

Factors influencing the clinical learning experience of student nurses in Hail Region, Kingdom of Saudi Arabia



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ABSTRACT

Clinical learning is an essential and integral component of nursing education. This study aims to explore the demographic profile of nursing students and the differences in their perception of factors influencing clinical learning experiences. This study employed a quantitative descriptive-cross-sectional approach. One hundred and ninety-two (192) nursing students from the College of Nursing, University of Hail, served as respondents. A modified questionnaire was adapted to collect the data; the return rate was 91%. Analysis of Variance (F-test) was used to determine the statistical significance of all the demographic factors that influence clinical learning experience, except for gender, which was analyzed with t-test. All statistical analyses were performed at 0.05 level of significance. This study was conducted in the first semester of the 2019-2020 academic session. The students largely "agreed" that all the factors influenced their clinical learning experiences. Mean responses were 4.03, 4.13, 4.15, and 3.99 for environmental, personal, interpersonal, and teaching-learning factors, respectively. For the environmental factors, a significant difference was observed in respondents' perceptions based on gender ($t=5.164$; $p=0.024$) and year of study ($F=5.303$; $p=0.002$) while differences in perception of the influence of the student factor were significant only for civil status ($F=3.152$; $p=0.045$). Differences in perceptions of the influence of interpersonal factors on clinical learning experience based on gender ($t=6.583$; $p=0.011$) and year of study ($F=4.504$; $p=0.004$) were significant while the teaching-learning factor was significantly based on age ($F=3.085$; $p=0.029$) and year of study ($F=3.552$; $p=0.016$). The nursing students believed that environmental, student, interpersonal, and teaching-learning factors had an influence on their clinical learning experience. Respondents' perceptions of the influence of environmental factors were significantly different based on the gender and year of study, while differences in perceptions of the student factor were only significant based on civil status. Perceptions of the influence of interpersonal factors on clinical experience were significantly different based on the gender, while perceptions for the teaching-learning factor were significant by age and year of study.

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1. Introduction

Clinical learning is an essential and integral component of nursing education. Indeed, more than half of the formal nursing education is carried out in

clinical environments where theory is translated into practice (Jamshidi et al., 2016; Tiwaken et al., 2015) through actual health care provision (Abrahamson et al., 2012; Lawal et al., 2016). Although the clinical setting is a significant place to apply the theories learned in the classroom, there remains a gap in the extent of application. The success or failure of the theory-practice integration is dependent on many factors, such as giving opportunities to the learners, proper management, and the preceptor's provision (McSharry and Lathlean, 2017). These factors relate to the gap that exists between knowledge and

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practice; to address these gaps, preceptors are appointed (Africa et al., 2013). With the many confounding considerations in the clinical environment, knowledge, and theory integration may frustrate learners. Thus, nursing education needs to improve the learner's experiences in the clinical setting in order to help students become better professional nurses.

Earlier literature found that the experiences of nursing students in a clinical environment can either be negative or positive. This means various factors can contribute to creating either a negative or positive environment (Andrews et al., 2005; Chesser-Smyth, 2005). A non-conducive environment may negatively affect the students' learning experience. Researchers found that the clinical learning environment is a major source of stress among nursing students (Goff, 2011; Jimenez et al., 2010; James and Chapman, 2010), and this may be attributable to different factors. For Graham et al. (2016), clinical characteristics or environmental influences may be the greatest sources of stress in the clinical area given because they account for the greatest percentage of the variance among the stress variables subjected to exploratory factor analysis. Accordingly, stressful situations can negatively impact a student's wellbeing, with negative outcomes on academic, clinical, and general performances (Gibbons, 2010; Shaban et al., 2012). Nursing students show greater levels of stress in their second year of training since this is generally their first introduction to the clinical environment (Jimenez et al., 2010). Another study highlights that the clinical learning of nursing students is related to the current level of study (better results in the third year), the clinical learning location, and the perception about the clinical placement (better grades when there is an optimal perception) (Serrano et al., 2016).

This research is significant as it focuses on the clinical learning environment of nursing students with the aim of improving clinical learning outcomes. Indeed, exploring the factors that influence the clinical learning experience of nursing students gives a framework to tailor fit the clinical learning program to their needs. Nursing students, on the other hand, will positively embrace their roles as student nurses so they can practically employ the knowledge they gained in the classroom. Therefore, this study explores the demographic profile of nursing students and differences in their perception of the factors that influence their clinical learning experiences.

2. Methods

2.1. Study design

This study employed a quantitative cross-sectional approach to determine the factors influencing the clinical learning experience of student nurses.

