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The relationship between Clinical Learning Environment and Clinical Learning Experience of Undergraduate Nursing Students in West Bank Universities/ Palestine: A Mixed-Methods Study

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Thesis Approval

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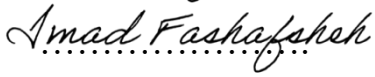
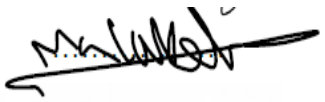
3. Dr. Imad Fashafsheh: Internal Examiner	
4. Prof. Malakeh Malak: External Examiner	
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Declaration

I declare that this dissertation “The Relationship between Clinical Learning Environment and Clinical Learning Experience of Undergraduate Nursing Students in West Bank Universities / Palestine: A Mixed- Methods Study”, that is submitted for the degree of Doctor of Philosophy in Nursing at Arab American University- Palestine (AAUP), has not been previously submitted anywhere in fulfilment of this degree at this or any other university; It is entirely my own scholarly work. All the materials used from other sources contained in the dissertation have been indicated and acknowledged.

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Dedication

"To the soul of my mother; who passed away during my PhD journey; to all her sacrifice for my education, to her instillation in me the spirit of hard work and learning to succeed in my life". "To my father who always supports me and becomes happy for my successes". " To my wife who accompanied me through the long and arduous nights and made things easier and more comfortable". " To my children who borne part of the burden and deprivation". " To my brothers and sisters who have all supported me". To my colleagues whom shared me their ideas, advised and supported me. To my nursing students, who are my precious investments to keep nursing profession in progress.

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Abstract

Background:

Clinical learning environment (CLE) plays a vital role in clinical nursing education and has an important effect on clinical learning experience (CL experience) of nursing students as they train in these clinical environments. CL experience of nursing students impacts the quality of care delivered to patients and determines the nursing students' competency in their future career.

Purpose:

The purpose of this study was to explore the relationship between the CLE and the CL experience of undergraduate nursing students at Palestinian universities.

Method:

A mixed-method study was used to identify and explore the CL experiences of undergraduate nursing students at three different governmental, public, and private universities. Quantitative data were collected from 306 second, third-, and fourth-year nursing students through a self-administered questionnaire using convenience sampling. Qualitative data were collected using a focus group consisting of 14 fourth year nursing students through semi-structured interviews.

Analysis:

The quantitative data were analyzed by the statistical package of Social Sciences (SPSS) version (25) using frequencies, means, standard deviation (SD), percentages, t-test, ANOVA, Post hoc and regression. The qualitative data were analyzed using inductive content analysis.

Results:

The results showed differences in the means of the CLE and the CL experience levels, statistically significant differences in the mean of the CL experience in relation to the type of the training site and the training ward at the level of p value ≤ .05 (p = .032, p = .019) respectively, and a strong correlation between CLE and CL experience (r = .758). The CLE variables also predict the CL experience mainly; the "pedagogical atmosphere" and the "supervisory relationship" variables predict the CL experience at the level of p value ≤ .001, ≤ .005 (p = .000, p = .001) respectively. The type of training site predicts the CL experience at the level of p value ≤ .05 (p = .034).

The qualitative data resulted in an emergence of four themes, namely perceptions of CL experience, facilitators of CL experience, barriers of CL experience, and strategies to improve CL experience. Seventeen categories related to clinical environment, students, instructors, nursing staff, assignments, opportunities, and training conditions were also created.

Conclusion:

The study answered the research questions in which there was a strong correlation between the CLE and CL experience, differences in the means of CLE and CL experience levels, significant differences in the means of the type of the training site and the training ward and CL experience. The "pedagogical atmosphere" and the "supervisory relationship" variables predicted the CL experience. In addition, four themes were emerged that were related to CL experience perception, facilitators of CL experience, barriers of CL experience, and strategies of CL experience. The results contributed to the existing body of knowledge by providing specific results related to the Palestinian context that formed a base line for scholars. The study recommended

further research to have more insight about the CLE and the CL experiences of undergraduate nursing students in different schools for various clinical courses in other clinical settings.

Key words: Clinical Learning Environment, Undergraduate Nursing Student, Clinical Learning Experience, Palestine

Table of Contents

List of Tables

List of Figures

List of Appendices

List of Abbreviations

AAUP	Arab American University Palestine
ANOVA	Analysis of Variance
BSN	Bachelor of Science in Nursing
CCU	Critical Care Unit
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CL	Clinical Learning
CLE	Clinical Learning Environment
CLES	Clinical Learning Environment and Supervision
CLES+T	Clinical Learning Environment Supervision and Teacher
ENB	English National Board
IRB	Institutional Review Board
LSD	Least Significant Difference
M	Mean
MCPH	Master of Community and Public Health
MeSH	Medical Subject Headings
MOHE	Ministry of Higher Education
MSN	Master of Science in Nursing
No	Number
NU-VTE	Nablus University for Vocational and Technical Education
PhD	Doctor of Philosophy
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
UNRWA	United Nations Relief and Works Agency

WA	Ward Atmosphere
WHO	World Health Organization
WM	Ward Manager
&	And

Chapter One

Introduction

Background

Undergraduate nursing education prepares nursing students for general nursing practice. It helps nursing students to become competent, professional, and skillful practitioners (Arkan et al., 2018). Clinical education facilitates the integration and translation of nursing students' theoretical knowledge from academia to practice and enables learning through a realistic clinical setting (Benti Terefe & Gemeda Gudeta, 2022). Clinical learning is an essential and integral component of nursing education that improves learner's experiences in which the clinical learning experience (CL experience) is located at the center of nursing education (Alshammari et al., 2020).

Clinical experience and the learning environment are good indicators of the quality of nursing education (Amoo & Enyan , 2022). The experiences of nursing students in the clinical environment can be either negative or positive; a non-conducive environment affects the student's learning experience negatively (Alshammari et al., 2020). Understanding the factors that facilitate CL experience contributes to improving the effectiveness of clinical teaching and learning while the challenges within the clinical environment hamper the effectiveness of clinical learning and prevent achieving clinical objectives (Amoo & Enyan , 2022).

The researcher's experience in different Palestinian settings as a staff nurse, clinical instructor, faculty member, and director of nursing for over twenty years aids in determining if nursing students in clinical settings face many challenges; this encouraged the researcher to investigate the relationship between the CLE and CL experience, the positive and negative factors that may affect CL experience, and the

clinical experience perceived by undergraduate nursing students at Palestinian universities. This study assessed the relationship between the CLE and CL experiences of nursing students in clinical training and identified the learning challenges in Palestinian clinical environments.

Nursing education is a distinct education in universities worldwide. It consists of two balancing portions: theoretical and clinical parts. The clinical part forms an important component of nursing education and nursing curriculum (Alatawi et al., 2020). Clinical education has an undisputable impact on the progress of individual, professional, and clinical nursing skills (Gaeeni et al., 2021). The importance of experiential learning in practice-focused professions such as nursing is significant (Warne, 2010). The clinical setting as a learning environment is an important interest in up-to-date nursing education that needs frequent evaluations to ensure its suitability and continuity as a beneficial learning environment (Papastavrou et al., 2016).

The learning environment has a noteworthy effect on clinical learning and learning outcomes (Neupane et al., 2018). Clinical learning placements and learning experiences gained through practice can affect the learning outcomes and the choices of nursing students for their future careers (Zhang et al., 2022). Nursing students need adequate clinical learning experiences (CL Experience) to prepare them for real clinical practice and to ensure that they have a chance to implement theory learning during their clinical training (Chicca & Shellenbarger, 2020).

Nursing students view the Clinical Learning Environment (CLE) as "the most anxiety-provoking component of nursing education" (Alatawi et al., 2020, p.1). This perception toward the CLE affects the nursing care of their patients (Neupane et al., 2018) because CLE is the place where nursing students acquire their knowledge,

skills, attitudes, relationships, communication, and professionalism and use them in their practice in their future careers. Also, it allows nursing students to transform theoretical knowledge into mental, psychological, and psychomotor skills which are important for patient care (Jamshidi et al., 2016). The CLE is a complex social environment that is affected by psychosocial, physical, and organizational environments and learning environments (Flott & Linden, 2016). Many factors interfere with and affect the nursing students' CL experiences eventually having a crucial impact on the effectiveness of their delivered care and on their decisions to stay and grow in their profession.

Problem Statement

The CLE is a social entity where knowledge, skills, and attitudes are gained by nursing students to be professional, competent, and qualified nurses in the future. The CLE affects nursing students' learning either positively or negatively. In clinical settings, nursing students have many problems and complaints regarding their clinical training that affect their clinical experience. Examples of these complaints include lack of equipment in the wards, inadequate opportunities to do nursing skills, ineffective communication between students and staff and patients, a large number of students in the wards, and incongruence between what is learned in the class and what is done at the clinical sites.

