecting subjective and objective data from patients. As well as communicating with nurse preceptors and other healthcare team in clinical setting.

Also ranked high in satisfaction with the aspect of feeling like active learners while training in clinical settings and that is gained from the small discussions between the students, nurse preceptors, and clinical instructors.

A cross-sectional study was carried out in a tertiary hospital in southeast China in September 2017, where 158 undergraduate nursing students participated. The researcher exposed them to early clinical training placing them in different hospital settings. The students were experiencing moderate levels of stress due to their level of knowledge and background and the skills they had to perform. Another factor that affected the students' level of stress is the maturity of some students and their ability to cope positively with stressors that emerged in the clinical settings[17].

The current study is also exploring the effectiveness of clinical instructors. This study showed that students were overall satisfied with the clinical instructors that were assigned to them in clinical settings with an average of 81.5% they most appreciated that the clinical instructors were approachable, answered and asked questions, were good role models for them, gave them constructive feedback on their clinical performance and gave them suggestions to improve themselves.

The current study results are consistent with that of a study conducted in Jordan in 1999, it was a cross-sectional study between the nursing program at multiple levels, and a collection of 452 convenient sample participants, completing a questionnaire survey. This study showed similarities to our study in terms of the student perspective of clinical instructors in the clinical setting. The most important characteristic identified by the majority of students was the clinical instructor's professional competence followed by his/her genuine interest in patients then their ability to supervise training students, help them relate theory to practice, provide useful, fair feedback to them, and perform objective and fair evaluation. They lacked interest in ranking clinical instructors based on their interpersonal relationships and their attributes[18].

High satisfaction rates were scored in the current study when students were asked to rank their overall satisfaction with the clinical experience as 91% of the students found it beneficial that the nursing curriculum introduced early clinical training experience, and how that training gave students an insight about the future career, and this will help them afterward in deciding to continue their studies in the nursing program or apply for a transfer to another specialty. When the scores were compared between the two levels, it was found that undergraduate nursing students in level 1 of the curriculum had showed significantly higher scores for 'Organization and structure of Early Clinical Training' (23.6 ± 2.35) compared to students in the second level of the curriculum (21.76 ± 2.63), $p<0.001$. There were no significant differences in satisfaction scores seen for 'Implementation of Early Clinical Training' and 'Advantage of Early Clinical Training' between the two levels ($p>0.05$). At the same time, the second-level students, showed significantly higher scores for satisfaction toward 'the clinical instructor' (71.32 ± 6.92) compared to the first-level students (67.24 ± 9.14), $p<0.021$.

The current study result is consistent with a study result that was held back in 1992 by Burnard, to explore nursing students' opinions about experiential learning in the form of training in clinical settings. Experiential learning was mostly perceived by nursing students as learning in a clinical context. Students viewed experiential learning as personal learning that included not just learning by doing

but also reflecting on what they were doing. Students stated that witnessing role models in the clinical setting taught them a great deal about nursing[19].

Higher perspective and satisfaction levels from first- and second-year undergraduate nursing students in our results indicate the effectiveness of our educational interventions, the preparation of students before and during the learning experience, and the professionalism of clinical instructors when offering help, skills acquisitions, and continuous monitoring for nursing students.

The results of the focus group that was analyzed to themes and subthemes revealed five themes that encapsulated participants' experiences of early clinical exposure and their role in improving students' readiness and professional identity development which are: (i) the effect of ECE on professional identity development, (ii) factors affecting the implementation of ECE, (iii) the challenges of ECE implementation, (iv) overcoming the challenge of the ECE implementation, and (v) institutional organization to support ECE.

The generated themes and subthemes in the current study are consistent with the results of Wang *et al.*, which was held in 2022, and stated that five themes emerged regarding nursing students' perspectives of professional identity: (i) Love for the nursing profession, (ii) Multiple roles nurses play, (iii) Personal characteristics a good nurse needs to have, (iv) Deeper understanding of the nursing profession, and (v) New understanding of the relationships between patients and nurses, between patients and doctors, and between doctors and nurses[9]. The current study results are also consistent with Ewnte and Yigzaw which was conducted in 2023 and identified five main themes from the data sources. The first theme focuses on the benefits of ECE, and the second and third deal with the factors that facilitate and impede ECE implementation, respectively. The fourth and fifth themes were all about institutional and programmatic issues related to ECE implementation, respectively[9,20].

The current study was also consistent with the study of Mukhalalati *et al.* which was held in 2024 on 37 undergraduate nursing students, and four deductive conventional themes were generated which are (i) The personal component of the learning environment, (ii) The social component of the learning environment, (iii) Organizational component of the learning environment, and (iv) Materialistic component of the learning environment, sub-Theme 1.1 discussed experiences influencing professional identity formation as students perceived hands-on activities such as on-campus practical courses and pre-clinical activities as positive experiences, which built their confidence and professional identity[21].

8. Study Limitations

This mixed-methods study has a few limitations, First, this study was conducted in only one medical college, so generalizations of the findings and conclusion would be challenging, and future multi-institutional research across different Saudi Arabian medical sciences colleges is recommended. Second, for quantitative analysis, self-administered questionnaires were used to collect data, so there is a chance of response bias. Third, for qualitative analysis, only 10 nursing students participated in one focus group, a larger number of students would be recommended to confirm data saturation. Fourth, It is recommended that future studies use a larger sample and implement tools to measure the performance of students not only their perspective of the experience to properly examine the effectiveness of early exposure to clinical practice on nursing students' formation of professional identity over a long period of training.

9. Conclusion

With early patient experience, students are provided with unique learning outcomes. Many benefits will result from such exposure, such as enhancing students' readiness and communication skills, not only with patients when talking to them and interacting with them, but also with their peers, preceptors, and other healthcare team members. Active involvement in hands-on experience in the clinical settings is favorable; to increase students' self-confidence and help develop professional identity while providing continuous observation, guidance, and feedback in the same settings.

10. Recommendations

- Modify the undergraduate nursing clinical training logbook with clearly defined objectives, assignments, and work submission.
- Assign undergraduate nursing students to well-trained preceptors in clinical settings.
- Apply comprehensive orientation to level 2 undergraduate nursing students before early clinical experience in the field of Adult Medical Surgical Nursing.

- Training program for nursing preceptors inside the clinical areas (preceptorship program).

11. References

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