2.2. Participants

The respondents comprised of student nurses from the College of Nursing, University of Hail. Using the RAOSOFT sample size calculator with a confidence level of 95%, 192 nursing students were selected for this study from a sample of 380 nurses. The researchers employed simple random sampling using a random number generator.

2.3. Data collection

Prior to actual data collection, the researchers conducted an orientation explaining the aim of the study, the rights of the participants, and their extent of participation. The nursing students were given ample time to answer the survey. This study was conducted in the first semester of the 2019-2020 session.

2.4. Questionnaire

A modified questionnaire was adapted from Lawal et al. (2016) was used to collect the data. The questionnaire was modified into a 20-item questionnaire to include only the factors influencing the clinical learning experience. The questionnaire was subjected to face validity with four experts in the field. Two of the experts were associate professors in research, and the other two had doctoral degrees and followed up with students in the clinical. Thereafter, the tool was tested with 15 nursing students who were not included in the actual data collection. The reliability test yielded a value of 0.86, which means the tool is reliable.

2.5. Data analysis

The Statistical Package for Social Sciences Version 22 (SPSS 22) was used for analysis. Frequency count and percentage were used to determine the profiles of the respondents. The Analysis of Variance (F-test) was employed to determine the statistical significance of all the factors influencing clinical learning experience in terms of their demographic information, except for gender, which was determined with the t-test. All statistical analyses were performed at 0.05 level of significance.

3. Result

The majority of the nursing students (82.8%) were aged 21-25 years (159) and dominated by females (70.3%).

Most of the participants (82.8%) were single, 31 (16.2%) were married, and 2 (1%) were divorced. Of the 192 respondents, the majority (31.8%) were level 8 students (graduating students), followed by level 5 (27%), level 6 (23.4%), and level 7 (17.7%) (Table 1).

The students largely "agreed" that all the factors influenced their clinical learning experiences. Mean

responses were 4.03, 4.13, 4.15, and 3.99 for environmental, personal, interpersonal, and teaching-learning factors, respectively (Table 2).

Table 1: Demographic profile of the respondents

N=192			
Profile		F	%
Age	Below 20	10	5.2
	21-25	159	82.8
	26-30	13	6.8
	Above 30	10	5.2
	TOTAL	192	100
Gender	Male	57	29.7
	Female	135	70.3
	TOTAL	192	100
	Single	159	82.8
Civil Status	Married	31	16.2
	Divorce	2	1.0
	TOTAL	192	100
	5	52	27.1
Year of study	6	45	23.4
	7	34	17.7
	8	61	31.8
	TOTAL	192	100

For the environmental factors, a t-test was employed to determine differences in perception based on gender (t=5.164; p=0.024) and ANOVA for

a year of study (F=5.303; p=0.002); differences were found to be significant. On the other hand, the ANOVA yielded no significant difference based on age (F=0.840; p=0.474) and civil status (t=0.244; p=0.783). Meanwhile, differences in perception of the student factor were only significant based on civil status (F=3.152; p=0.045). There were no demographic differences in respondents' perception of student factors based on age (F=0.448; p=0.719), gender (t=0.031; p=0.860) and year of study (F=1.038; p=0.377) (Table 3).

Regarding interpersonal factors, differences in perception based on gender (t=6.583; p=0.011) and year of study (F=4.504' p=0.004) were found significant while differences based on age (F=2.083; p=0.104) and civil status (F=1.460; p=0.235) found not significant. On the other hand, differences in the perception of a teaching-learning factor were significant based on age (F=3.085; p=0.029) and year of study (F=3.552; p=0.016), but there were no significant differences in perception based on gender (t=-0.220; p=0.640) and civil status (F=3.552; p=0.016) (Table 4).

Table 2: Factors influencing the clinical learning experience of the student nurses N=192

Environmental Factors	Mean	Remarks
Organization of the clinical area was student-friendly.	3.99	Agree
The clinical area helped to meet my learning needs.	4.09	Agree
The clinical area was supportive of nursing students' learning.	4.05	Agree
There was an adequate opportunity to perform tasks.	4.16	Agree
The clinical environment provided resources that stimulated self-initiated learning.	3.93	Agree
There were reasons to be anxious in the clinical area.	3.81	Agree
Learning has taken place since placement in the clinical area.	4.21	Agree
Mean	4.03	Agree
STUDENT FACTORS		
I learn best when I observe.	4.17	Agree
I learn best when I do return demonstration.	4.19	Agree
The clinical experience had a positive impact on me professional growth.	4.16	Agree
Positive interpersonal relationship between students and staff of the clinical unit was evident.	4.01	Agree
Mean	4.13	Agree
INTERPERSONAL FACTORS		
The relationship between clinical staff and nursing students influenced the learning experience.	3.95	Agree
There were enough opportunities for me to participate in ward/clinic activities.	3.65	Agree
The interpersonal relationship with preceptors/mentors influenced my learning.	3.76	Agree
The preceptor/mentor played a significant role in my learning experience.	4.15	Agree
Mean	3.88	Agree
TEACHING-LEARNING FACTORS		
The teaching methods used were helpful	4.09	Agree
I learn best when I listen to lectures	3.82	Agree
My opinion of the clinical area has changed positively since placement.	4.11	Agree
Integration of theory into practice has taken place.	3.95	Agree
Mean	3.99	Agree