Nursing students' clinical experience is an important indicator of their promotion, care delivery, and competency. Clinical Learning (CL) of undergraduate nursing students face many problems that affect the learning experiences of nursing students (Baraz et al., 2015). Among these are organizational constraints, increased workload, negative experiences, inadequate preparation for the role of mentor, and

staff shortages (Prescott-Carter & Onuoha , 2016). Also included are not achieving the learning objectives (Amoo & Enyan , 2022), a large number of students preventing them from adequate opportunities to learn, a lack of equipment, poor communication, and theory-practice incongruence (Mbakaya et al., 2020). Continuous feedback and evaluation by nursing students for their CLE are needed to ensure that they gain the required skills to be competent in their future profession and to explore the suitability and comfort of these settings for the student's training. Further, the nursing programs' staff and the leaders of healthcare facilities are required to evaluate the CLE to make sure that the learning objectives are met, and that the nursing students are better prepared for practice by gaining CL experiences. Moreover, poor coordination between nursing schools and training sites minimizes the success of nursing students in their clinical practicum (Strandell-Laine, 2022). Finally, ineffective clinical supervision, unqualified nurse teachers or preceptors, and lack of opportunities to do nursing procedures are all related to the CLE (Jamshidi et al., 2016).

CLE has many variables that relate to clinical learning. The CLE in terms of "pedagogical atmosphere", ward manager "leadership style", "premises of care" as well as "nurse-teacher" are all important for ensuring the sufficiency and adequacy of the CL experience (Strandell-Laine, 2022). Four sub-dimensions of the CLE, supervision, and nurse teacher involve key factors that are highly associated with learning and operate collectively to achieve students' learning objectives. These subdimensions are related to each other and vary according to different clinical settings (public, private, and governmental) (Luders et al., 2021).

Nursing students with different levels, backgrounds, gender, universities, and training sites have differences in their perception of the factors that influence their

clinical learning experiences (Al- Shammari et al., 2020). Environmental, student, interpersonal, and teaching-learning factors influence clinical learning experiences because they shape students' experiences to become professional nurses. Also, a non-conducive environment may negatively affect the students' learning experience (Al-Shammari et al., 2020).

Importance of the study

In Palestine, nursing education is delivered through colleges, university colleges, and universities that offer a two-year diploma, bachelor of science in nursing (BSN), master of science in nursing (MSN) in different specialties, master of community and public health (MCPH) and lately Doctor of Philosophy in nursing (PhD). In West Bank-Palestine, there are ten universities and three university colleges that offer a bachelor's degree in nursing (BSN); the universities are either governmental, public, or private while the university colleges are all private. The number of nursing students in Palestinian nursing schools is 7833 students (MOHE, 2022) whereas the number of BSN graduates per year is approximately 1750. Nursing programs in Palestine follow different models of nursing education taking into consideration the World Health Organization (WHO), regional, and international recommendations. The clinical part in most Palestinian nursing programs curricula forms about 45% - 55%, in which the students are supervised by either full or part-time nursing school staff or preceptors from hospitals.

Nursing students spend about fifty percent of their nursing education in different CLEs mainly in hospitals and primary care settings (Ali et al., 2021) and spend between 33% and 55% of their time in clinical activities (Warne, 2010). This somehow applies to nursing education in Palestinian nursing schools.

There is a lack of studies in Palestine that came across and studied the CLE and its relationship with undergraduate nursing students' CL experience. This study was implemented to describe the relationship between the CLE and the CL experience and to explore the CL experience of undergraduate nursing students in Palestinian universities. Further, the study focused on investigating the factors that facilitate and hinder clinical learning and exploring more about the CL experiences of undergraduate nursing students in their CLEs in the Palestinian context. Understanding the facilitating, hindering, and challenging factors of clinical learning for nursing students in the Palestinian context will advance the clinical experiences of nursing students, bridge the gap between theory and practice as well as update the curricula of Palestinian nursing schools accordingly.

In addition, the study will form a base for future nursing studies in Palestine for those who are interested in nursing clinical education and its relationship with the learning experiences of nursing students. Moreover, a new and different group of students' experiences regarding CLE will be reflected, specific experiences in the CLE within the Palestinian culture will be explained and opportunities to determine the factors that have more impact on CL experiences will be explored too.

Finally, the results of the proposed study will help in improving the circumstances of the CLEs, increasing the collaboration and cooperation between nursing schools and clinical sites, and improving the CL experiences which aid in delivering better nursing care that will improve the Palestinian populations' health as a whole.

Purpose of Study

The purpose of the study was to describe the relationship between the CLE and the CL experiences and explore the CL experience of undergraduate nursing students at three Palestinian universities in the West Bank.

Study Objectives

1. To describe the levels of CLE and CL experience of undergraduate nursing students.
2. To identify whether there is a relationship between CLE and CL experiences of the nursing student's clinical area.
3. To identify whether there are differences in the means of the CL experiences of undergraduate nursing students across demographic and academic variables and the CLE of their clinical area.
4. To identify significant predictors of students' CL experience among their personal and academic variables as well as CLE of the clinical training.
5. To explore positive and negative factors affecting the CL experience, challenges, and ways of improvement of the CL experiences as perceived by undergraduate nursing students at three Palestinian universities in the West Bank.

Study Questions

1. What are the levels of the CLE and CL experience among undergraduate nursing students?
2. What is the relationship between the CLE and CL experience with undergraduate nursing students' demographic and academic variables?
3. What are the differences in the means of the CL experiences of undergraduate nursing students across demographic and academic variables and the CLE of their clinical area?

4. What are the predictors of the CL experiences of undergraduate nursing students at The West Bank universities of Palestine in terms of CLE, demographic, and academic variables?
5. How do the undergraduate nursing students explore their CL experience about the CLE in terms of identified challenges and ways of improvement?

Definition of Study Variables

This study incorporates several research variables to address the stated purpose, "describe the relationship between the CLE and CL experiences and explore the CL experiences of undergraduate nursing students." The study variables and their definitions are shown in Table 1.

Table 1. Definitions of Study Variables

Variable	Conceptual definition	Operational definition
Clinical Learning Environment (CLE)	CLE involves any area where nursing students apply theory to practice by conducting actual patient care to gain knowledge about skills, attitudes, and decision-making abilities necessary to become a competent, entry-level nurse. It includes the physical space, psychosocial and interaction factors, teaching effectiveness of the instructor, student engagement, and organization culture, all of which have an impact on student abilities to meet learning outcomes (Flott & Linden, 2016, p. 508).	In this study, CLE (independent variable) refers to a hospital, a clinic or a center where the nurse student trains in order to acquire knowledge, practice a skill or inspire an attitude that will prepare him to practice nursing and become competent and qualified nurse. It includes the following variables: pedagogical atmosphere, leadership style of the ward manager, premises of care on the ward, supervisory relationship, and role of the nurse-teacher. The respondent was requested to indicate his/her opinion about how many degrees the quality of CLE variables facilitate his/her learning experiences on a 5-point Likert scale (Saarikoski, et al., 2008)
Pedagogical	Refers to the quality of the	The respondent was requested to

atmosphere	teaching and learning environment, including the policies, practices, and resources that support effective teaching and learning (Dunn & Hansford, 1997; Neville & French, 1991; Warne & McAndrew, 2008).	indicate his/her opinion about how many degrees the quality of teaching and learning environment facilitate his/her learning experiences on a 5-point Likert scale (Saarikoski, et al., 2008).
Leadership style of the ward manager	Refers to the behavior and attitudes of nursing leaders in the CLE, including ward managers, clinical instructors, and preceptors (Saarikoski & Leino-Kilpi, 1999 ; Wilson-Barnett et al., 1995).	The respondent was requested to indicate his/her opinion about how much degree the behavior and attitudes of nursing leaders in the CLE to facilitate his/her learning experiences on a 5-point Likert scale (Saarikoski, et al., 2008).
Premises of care on the ward	Refers to the underlying beliefs, values, and assumptions that guide nursing practice and education (Saarikoski, et al., 2008).	The respondent was requested to indicate his/her opinion about how much the content of nursing is an important issue in clinical practice to facilitate his/her learning experiences on a 5-point Likert scale (Saarikoski, et al., 2008).
Supervisory	Refers to the quality of the	The respondent was requested to

relationship	relationship between nursing students and their clinical instructors or preceptors (Allan et al., 2008; Campbell et al., 1994; Crawford et al., 2000).	indicate his/her opinion about how much degree of the quality of the relationship between nursing students and their clinical instructors or preceptors to facilitate his/her learning experiences on a 5-point Likert scale (Saarikoski, et al., 2008).
Role of the nurse- teacher	Refers to the quality of the teaching and guidance provided to nursing students by their clinical instructors or preceptors (ENB/ English National Board, 2001).	The respondent was requested to indicate his/her opinion about how much the degree the quality of the teaching and guidance provided by clinical instructors and preceptors in clinical practice to facilitate his/her learning experiences on a 5-point Likert scale (Saarikoski, et al., 2008).
CL experience	Refers to the involvement of nursing students in nursing clinical training to acquire clinical skills either in hospitals, clinics, or other healthcare centers and in the community that help them in	The respondent was requested to indicate his/her opinion about how much he/she was involved in clinical skills during clinical training to gain clinical experiences necessary for his/ her future career using a 5-point

	making decisions and informing their future actions (Rajeswaran, 2016). CL experience is the "heart" of professional education as it provides students with an opportunity to consolidate knowledge, socialize in a professional role, and acquire professional values" (Chan, 2004, p.4).	Likert scale (Rajeswaran, 2016).