1.00-1.50=Strongly Disagree; 1.51-2.50=Disagree; 2.51-3.50=No Opinion; 3.51-4.50=Agree; 4.51-5.00=Strongly Agree

4. Discussion

This study explored the demographic profile of nursing students and differences in their perception of factors influencing clinical learning experiences. Generally, the nursing students in this study believed that environmental, student, interpersonal, and teaching-learning factors have an influence on their clinical learning experiences. Indeed, these factors are very significant because they shape students' experiences on their paths to becoming professional nurses.

Therefore, nurse preceptors should provide sufficient learning opportunities for student nurses to practice safe and competent care, which is a requisite to meet the standards of the profession (McHugh and Lake, 2010). Moreover, the sustained commitment of the nurse faculty members to align the learning activities with the outcomes is of importance in meeting the standards (Albaqawi et al., 2018). Nursing programs and teachers need to address the factors addressed in this study and tailor clinical learning environments to fit their students' demographics.

Table 3: Demographic differences in respondents' perception of environmental and student factors that affect the clinical experience

Environmental Factor	Mean Response	F-value/t-value	P-value	
Age	Below 20	4.01	0.840	0.474
	21-25	3.96		
	26-30	3.87		
	Above30	3.89		
Gender	Male	4.04	5.164	0.024
	Female	3.93		
	Single	3.97		
Civil Status	Married	3.92	0.244	0.783
	Divorce	4.03		
Year of study	5	4.02	5.303	0.002
	6	3.90		
	7	4.11		
	8	3.87		
	8	3.96		

Student Factor	Mean Response	F-value/t-value	P-value	
Age	Below20	4.11	0.448	0.719
	21-25	4.13		
	26-30	4.25		
	Above30	4.18		
Gender	Male	4.12	0.031	0.860
	Female	4.14		
	Single	4.13		
Civil Status	Married	4.17	3.152	0.045
	Divorce	3.10		
Year of study	5	4.10	1.038	0.377
	6	4.22		
	7	4.07		
	8	4.13		

Table 4: Demographic differences in respondents' perceptions of interpersonal and teaching-learning factors that influence the clinical experience

Interpersonal Factor	Mean Response	F-value/t-value	P-value	
Age	Below 20	3.98	2.083	0.104
	21-25	3.83		
	26-30	3.88		
	Above30	3.83		
Gender	Male	3.77	6.583	0.011
	Female	3.92		
	Single	3.88		
Civil Status	Married	3.82	1.460	0.235
	Divorce	4.42		
Year of study	5	3.97	4.504	0.004
	6	3.86		
	7	3.69		
	8	3.91		

Teaching-Learning Factor	Mean Response	F-value/t-value	P-value	
Age	Below20	3.86	3.085	0.029
	21-25	4.04		
	26-30	3.97		
	Above30	4.06		
Gender	Male	4.01	-0.220	0.640
	Female	3.98		
	Single	3.98		
Civil Status	Married	4.04	0.859	0.425
	Divorce	4.35		
Year of study	5	3.86	3.552	0.016
	6	3.97		
	7	4.07		
	8	4.06		

There were significant differences in respondents' perceptions of the influence of environmental factors based on gender and year of study. Results suggest that female respondents and

year of study (Level seven) students considered the environment as significant factors in their clinical learning experiences. The female respondents considered the environment as critical to their clinical learning experiences. The findings of the present study must be put in the context of previous studies that did not explore the environment or areas where male and female nurses were deployed. In Saudi Arabia, female student nurses are more favored in the hospital where they can diversely deliver care both to male and female patients. From this perspective, male student nurses may have a limited clinical learning experience. Previous research reported that males found the environment as unsupportive and viewed it as an obstacle (Gemuhay et al., 2019) to their learning. Papastavrou et al. (2010), on the other hand, affirmed that a conducive environment should encourage socialization and lessen anxiety; that way, confidence increases, and learning is enhanced. Nursing programs should consider these findings and re-strategize to support student-friendly environments. In addition, learning environments must give male nursing students an equal chance to deliver care. Level seven nursing students perceived the environment as having a huge influence on their clinical experience. This suggests that level seven students perceive that environment can make or break their learning outcomes. Accordingly, those who are in higher levels may have difficulty in the clinical area because of their higher learning outcomes. The present research demonstrates that those who are in higher academic levels experience more challenges when it comes to competency development (Aboshaiqah et al., 2018), and those who are in the higher level (third year) have better competencies (Serrano et al., 2016). Therefore, nurse educators should improve learning environments as students advance to higher levels.

Meanwhile, a significant difference was found in students' perceptions of the influence of the student factor based on civil status. Married nursing students were more likely to consider the student factor a challenge to their clinical learning experience. This may be because married nursing students have more to balance studies with family life. In Aboshaiqah's et al. (2018) study, civil status, for example, the married ones, are linked with challenges such as fewer socialization opportunities and difficult financial conditions. Based on these findings, nurse educators can make an effort to give married nursing students more opportunities to achieve the learning outcomes of the program.

For interpersonal factors, the female student nurses and those who are in the lower year of study were more affected. The present findings support the results from Lawal et al. (2016), where the foundation of a positive learning environment helps in the effective interpersonal relationship between nurses and student nurses. Those who were in the lower year of study were more affected by interpersonal factors (Lawal et al., 2016) due to their uneasiness in the clinical environment. According to

Killam and Heerschap (2013), for students deployed for the first time in a clinical environment, their interpersonal relationships could be affected, and this has an implication on patient safety. Meanwhile, there were significant differences in teaching-learning factor based on age and year of study. Although, it is understood that older nursing students have more familiarity with the teaching and learning methods, however, learning preferences must be considered. According to Newton et al. (2009), the enhancement of knowledge transfer must be considered through the teaching methods preferred by the nursing students. Previous research suggests that exploring teaching methods can enhance teach (Lawal et al., 2016).

5. Conclusion

The nursing students believed that environmental, student, interpersonal, and teaching-learning factors influence their clinical learning experience. Respondents' perceptions of the influence of environmental factors were significantly different based on the gender and year of study, while differences in perceptions of the student factor were only significant based on civil status. Perceptions of the influence of interpersonal factors on clinical experience were significantly different based on gender, while perceptions for the teaching-learning factor were significant by age and year of study. The results of the present study can contribute to the enhancement of the clinical learning experience and achievement of the program learning outcomes, especially when the demographics of the nursing students are considered.

Compliance with ethical standards

Ethical considerations

The researchers received approval from the Ethical Board of the University of Hail (UOH-2016-056).

Conflict of interest

The authors declare that they have no conflict of interest.