Summary

In this chapter, an overview of the study was provided; it is about the relationship between the CLE and CL experience of undergraduate nursing students at Palestinian universities. The researcher discussed the main variables in the study which were the CLE as an independent variable and the CL experience as a dependent variable. The theoretical and operational definitions of both variables were identified; an introduction of the subject was introduced, and the relationship between the variables was discussed in the problem statement. Also, the researcher emphasized the importance of the study as it is relevant to the Palestinian context and forms a baseline. In addition, the objectives and the study questions were also stated.

Chapter Two

Literature Review

Introduction

This chapter discussed the literature review and studies related to CLE and CL experience and their variables**.** The focus of the literature review was on the studies that addressed the relationship between the CLE and CL experience. In addition, the problems, challenges, and weaknesses in nursing CL education were elaborated. This chapter included the search strategy, the inclusion/exclusion criteria, and the process of studies' searching and filtering. Moreover, the referenced theory of the study was discussed. Finally, the researcher created a conceptual framework that included demographic and academic characteristics and variables of the CLE and CL experience.

There are two main complementary parts in nursing education: theoretical and clinical parts. Clinical learning (CL) forms half of nursing educational experience in nursing programs in many countries (Arkan et al., 2018). CL enhances nursing students' function and affects the development of the nursing profession (Mahmoud, 2014).

As a practice-based profession, CL in the nursing curriculum prepares nursing students for their future profession (O'Mara, 2014). CL is originally described as a network of "interacting forces" within a clinical environment (Dunn & Burnett, 1995, p. 1167; Saarikoski, 2018, as cited in Dunn & Burnett,1995). A clinical environment is defined as shared interactive forces in a clinical setting that affect nursing students' CL experience (Baraz et al., 2015).

Learning experiences differ from one CLE to another as they are context-based. This applies to most developing countries around the world (Saarikoski et al., 2013). Nursing students gain their clinical experience in the CLE to enhance their learning. This makes nursing programs competitive to secure clinical sites (Hooven, 2014) and emphasizes more collaboration between nursing schools and healthcare settings to increase the nursing students' success in their clinical practicum (Strandell-Laine, 2022).

The CLE refers to "a group of stable characteristics unique to a particular clinical setting and impacting on the behavior of individuals within that setting" (Orton, 1981,p.6). The CLE can be defined as the overlapping space that includes the "work environment" (i.e., the clinical context in which trainees learn and participate in patient care) and the "educational context" (i.e., the syllabi, curricula and goals, methods for learning, expected learning outcomes and assessment practices) (Nordquist, 2019, p.3). The CLE is a social, cultural, and material context where trainees learn to help and care for patients in the clinical workplace (Henry and associate, 2019, p.1).

The CLE combines all educational and learning activities during nursing students' clinical training (Papastavrou et al., 2016). It is a multipart atmosphere that affects nursing students' training either by improving or hindering their performance (Berhe & Gebretensaye, 2021). The CLE is a measurable concept although many research studies claim that students' experiences are explored by qualitative approaches (Chesser-Smyth, 2005; Chun-Heung & French, 1997; Papastavrou et al., 2010; Papp et al., 2003; Peyrovi et al., 2005). As a concept, the CLE along with its

impact on students' learning and nursing education has been of major concern for decades, and it will continue in the future (Hooven, 2014).

Search Strategy

Three databases for searching related literature were used: Cumulative Index to Nursing and Allied Health Literature (CINAHL), Pub-Med, and Science Direct in addition to Google Scholar as engine. Boolean operators (OR, AND) are used separately to combine and expand the search first. To narrow down, and make the search more focused and to have productive results, a validated Medical Subject Heading (Me-SH) term search was also considered. The following formula was finally used in searching ("clinical learning environment" AND "nursing students" OR "nursing students" AND "clinical learning experience"). The search started from the 1st of February to the 31st of May of 2023 and included articles published between 2013-2023. The titles and abstracts of the relevant articles were skimmed carefully. One thousand- three hundred and sixteen results from all databases (CINAHL= 227, PubMed = 50, Science Direct = 153, Google Scholar = 886) were obtained.

Criteria of Articles Inclusion/ Exclusion

Inclusion/ exclusion criteria for articles were determined as follows: English language, nursing students (2nd, 3rd, and 4th year), research articles, peer-reviewed. Besides, the focus was on the articles that addressed the CLE, CL experience and nursing students' views of learning environment and experiences.

The excluded articles were those that addressed simulation or virtual learning, perspectives of other health professionals, first-year students, non-English studies, and training in simulation or laboratories in the school itself. The number of screened articles was one hundred and ninety-four (194), and the final number of articles

meeting the inclusion criteria and matching the validated Me-SH terms was fifty (50) as shown in (Figure 1).

The search proceeded as follows: First, the statement with key words, Boolean operators and brackets was searched in the four databases where 1316 studies were obtained, after that 86 articles were removed due to duplication. Second, the results were skimmed carefully focusing on key words, variables and objectives of each searched study excluding 972 studies because their titles and objectives were irrelevant, as well as removing 64 articles due to ineligibility. Third, the filtered articles, one hundred ninety-four (194), which were thought to be relevant were considered and revised again. After a focused revision of the filtered articles, seventy-six (76) of them were excluded as they were not the same as the target group. For example, the articles focused only on male students or mixed students, nursing, and midwifery. Fourth, after another more precise revision for the eligible articles, forty-two (42) records were not retrieved as they were conducted in special wards under certain circumstances mixed with students of different levels: upgraded or with preceptors or nurses. When considering exclusion criteria including first-level students who were not involved in clinical training, non-English language, and non-nursing students' articles, twenty-six (26) articles (9;5;12 respectively) were excluded from the search. Finally, the most relevant, eligible, and precise articles that were beneficial to the purpose of the study were fifty (50) articles.

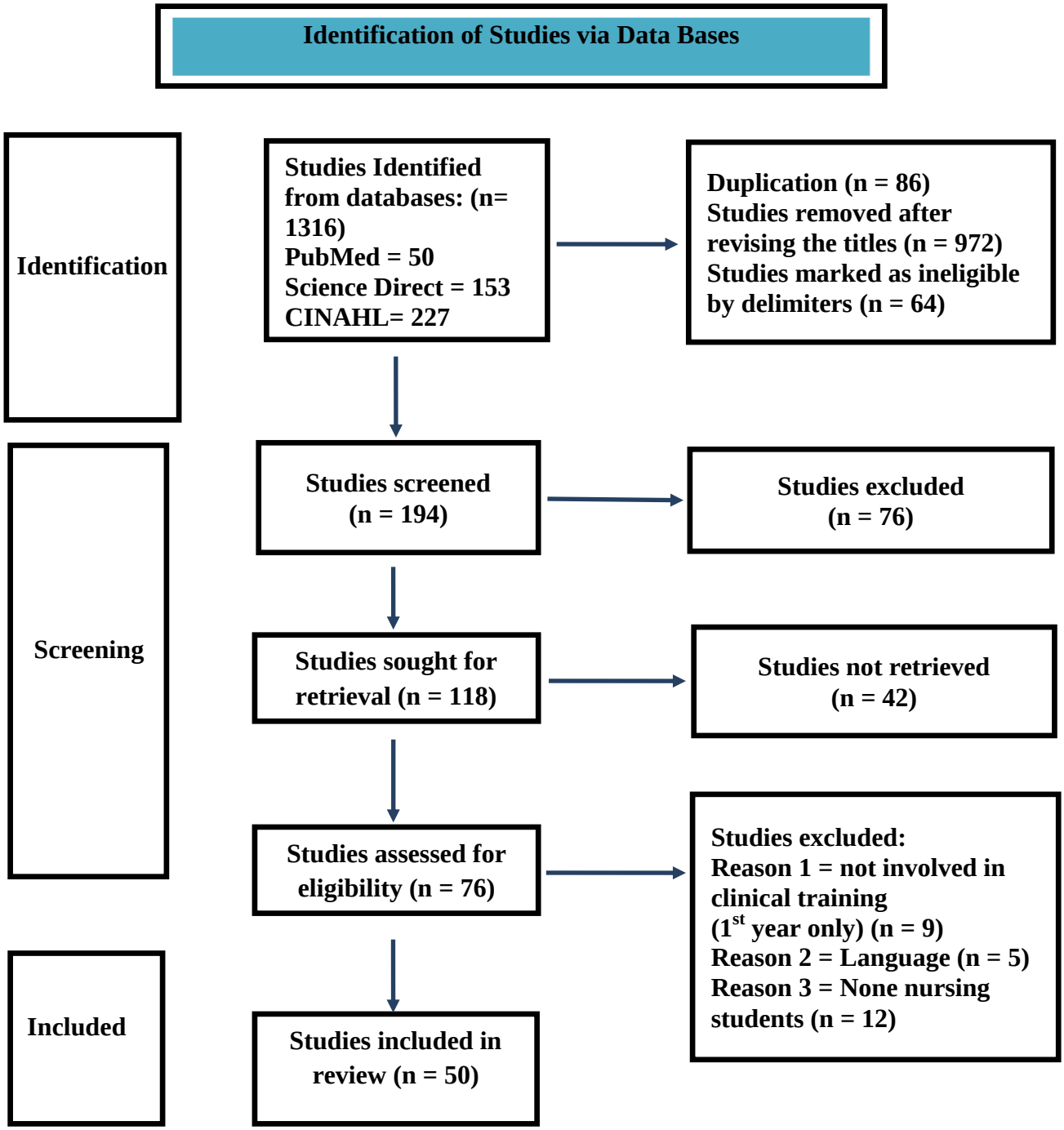

Figure. 1. Data search results

Clinical Learning Environment

The CLE is the place where nursing students gain their skills to care for their patients. Understanding the CLE enables nursing education programs and healthcare agencies to collaborate, create meaningful clinical experiences, and enhance student preparation for the professional nurse role (Flott & Linden, 2016). Contributions to nursing students' learning in the CLE from both faculty members and ward nurses are equally important, and their promotion of clinical learning is dependent on the collaboration between clinical and teaching staff (Hooven, 2014).