References

- Aboshaiqah AE, Roco IM, Pandaan IN, Baker OG, Tumala RB, and Silang JPBT (2018). Challenges in the clinical environment: The Saudi student nurses' experience. *Education Research International*, 2018: 3652643. <https://doi.org/10.1155/2018/3652643>
- Abrahamson KA, Fox RL, and Doebbeling BN (2012). Facilitators and barriers to clinical practice guideline use among nurses. *The American Journal of Nursing*, 112(7): 26-35. <https://doi.org/10.1097/01.NAJ.0000415957.46932.bf> **PMid:22705494**
- Africa F, Jeggels JD, and Traut A (2013). A report on the development and implementation of a preceptorship training programme for registered nurses. *Curationis*, 36: 1-6. <https://doi.org/10.4102/curationis.v36i1.106> **PMid:26697619**
- Albaqawi H, Alshammari F, Pasay-an E, Alyami M, and Dizon E (2018). Evaluating course syllabus: Basis for reframing into a learner-centered syllabus for outcome-based nursing education. *European Scientific Journal*, 14: 222-233. <https://doi.org/10.19044/esj.2018.v14n10p222>
- Andrews GJ, Brodie DA, Andrews JP, Wong J, and Thomas BG (2005). Place (ment) matters: Students' clinical experiences and their preferences for first employers. *International Nursing Review*, 52(2): 142-153. <https://doi.org/10.1111/j.1466-7657.2005.00262.x> **PMid:15842327**
- Chesser-Smyth PA (2005). The lived experiences of general student nurses on their first clinical placement: A phenomenological study. *Nurse Education in Practice*, 5(6): 320-327. <https://doi.org/10.1016/j.nepr.2005.04.001> **PMid:19040840**
- Gemuhay HM, Kalolo A, Mirisho R, Chipwaza B, and Nyangena E (2019). Factors affecting performance in clinical practice among preservice diploma nursing students in Northern Tanzania. *Nursing Research and Practice*, 2019: 3453085. <https://doi.org/10.1155/2019/3453085> **PMid:30941212 PMCID:PMC6420979**
- Gibbons C (2010). Stress, coping and burn-out in nursing students. *International Journal of Nursing Studies*, 47(10): 1299-1309. <https://doi.org/10.1016/j.ijnurstu.2010.02.015> **PMid:20359710**
- Goff AM (2011). Stressors, academic performance, and learned resourcefulness in baccalaureate nursing students. *International Journal of Nursing Education Scholarship*, 8: 1. <https://doi.org/10.2202/1548-923X.2114> **PMid:21291410**
- Graham MM, Lindo J, Bryan VD, and Weaver S (2016). Factors associated with stress among second year student nurses during clinical training in Jamaica. *Journal of Professional Nursing*, 32(5): 383-391. <https://doi.org/10.1016/j.profnurs.2016.01.004> **PMid:27649597**
- James A and Chapman Y (2010). Preceptors and patients—the power of two: Nursing student experiences on their first acute clinical placement. *Contemporary Nurse*, 34(1): 34-47. <https://doi.org/10.5172/conu.2009.34.1.034> **PMid:20230170**
- Jamshidi N, Molazem Z, Sharif F, Torabizadeh C, and Najafi Kalyani M (2016). The challenges of nursing students in the clinical learning environment: A qualitative study. *The Scientific World Journal*, 2016: 1846178. <https://doi.org/10.1155/2016/1846178> **PMid:27366787 PMCID:PMC4913003**
- Jimenez C, Navia-Osorio PM, and Diaz CV (2010). Stress and health in novice and experienced nursing students. *Journal of Advanced Nursing*, 66(2): 442-455. <https://doi.org/10.1111/j.1365-2648.2009.05183.x> **PMid:20423427**
- Killam LA and Heerschap C (2013). Challenges to student learning in the clinical setting: A qualitative descriptive study. *Nurse Education Today*, 33(6): 684-691. <https://doi.org/10.1016/j.nedt.2012.10.008> **PMid:23141689**
- Lawal J, Weaver S, Bryan V, and Lindo JL (2016). Factors that influence the clinical learning experience of nursing students at a Caribbean school of nursing. *Journal of Nursing Education and Practice*, 6(4): 32-39. <https://doi.org/10.5430/jnep.v6n4p32>
- McHugh MD and Lake ET (2010). Understanding clinical expertise: Nurse education, experience, and the hospital context. *Research in Nursing and Health*, 33(4): 276-287. <https://doi.org/10.1002/nur.20388> **PMid:20645420 PMCID:PMC2998339**

- McSharry E and Lathlean J (2017). Clinical teaching and learning within a preceptorship model in an acute care hospital in Ireland; a qualitative study. *Nurse Education Today*, 51: 73-80.
<https://doi.org/10.1016/j.nedt.2017.01.007> **PMid:28130976**
- Newton JM, Billett S, Jolly B, and Ockerby CM (2009). Lost in translation: Barriers to learning in health professional clinical education. *Learning in Health and Social Care*, 8(4): 315-327.
<https://doi.org/10.1111/j.1473-6861.2009.00229.x>
- Papastavrou E, Lambrinou E, Tsangari H, Saarikoski M, and Leino-Kilpi H (2010). Student nurses experience of learning in the clinical environment. *Nurse Education in Practice*, 10(3): 176-182.
<https://doi.org/10.1016/j.nepr.2009.07.003>
PMid:19700368
- Serrano GP, Martínez-Marcos M, Espejo-Matorrales F, Arakawa T, Magnabosco GT, and Pinto IC (2016). Factors associated to clinical learning in nursing students in primary health care: An analytical cross-sectional study. *Revista Latino-Americana de Enfermagem*, 24: e2803.
<https://doi.org/10.1590/1518-8345.0327.2803>
PMid:27627124 PMCID:PMC5048728
- Shaban IA, Khater WA, and Akhu-Zaheya LM (2012). Undergraduate nursing students' stress sources and coping behaviours during their initial period of clinical training: A Jordanian perspective. *Nurse Education in Practice*, 12(4): 204-209.
<https://doi.org/10.1016/j.nepr.2012.01.005>
PMid:22281123
- Tiwaken SU, Caranto LC, and David JJT (2015). The real world: Lived experiences of student nurses during clinical practice. *International Journal of Nursing Science*, 5(2): 66-75.