Investigation of CL gives a comprehensive insight into the educational functioning of clinical areas and allows nursing teachers to improve students' opportunities for learning (Papastavrou, 2010). Higher educational institutions are recommended to assess CLEs (Mansutti, 2017).

Successful development of nursing students into a professional role is mostly dependent on the quality of the clinical environment. The CLE encroaches on and influences students' learning outcomes by different forces and elements (Dunn & Burnett, 1995). These forces include the physical space, psychosocial and interaction factors, organizational culture, and teaching and learning components (Flott & Linden, 2016). The CLE can help or hinder learning and achievement of program outcomes, thus, ensuring that a supportive CLE becomes crucial for success.

A supportive CLE should have cooperative learning, trust, and mutual respect and should give nursing students opportunities to express their opinions about their clinical experiences (Rashwan et al., 2022), while an unsupportive CLE is one with a dearth of access to direct experience, traditionalism in clinical behaviors, unsupportive

interpersonal communication. A tensely psychosocial environment (Drateru, 2019) negatively impacts students' learning (O'Mara, 2014).

Good CLEs have to be characterized by a non-hierarchical structure with a positive atmosphere and team spirit (Magnani et al., 2014). Appropriate CLEs are characterized by the supervisor's guidance in the department, relationship with supervisors, quality of nursing care and nursing educators' role and clinical expertise (Rashwan et al., 2022).

The CLE has many variables that relate to clinical learning in nursing. The terms of "pedagogical atmosphere", ward manager "leadership style", "premises of care" as well as mentor supervision are all important variables for ensuring the sufficiency and adequacy of the future nursing workforce (Strandell-Laine, 2022).

Four sub-dimensions of the CLE, supervision and nurse teacher (CLES+T) scale involve key factors that are highly associated with learning and operate collectively to achieve students' learning objectives. These subdimensions are related to each other and vary according to different clinical settings (public, private and governmental) which need more robust investigation (Cant et al., 2021). There are three main learning variables affecting nursing students: the ward atmosphere (WA), the leadership of the ward manager, and the supervisory relationship with the nurse teacher (Benti Terefe & Gemeda Gudeta, 2022; Musabyimana et al., 2019; Neupane et al., 2018; Papastavrou et al., 2016).

The "Pedagogical Atmosphere" variable includes a positive environment that allows students to feel comfortable and accepted and takes part in their clinical placements during inter-professional work (Mikkonen, 2020), in addition to the

teamwork and the personnel’s interest in students’ learning needs (Papastavrou et al., 2016, p.3).

The pedagogical atmosphere subscale quantifies the related atmosphere including the students' comfort, degree of positivity, and the "goodness" of the ward (Hooven, 2014). Nursing students' assessment of the pedagogical atmosphere is associated with the year of studies, model of supervision and duration of clinical training (Reichers, 1990).

Nursing managers are highly challenged to build a positive pedagogical atmosphere that fosters organizational premises (Mikkonen, 2020). From the students' viewpoint, the most noteworthy part that relates to effective clinical training is the pedagogical sensation (Rashawn et al., 2022).

The "Leadership Style" variable refers to "the attitude of the ward manager towards the staff members, his or her appreciation of the efforts of individual employees and the leader’s behavior as a team member" (Papastavrou et al., 2010, p.2). The leadership style subscale quantifies the nurse ward manager's involvement, responsiveness and if he is a team player (Hooven, 2014).

The "Premises of Care" variable refers to "the organization of the nursing care"(Papastavrou et al., 2016, p.3). It also includes the philosophy of nursing wards, care delivery, nursing documentation related to patient care and information flow, such as nursing care plans and recording of daily nursing procedures (Saarikoski and Leino-Kilpi, 2002).

The "Supervisory Relationship" *variable* stands for the sense of trust, student/mentor equality and continual feedback (Papastavrou et al., 2016, p.3). The supervisory relationship measures the pedagogical and psychological relationship,

including the mentor's attitude towards an individualized approach and feedback to the student (Papastavrou et al., 2010). The supervisory relationships subscale is directly related to the staff-student relationships (Hooven, 2014).

The "Nurse-Teacher" variable refers to "the role of a qualified nurse-teacher employed by an educational institution, whose role encompasses both theoretical and clinical teaching" (Saarikoski, 2008, p.2). Nurse teachers are facilitators and responsible for students' learning in clinical settings (Benti Terefe & Gemeda Gudeta, 2022). The nurse-teacher's role in clinical practice is defined as the nurse-teacher's ability to minimize the theory-practice gap (Papastavrou et al., 2016). The nurse-teacher plays a crucial role in supporting and guiding nursing students during their clinical training (Strandell-Laine, 2022). The nurse-teacher variable is related to his/her role which may include integrating theory with clinical practice, operationalizing goals, being a team player, and having learning support (Hooven, 2014). Feedback from staff nurses, nurse-teachers, and nurse managers is also included in some subscales of the CLES +T scale (Hooven, 2014).

CL experience of nursing students is crucial to improve their competency and skills for further career development. Nursing education provides nursing students essential skills through scientific based CL experiences to care for patients with health problems (Kadhila, 2023). Nursing education needs to improve the learner's experiences in the clinical setting in order to help students become better professional nurses (Alshammari, 2020).

Nursing students gain diverse clinical experiences as they train in different CLEs (Mburu, 2015). Nursing students' CL experiences are influenced positively and negatively, which affects students' learning as a whole (Berhe & Gebretensaye, 2021).

Positive CL experiences may include right application of theory in practice, effective mentoring, good interpersonal relationship and constructive feedback (Berhe & Gebretensaye, 2021). Good student-nurse relationships influence the students' CL experience positively while theory-practice gap, unclear role of student nurses in the clinical placement and negative emotions hinder the CL experience of nursing students (Amimaruddin & RuditaIdris, 2022).

Environmental, student, interpersonal, and teaching-learning factors have an influence on clinical learning experiences of nursing students as they shape their experiences to become professional nurses (Al- Shammari et al., 2020).

Several individual factors may positively affect the student's clinical practical experiences; among these are student motivation, emotional intelligence, career choice, prior work experience, and the reality of nursing practice (Strandell-Laine, 2022). Other factors may also include clinical instructor expertise , clinical nurses' supportive role, effective communication and relationship, clear job description, theory-practice integration, availability of resources, professional discussions, skill development, proper documentation and social and psychological factors (Rozario, 2022).

Cultural and organizational influences affect the CL experience and professional socialization of beginners and can impact the students' desire to continue in their chosen profession (Gao et al., 2022). Also, nursing students' learning experiences are heavily influenced by the culture in the clinical area (Arora, 2015). The teaching-learning process in clinical settings is one of the most important factors that is affected by students' exposure to the CLE (Jamshidi et al., 2016). Many influences may impede the learners' development during their clinical training.

Literature suggests that collaboration between nursing faculty members and clinical staff nurses is a key constituent for successful clinical experiences (Hooven, 2014).

A successful clinical education program should provide productive and genuine learning experience to nursing students to guarantee their confidence and competence in their future practice (Flott & Linden, 2016). Research studies have demonstrated that the CLE has a significant role in CL and learning outcomes (Arora, 2015). The factors that facilitate nursing students' learning include assessments' flexibility, adapting teaching styles to meet learning needs, good orientation for students, having a welcoming environment, consistent allocation and suitable training for preceptors (Hari, 2021). One study emphasizes the importance of individual supervision as an important factor that provides a positive learning experience for nursing students in clinical education (Gurková & Žiaková, 2018).

Several studies conducted in different parts of the world have shown considerable weaknesses in clinical teaching (Mburu, 2015), such as the gap between theory and practice (Mbakaya et al., 2020), instructors' qualities and approaches during training (Ali et al., 2021) and lack of updated knowledge and skills of the supervisors (Haukongo, 2020).

Negative challenges may decrease the students' motivation to pursue their nursing careers. Lack of self-motivation to learn and perceived fear of making errors are some of the demotivating factors (Panda et al., 2021). However, shared appreciation in the CLE and more visits of nurse educators make nursing students more motivated to learn (Kamphinda & Chilemba, 2019; Rashwan et al., 2022). Un-well-prepared graduates will suffer from anxiety and stress as working nurses when

facing real nursing world challenges due to incompetence and low confidence (Ali et al., 2021).

Instructors and staff attitudes, lack of resources, staff shortage, workload, poor relationship with staff, lack of support from clinical teachers and discrepancies between theory and practice are also additional challenges in the CLE (Panda et al., 2021).

Theory

The organizational and educational theory forms the theoretical basis for understanding and measuring the CLE (Dunn & Burnett, 1995). The organizational theory explains the interaction of people with one another and then with their environment in the organization. The structure of an organization and hierarchical components influence and get influenced by interpersonal relationships in the organization (Argyris, 1972; Reichers, 1990). The educational theory, on the other hand, clarifies the effect of contextual factors on learning (Bloom, 1964; Keeves, 1972). The learning environment contains all the forces or stimuli that impact the learning and development of the individual (Biggs, 1987; Bloom, 1964; Dunn, 1995; Keeves, 1972).

Theoretical Framework

The conceptual framework for this study is based on Dunn and Burnett's (1995) organizational and educational theory, which forms the theoretical bases to understand and measure the CLE. The organizational theory explores the interaction of human beings with one another and with their environment in the context of an organization. The nature of an organizational setting, including its structural and

hierarchical components, influences and is influenced by the interpersonal relationships of the participants in the organization (Argyris, 1972; Reichers, 1990).

One of the key concepts in Argyris' organizational theory is the idea of organizational learning. Argyris believes that organizations should be viewed as learning systems in which individuals at all levels of the organization are engaged in a continuous process of learning and improvement. This requires a supportive environment that encourages individuals to reflect on their experiences, question assumptions, and experiment with new approaches. A supportive environment is essential for creating a culture of learning and adaptation within an organization (Argyris, 1972).

The educational theory, on the other hand, has long recognized the influence of contextual factors on learning (Bloom, 1964; Keeves, 1972). In 1956, Bloom developed a taxonomy of educational objectives that has become known as Bloom's taxonomy (Krathwohl, 2002). This taxonomy has been considered a framework for thinking about how to teach and how to learn. It provides a set of hierarchical categories that can be used to describe different kinds of cognitive skills that students are expected to acquire.

Bloom's taxonomy is divided into three domains: the cognitive, affective, and psychomotor domains. The cognitive domain is concerned with intellectual skills, such as knowledge, comprehension, application, analysis, synthesis, and evaluation. The affective domain is concerned with emotional and attitudinal skills, such as receiving, responding, valuing, organizing, and characterizing. The psychomotor domain is related to physical skills, such as physical movements and hand-eye coordination (Sönmez, 2017).

The learning environment includes all the forces or stimuli that impact the learning and development of an individual and exists both within and beyond a classroom setting as well. The educational learning environment may be defined by a limited number of characteristics, including physical surroundings, classroom climate, teaching methods, course structure, curriculum content, and relationships among participants in the environment (Biggs, 1987; Bloom, 1964; Keeves, 1972).

The concept of learning environment has been well accepted in the educational literature, but it is relatively new to nursing education. Helal and colleagues (2013, p.4) have defined the educational environment as an “environment experienced or perceived by the students as well as by the teachers". The educational environment is based on three important aspects: the physical environment, emotional climate, and intellectual climate (Bakhshialiabad et al., 2019, p.1).

The theoretical foundation of the study represents a variety of aspects that contribute to students' learning in clinical settings. The conceptual and operational basis for this study is provided by the CLE, supervision, and nurse teacher (CLES+T) evaluation scale. The CLES+T scale is based on a content analysis of empirical research, audit tools, and systematic literature reviews published between 1980 and 2006 (Saarikoski, 2008, 2009).

The current study utilizes the CLES+T scale to create the study framework. It is based on the assumption that CLES+T provides nursing students with valuable feedback on CLE quality and can be used to identify improvement areas and enhance nursing education quality.

The CLES+ T consists of (i) the "pedagogical atmosphere" variable to measure the teaching and learning environment quality, resource availability, clinical staff-

provided support, and instruction quality, (ii) the "leadership style" variable to measure the organizational culture level, subordinates needs and preferences, and CLE goals, (iii) the "premises of care" variable to assess the nursing care provided to patients and nursing documentation clarity which ensures students' understanding of the treatment process, (iv) the "supervisory relationship" variable to assess the quality and frequency of supervision (including the feedback and guidance) provided to nursing students by clinical staff and nurse teachers, and (v) the "role of the nurse-teacher" variable to measure the level of support (including availability and approachability) provided by nurse teachers for nursing students.

The "pedagogical atmosphere" variable, which relates to the psychosocial climate of the ward, is the most important feature of a good learning environment to ensure students' sense of ontological security (Warne et al., 2010). This is accomplished in a fair setting where students learn to solve problems in a culture that accepts flaws and failures as a part of the learning process. There is substantial evidence that a one-on-one relationship is critical to students' learning and professional growth in clinical practice (Allan et al., 2008). Furthermore, confidential supervision sessions are regarded as important because they allow students to discuss their own experiences and feelings, and the mentoring role of staff nurses has become increasingly important in these clinical supervision processes (Lewin, 2007).

It is frequently the ward manager who is most responsible for supporting a certain approach to student learning supervision. Likewise, how the ward culture is experienced (positively or negatively) will reflect the leadership style of the ward manager. A positive team spirit and a less hierarchical "leadership style" will be present within all the basic functions of the ward: nursing care, levels of staff

motivation, supervision of students, and so on (Saarikoski, 1999). "Nurse-teachers" (NT) are typically employed by a university or college. They facilitate theoretical and clinical learning. As such, they make a significant contribution to the educational process within practice settings, including coordinating student assessments and learning. Additionally, the NT contributes to the development of clinical practice and provides support and guidance to mentors and others who contribute to the student's overall learning experience in practice. Students benefit through meeting their learning outcomes and the development of appropriate competencies (Gardner et al., 2004).

The study framework hypothesized that demographic and subdimensions of CLES+ T relate, facilitate, and support the CL experiences of undergraduate nursing students in Palestine. The conceptual framework for the current study is shown in Figure 2.

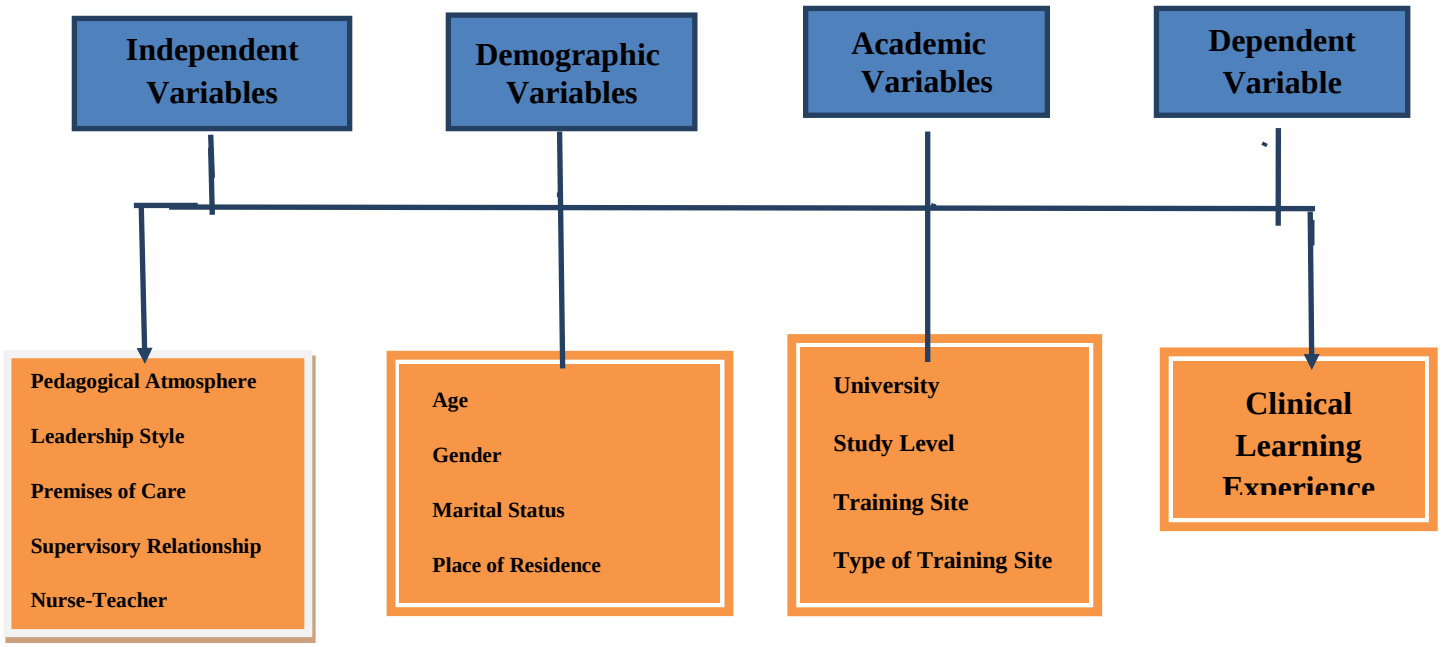

Figure. 2. Conceptual Framework

Summary

This chapter discussed and analyzed many studies from different contexts to synthesize the related literature for this study. The focus of the literature was on the CLE and CL experience of undergraduate nursing students. Several specialized engines were searched for articles from the last ten years. The discussed literature revealed that the CLE had a significant role in CL experience and learning outcomes. Also, nursing students from different countries who train in different CLEs have diverse clinical experiences that vary according to different clinical settings (public, private, and governmental) which need more robust investigation.

The literature in this chapter addressed the CLE and the CL experience and their variables. Also, it discussed the effect of the CLE and its variables on the CL experience. In addition, it revealed that undergraduate nursing students have many challenges in their CLE that miffed their learning. Moreover, it can be concluded that clinical training sites in different countries have lots of problems, difficulties, and weaknesses that are facing undergraduate nursing students during their training, which affects their performance and hinders their progress as future competent and qualified nurses, which needs investigating and exploring. Despite the numerous studies that have been analyzed, none of them comes across the relationship between the CLE and CL experience.

In Palestine, the West Bank has ecologically special characteristics and circumstances that need studying. In the Palestinian context, belonging to different (governmental, public, and private) universities and coming from different (North, Middle, South, 48 Arab) areas, Palestinian nursing students, with different training backgrounds in different (governmental, public, private, and UNRWA) clinical

settings, suffer from especially political, financial, economic, situational and transportation difficulties that make training in CLEs uniquely and distinctively challenging and problematic.

Besides, the rising number of undergraduate nursing students at Palestinian clinical sites already limited in training facilities affects the students' CL experiences, a matter which adds a special color to the study. In addition, the lack of studies conducted on the relationship between the CLE and CL experiences of undergraduate nursing students in Palestine and the region necessitates the need for this study. Finally, keeping the Palestinian culture with its diverse socioeconomic structure in mind, the specific CL experiences of undergraduate nursing students will be explored and explained more. Thereby, this mixed-method study and the uniqueness of the Palestinian context will produce new knowledge that hopefully adds new and valuable insights to the literature, which will also be used as a reference for future studies.

Chapter Three

Methodology

Study Design

A mixed-method study including a cross-sectional quantitative and phenomenological descriptive qualitative design was used for this study.

Cross-sectional studies are observational, descriptive studies employed in social sciences to examine a population at a specific time. They provide a snapshot of the population's characteristics, behaviors, or conditions at a singular moment. The selected sample is chosen to reflect the diversity of the larger population. In these studies, surveys and interviews are commonly used to collect data. This approach enables researchers to explore relationships between different factors within the population and identify patterns that contribute to a comprehensive understanding of the studied phenomenon. They also play a crucial role in guiding further and more in-depth investigations, and they are highly representative (Zuleika, 2022).

Phenomenological studies are one of the five qualitative approaches. They describe the lived experience of several individuals for a concept or a phenomenon to give a common meaning to it. They are popular in nursing and health sciences (Nieswiadomy , 1993) and education (Tesch, 1988; Van Manen, 2016). Phenomenological studies aim to provide a full description of the lived experiences, or what that experience means to those who live it. They focus on describing what all participants have in common as they experience a phenomenon (e.g., learning is universally experienced). The researcher collected data and developed a combined description of the essence of the experience for all of the individuals. The description

is about “what” they experienced and “how” they experienced it (Al Kalaldeh et al., 2018; Moustakas, 1994).

The phenomenological procedures consist of recognizing a phenomenon for study, bracketing out one’s experiences, and collecting data from several persons who have experienced the phenomenon. After that, the data are analyzed by reducing the information to statements or quotes and combining them into themes. Then, a textural description of the experiences (what participants experienced) and a structural description of their experiences (how they experienced it) is developed. Finally, a combination of the textural and structural descriptions is formed to convey the overall essence of the experience (Creswell & Poth, 2016).

In this study, a cross-sectional and phenomenological designs were used, in which the quantitative data were collected through a self-administered questionnaire and the qualitative data were collected through semi-structured interviews. The collected data from both approaches were analyzed, integrated and interpreted to have the results and to provide a comprehensive understanding of the relationship between the studied variables.

Study Population

The study population was (second, third and fourth year) undergraduate nursing students enrolled as full-time students at the Arab American University-Palestine (AAUP), Al-Quds University, and Nablus University for Vocational and Technical Education (NU-VTE).

The participants of the study were selected based on inclusion and exclusion criteria. The inclusion criteria for participating in the study included the nursing students in the second, third, and fourth year of an undergraduate nursing program

who completed at least the training of “Fundamentals of Nursing” courses. Students who were doing their clinical training at the time of data collection were also included. Students had to be registered as regular students in the selected settings. The main characteristics of the participants included male and female students (between 19 - 24 years) who received clinical training in hospital wards and /or primary health centers, and who voluntarily accepted to participate in the study.

On the other hand, first year nursing students, non-Palestinians, part time students (up-grading), those not registered in the semester when the data collection was taking place, and those who did not go through clinical training at all were excluded from the study.

Setting Three universities (AAUP, Al-Quds University, and NU-VTE) were selected as they represented all university categories in Palestine: private, public and governmental.

AAUP is a private university; it has two campuses; in the north of Palestine-Jenin district for the undergraduate students and in the middle of Palestine-Ramallah district for graduate studies. AAUP has 3100 (BSN) undergraduate nursing students and about 132 graduate students (109 MS students specialized in adult health nursing, emergency nursing, critical care nursing, neonatal nursing, and ophthalmology nursing and 23 PhD program students).

Al-Quds university is a public university; it is located in the middle of Palestine- Jerusalem district with a total of 1355 nursing students (1277 in the BSN level and 78 in the master level specializing in nursing management, pediatric nursing, maternal and child care).

NU-VTE is a governmental university in Nablus district; this university is newly established (2021); it has a nursing school (Ibn-Sina College for Health Professions) with a total of 370 undergraduate nursing and midwifery students.

Sampling

A convenience sampling for the quantitative part was used. Also, a stratified sample from the participating universities was used. The stratified sample was according to the number and the proportion rate of students for each university.

A purposeful sample for the qualitative part (14 nursing students focus group from the fourth year of the three participating universities which had a total of 941 students) was interviewed. The 4th year students were selected because they had completed their clinical requirements, had more clinical exposure, and perceived different challenges compared with freshmen, sophomores and juniors (Ali et al., 2021). Further, students who had potential, were eager to participate actively, and were committed to the clinical training were selected to participate in this study. The qualitative sample size was determined through data saturation in which the obtained information provided a deep insight into CL experiences of nursing students in Palestinian nursing schools.

In this study, data saturation was attained as the students no longer provided additional information that might add value to the collected data. The literature showed that data saturation in different qualitative approaches using in-depth interviews and homogenous study populations could be gained by conducting 9-17 interviews (Hennink & Kaiser, 2022).

The interviews were conducted privately; they were audiotaped. Five of them were done via Zoom and videotaped. The time of the interviews ranged from 20-30

minutes. Before each interview the participants were informed about the purpose of the study, their permission was obtained, and they voluntarily agreed to be interviewed.

Sample Size

The calculation of the sample size for the quantitative part of the study was based on a confidence level of 0.95 and a margin error of 0.053. In this study there were 2571 students in the three universities: (AAUP: 2nd year = 400, 3rd year = 600, 4th year = 600 with a total of 1600 students; Al-Quds University: 2nd year = 156, 3rd year = 389, 4th year = 304 with a total of 849 students; Nablus University: 2nd year = 49, 3rd year = 36, 4th year = 37 with a total of 122 students). According to the Raosoft software sample size calculator, the sample size from the three universities = 306 distributed as follows: 187 from AAUP, 102 from Al-Quds University, and 17 from NU-VTE.

Instruments

Two instruments were used for the quantitative part: a valid and reliable instrument; The Clinical Learning Environment Supervision and Nurse Teacher (CLES+T) (Saarikoski et al., 2008) and an instrument utilized by (Alshammari and colleagues, 2020) that was modified by researcher. Both instruments were in English as they were directed to nursing students who were literate and their clinical training instructions were in English, so there was no need to translate the questionnaires. To complete the questionnaire, the participants were asked to select the answers that best represented their opinions in clinical learning by ticking in the proper box. The participants had to answer all questions. Below is a brief description of the two instruments.

The CLES+T evaluation scale was used to measure the CLE. The instrument included the following variables: "Pedagogical Atmosphere", "Leadership Style", "Premises of Care", "Supervisory Relationship", and the role of the "Nurse-Teacher". The CLES+T evaluation scale is widely used in educational research to evaluate the CLE during healthcare education (Carlson & Idvall, 2014; Mansutti et al., 2017; Riklikienė & Tichelaar, 2018). The CLES+T is a tool commonly used to measure elements thought to optimize nursing students' clinical learning (Saarikoski, et al., 2008).

The CLES+T was developed by Saarikoski and associates (2008) after revisions made to the CLES scale version (which was developed by Saarikoski and associates (2002). The CLES+T is the new version of the CLES. The CLES originates from the theories of Quinn (1995), Wilson-Barnett et al. (1995), and Moss & Rowles (1997) (Lommi, et al. , 2023). It is the first instrument developed based on Bloom's (1964) and Orton's (1981) theories (Dunn & Burnett, 1995). The CLES is rooted in 'organizational' and 'educational theory', along with Benner's (1982) "skill acquisition theory" (Dunn & Burnett, 1995; Flott & Linden, 2016). The CLES+T scale is based on the content analysis of the results arising from several empirical studies (n = 87), audit instruments (n = 6), and systematic literature reviews (n = 5) published between 1980 and 2006. Also, it is based on the literature review of prior research and tools with components as influential with student learning.

The CLES+T scale consisted of 34 items and five variables: the "pedagogical atmosphere" (9 items), the "leadership style" of the ward manager (4 items), the "premises of nursing care" on the ward (4 items), the "supervisory relationships" (8 items) and the role of the "nurse-teacher" (9 items). A five-step continuum scale on all

statements of the CLES+T was used: (1) “fully disagree”, (2) “disagree to some extent”, (3) “neither agree nor disagree”, (4) “agree to some extent”, and (5) “fully agree”. The minimum score for the entire scale was 34 and the maximum score was 170 (Appendix 1).

The CLES+T is currently the most translated and validated instrument across countries, specifically in Cyprus (Papastavrou et al., 2015), Germany (Bergjan et al., 2013), Italy (Tomietto et al., 2012), New Zealand (Watson et al., 2014), Norway (Henriksen et al., 2012), Spain (Vizcaya-Moreno et al., 2015) and Sweden (Gustafsson et al., 2015; Johansson et al., 2010). Besides, the instrument has been validated in primary healthcare settings and it is internationally considered the gold standard for the assessment of CLEs in hospital settings (Mansutti et al., 2017).

The validity of CLES+ T was guaranteed through face validity using an expert panel, experts’ face, and content validity index, inter-item correlations, and construct validity (Watson et al., 2014; Saarikoski & Strandell-Laine, 2018). The reliability of the CLES+T instrument was confirmed using Cronbach’s alpha which ranged from 0.82 for the Chinese version to 0.97 for the Polish version (Zeleníková et al., 2024).

The second instrument which was used to measure CL experience was based on literature and was modified to measure the CL experiences of nursing students in the CLE. It was validated by specialized peer reviewers, and its reliability was examined using the Cronbach alpha.

The instrument was a self-administered questionnaire that included twenty items within four variables; "environment", "student", "interpersonal", and "teaching-learning" (Alshammari, et al., 2020). These variables were identified to have an important impact on the CL experience of the students. Seventeen items of the

questionnaire were adapted from Alshammari's study (Alshammari, et al., 2020) and three items (6, 15, and 20) were adapted from Clifford's study (Clifford, 1992). Minor modifications were made to some items to suit the purpose and the objectives of the current study. The modifications included adding, omitting, or changing some words. Furthermore, item 14 was transferred from the student variable to the interpersonal variable as it was more relevant to be there because it talked about the interpersonal relationship between the students and staff of the clinical unit. The instrument had a five-step continuum scale where (1) was "strongly disagree", (2) "disagree", (3) "no opinion", (4) "agree", and (5) "strongly agree". The minimum score for the entire instrument was 20 and the maximum score was 100 (Appendix 2).

The theoretical base of the second questionnaire was grounded in Imogene King's Goal Attainment theory (Lawal et al., 2019; Williams, 2001), which focused on the relationship between three interacting factors: individual (nurse-patient), interpersonal (nurse with other health care providers) and social (representing the organization). The three factors met in an environment and interacted to achieve a goal. In this questionnaire, the nursing students were asked about the factors they felt affecting their learning experience in the clinical area.

Pilot Testing

Pilot testing was done to increase research quality and enhance its validity and reliability. In this study, a pilot study was done to skip the transcultural differences of the participants. The questionnaire was revised by three Ph.D. professional nursing experts from different educational institutions. The professional experts had good experience in teaching nursing students in the theoretical and the clinical parts so face validity of the tool was ensured. The questionnaire was piloted to ensure clearance and

accuracy of its items, determine its validity and reliability, identify the study's feasibility and applicability, and determine the difficulties that data collection and the time needed to be completed by undergraduate nursing students in the Palestinian context.

The three parts of the questionnaire were delivered to twenty nursing students from two different levels (second-year (6) and third-year (14) nursing students of Nablus University (NU-VTE) to be filled; the students in the pilot study had similar characteristics with the students' sample in general and they were excluded from the study later on. After piloting, modifications were made to the questionnaire based on the students' responses; the following modifications were done: in item 24 "Mutual respect and approval prevailed in the supervisory relationship", the phrase "and approval" was removed. Likewise, in item 30 "The nurse-teacher was able to give his or her pedagogical expertise to the clinical team", the word "pedagogical" was replaced by "educational", and in item 34 "Focus on the meetings was in my learning needs", the word "in" was replaced by "within". Finally, the internal consistency and reliability of the tool were tested by identifying the Cronbach alpha value by the SPSS program.

A five-step continuum scale on all the statements of the CLE was used: (1) "fully disagree", (2) "disagree to some extent", (3) "neither agree nor disagree", (4) "agree to some extent", and (5) "fully agree". The minimum score for the entire scale was 34 and the maximum score was 170 (Appendix 1). The CL experience instrument had a five-step continuum scale where (1) was "strongly disagree", (2) "disagree", (3) "no opinion", (4) "agree", and (5) "strongly agree". The minimum score for the entire instrument was 20 and the maximum score was 100 (Appendix 2).

Validity and Reliability

The quality of the study could be achieved by validity and reliability which enhanced the rigor of the research. The questionnaire with its three parts: the social and academic demographics, the CLE variables, and the CL experience variables (which were adopted and modified by the researcher) was tested for validity and reliability to ensure applicability in the Palestinian context. The variables of the CLE in Palestinian training settings and the variables of the CL experiences of nursing students at Palestinian nursing schools were measured to get the expected outcomes of the study.

Validity

In this study, the quantitative data were collected after using a piloted questionnaire on Palestinian nursing students. 34 and 20 items that measured the CLE and the CL experience variables respectively were included in the questionnaire. Construct validity was fostered by defining and explaining the meaning of the concepts in the study, including the CLE and CL experience as well as variables including the pedagogical atmosphere, leadership style, premises of care, supervisory relationship, and nurse-teacher. Face validity was ensured and maintained by reviewing the questionnaire by experts in nursing education and an expert in statistics. The experts' comments were considered and incorporated into the final questionnaire. Some statements were reworded or transferred, some words were added or substituted, and others were deleted. For the qualitative part, validity was ensured by clear questions that were based on literature, selecting a purposeful sampling and the researcher’s engagement, and describing his role as a primary investigator.

Reliability

Reliability is related to the consistency of the research instrument; if the instrument is consistent and stable, it is said to be reliable. The greater the consistency and stability, the greater the instruments' reliability is (Tamilselvi & Ramamurthy, 2013). Consistent measurements are achieved when the same information is obtained as the data are collected more than once, using the same instrument under the same or similar conditions (Tamilselvi & Ramamurthy, 2013). Cronbach's alpha is the most commonly used test to determine the internal consistency of instruments with questions that have more than two responses (Amirrudin et al., 2021). Cronbach's alpha ranges between 0 and 1. Generally, Cronbach's alpha value of 0.7 and more is considered acceptable (Shrestha, 2021).

In this study, both questionnaires were piloted to ensure reliability and to evaluate if they could be repeated later in the same or similar circumstances. Cronbach's alpha coefficient for the two scales was calculated for both the pilot sample (20) and the total sample (306). For the pilot sample, Cronbach's alpha for the CLES+T tool was 0.982, and Cronbach's alpha for the CL experience was 0.974. In addition, Cronbach's alpha for the total sample of the CLES+T tool equaled 0.984, and Cronbach's alpha for the CL experience equaled 0.976. The results showed that Cronbach's alpha values were acceptable for both scales as they were above 0.70. Table 2 summarizes Cronbach's alpha values for the total sample for both scales and their variables.

Table 2. Cronbach's Alpha coefficients for the scales and their variables

Scale	N of Items	Cronbach's Alpha
CLES+T (Total scale)	34	0.984
CLES+T (variables)		
Pedagogical atmosphere	9	0.956
Leadership style of the ward manager	4	0.912
Premises of care	4	0.901
Supervisory relationship	8	0.967
Role of the nurse teacher	9	0.979
CL Experience (Total scale)	20	0.976
Clinical Learning Experience (variables)		
Environmental	6	0.959
Student	3	0.889
Interpersonal	6	0.946
Teaching-learning	5	0.954

For the qualitative part, questions were developed based on literature and analyzed systematically and transparently using the suitable method that fitted the data and research questions which was the inductive content analysis. The following questions were included:

1- Describe one day of your clinical experience.

2- Please, talk about the factors that facilitate your CL experience.

3- Please, talk about the factors that hinder your CL experience.

4- How does the CLE help your CL experiences?
5- In your opinion, what are the challenges you are facing during your clinical experience?
6- In your opinion, how can the CL experience be improved?
7- Provide additional things that are related to your CL experience.

The validity was assured by employing a methodological triangulation strategy where both quantitative and qualitative approaches were used. The data were analyzed and peer-debriefed by a specialist in qualitative research. Respondent validation was also used in which the results were retested by participants to be sure if they still rang true.

The reliability of the qualitative part was assured by recording the data, providing thick description, arranging them in a table according to the developed questions that enabled the researcher to interpret the results as per the record of every participant, selecting the relevant and representative participants purposively, ensuring confidentiality, and finally keeping detailed and accurate records

Rigor

In qualitative research, rigor is highly considered. Trustworthiness which comprises transferability, credibility, dependability, and confirmability is enhanced and clarified (Lincoln & Guba, 1986; Stahl & King, 2020). In this study, the researcher ensured rigor and distinguished it by the following:

Trustworthiness The trustworthiness of the study was discussed in terms of the criteria suggested by Lincoln and Guba (1985): credibility, dependability, transferability, and confirmability. Trustworthiness was achieved as the participants had trust in the researcher because he contacted them officially through the deans' offices, nursing

program directors, and clinical training coordinators who introduced them to the researcher, noting that none was present during the interviews to allow the participants to express themselves freely with no embarrassment. The researcher ensured students' participation voluntarily and shared their experiences with no coercion. An interview guide was also used to ensure consistency of the participants' experiences which were shown in the results.

Confirm ability was determined by the conclusions that were extracted from the real data to achieve the goal of the study. Confirmability was established by interviewing 14 participants from fourth-year nursing students whose experience of clinical learning is good enough as they almost finished their clinical courses. The researcher conducted the interviews till data saturation was achieved. The data were recorded and transcribed verbatim without any changes or modifications. The data were also read more than once to ensure their accuracy and avoid missing, then they were organized and analyzed; later codes were identified, and finally, themes were created.

Credibility was ensured by enabling some participants to review the findings and the summary of the results to approve if they reflected their real experiences. The results were reviewed through member-checking and peer debriefing to guarantee that they were free from bias, misunderstandings, or misinterpretation.

Member checking was used at various stages of data collection and data analysis: (1) at the pilot stage where the interviewer discussed the interview questions with participants at the end of each interview, (2) during the formal interviews where the interviewer fed ideas back to participants to refine, rephrase, and interpret, (3) in the post-interview where the participants had the chance to discuss the findings to verify their accuracy, and (4) an additional session was conducted with a sample of

participants to provide feedback on the transcripts of their interview as well as to evaluate the research findings.

Peer debriefing was used in the study to confirm interpretations and coding decisions including the development of categories. The researcher's observation and engagement, and a better understanding of participants' experiences and views through clarification and questioning were all emphasized. Feedback from other researchers was also obtained to ensure that the findings were credible and trustworthy.

Transferability was determined as the researcher emphasized that the data and information obtained from the study were trustworthy and meaningful to ensure that those using the findings of this study would find them applicable and similar to other studies to make valid decisions. Transferability was also ensured by a detailed description and reporting of the research context, methods, and findings.

Dependability was achieved by returning the results to the participants randomly so they could distinguish their experiences.

Triangulation refers to the extent of different approaches used in the research study to gain information and answer the research questions (Stahl & King, 2020). In this study, the researcher used multiple sources of data and methods to confirm the findings through interviews with open-ended questions and questionnaires which enabled better insight and understanding of the participants' clinical experiences. Multiple methods of analysis (coding inductive analysis) were also used.

Data Collection

The study questionnaire consisted of two self-completion administered tools (The CLES+T and the CL experience tool which was modified by the researcher) for the quantitative part of the study. Both tools were completed by participants and sent

to the researcher through Google Forms. Further, a semi-structured interview for the qualitative part guided by seven questions based on a literature review (Gaeeni et al., 2021; Mbakaya et al., 2020; Rajeswaran, 2016) was conducted with each participant separately.

In this study, both the quantitative and qualitative data were collected within the same time frame. The quantitative data from the questionnaire were used to measure the relationship of the CLE variables and CL experience factors in addition to the demographic and academic characteristics (Appendix 1). The qualitative data related to the nursing students' CL experiences were explored by semi-structured interviews directed by well-stated, concise, and direct questions through a purposeful sample from the fourth-year nursing students of the three universities that participated in the study (Appendix 2). The quantitative and qualitative data were obtained to determine the similarities and differences and to see how both would complement and support each other. The validity of the software and the technical problems were checked through the pilot study in which the researcher introduced to some technical problems that happened through filling out the questionnaire and asking for help from specialized technicians.

Data Collection Procedure

The data were collected over three months, from mid-September, 2023 to mid-December, 2023 through self-administered questionnaires sent to the participants via Google Form. The participants themselves had to answer all the questions in the questionnaire related to the demographic and academic characteristics, the CLE variables, and CL experience variables which represented the quantitative part of the study. A semi-structured interview guided by seven questions was also held by the

researcher himself. Fourteen students from the fourth year of the three different nursing schools were interviewed to answer the questions related to their real experiences in the CLEs. In addition, in case of minor questions raised during the interview, the researcher was ready to make vague and ambiguous points clear. This interview represented the qualitative part of the study and answered the questions related to the students' clinical experiences.

The population of the study was stratified into three strata representing the three universities (Governmental, Public, and Private). Each university nursing school was taken alone. The sample was selected according to the proportion of the students' number in each school. The student's emails and mobile numbers were taken from the registration departments and confirmed by deans' offices to facilitate easy contact with the students. The questionnaire and the informed consent were sent via Google Form to all participants included in the inclusion criteria.

The students were assured that their participation was voluntary; there was no need for their names on the questionnaire and their provided information would be confidential and for the study only. The students had the choice to either participate or not in the study, and they had the right to continue or withdraw at any time during the study period. The responses from the students were also received via Google Forms. Each response had a number to ensure confidentiality. Some students didn't respond within the required time. Therefore, a reminder was sent to them and a second reminder was sent one week after the first reminder. The majority of the participants returned the questionnaire within 24 hours. No cost was required as the questionnaire was filled and sent electronically.

For the qualitative part of the study, a sample of 14 participants from the fourth-year nursing students of the three universities involved in the study was selected purposefully. The rationale for selecting the fourth-year students for the qualitative part is that they had completed almost all clinical training courses including Fundamentals of Nursing, Medical-Surgical, Maternity, Pediatric Nursing, Critical Care, Community Nursing, Mental Health, and Nursing Management. They also had enough experience in clinical training sites and could better talk about their experiences related to the CLE.

The participants were invited by the researcher through an official email gained from the registration department after obtaining a permission from the university to distribute the questionnaire and to do the interviews. The participants were assured that their participation was voluntary and they could withdraw at any time they wanted without any obligations. The duration of the interviews lasted for 20-30 minutes in quiet, private rooms in each nursing school arranged previously with the help of the head of the Nursing Department and the head of the Clinical Training Section at the involved universities. The time of the interviews was flexible and in accord with the participants' desire to be more comfortable.

The researcher conducted the whole interview. Before starting the interview, the researcher explained the purpose of the study to ensure that all the aspects were clear and understood, emphasizing that the data were confidential and confirming that no one would reach them except the researcher and the university staff who were supervising the study.

The interviews were recorded to retrieve them when required. The participants were informed about the recording of the interviews. The participants were assured

that the data and the recordings would be stored in the personal computer of the researcher so that no one could reach them. During the interviews, the researcher took notes and asked questions for clarification in order not to forget any information.

The data were analyzed by the researcher using the manual content analysis after revising the notes hearing the recordings and reaching an overall understanding of the collected data. Information related to the students' CL experiences was extracted in a separate text. After that, words, sentences, and phrases similar or relevant to each other were merged and coded. Finally, data were categorized and themes were extracted.

Ethical Considerations

The Institutional Review Board (IRB) approval was obtained from the Arab American University-Palestine (AAUP) committee before conducting the study besides approval letters from each university presidency involved in the study. An official correspondence to the three universities was sent to have their approval of the study and to provide the primary investigator with access to students' data. After that, an official contact with the deans of Nursing Schools was scheduled to explain the purpose of the study to facilitate the task. The Registration Departments of the three universities and the heads of the Clinical Training Sections were also contacted to obtain the total numbers of the second, third, and fourth-year nursing students, who were training in the fall semester of 2023; their emails were also obtained.

The consent form with the purpose of the study was sent to the selected participants and signed ensuring them that their participation was voluntary and that they could withdraw at any time with no official constraints. The participants' names weren't required as part of the data, so anonymity and privacy were warranted. The

information was obtained from the questionnaires, and the analysis remained confidential, was kept with the researcher, and would be used for research purposes only. The data gathered from the entire research process were saved in the personal computer of the researcher so no one could reach them. The obtained data would be kept with the researcher till the end of the study before being discarded according to the university protocols.

Data Analysis

The Statistical Package for Social Sciences (SPSS) software version 25 was used for data analysis. Descriptive statistics were used to present participants' characteristics, including their demographic and academic variables, the CLE variables, and CL experiences variables. Frequencies and percentages were used for categorical variables, and mean with the associated standard deviation factors was used for the continuous variables. Pearson correlation was used to explore the relationship between the CLE and CL experience. One way analysis of variance (ANOVA) and t-test were used to study the difference in the mean of CL experience based on participants' demographic, academic and CLE characteristics. Post hoc test was applied where necessary to determine which pairwise comparison of means contributed to the overall significant difference that was observed in the computation of the F statistic. Finally, standard multiple linear regression was applied to identify the significant predictive (CLE, demographic, academic) variables that determined the CL experiences of undergraduate nursing students in West Bank universities of Palestine.

For the qualitative part of the study, inductive content analysis was used to identify themes retrieved from the participants. Inductive content analysis was used to

identify the similarities and differences within different parts of the text. The whole interview was considered the unit of analysis. The researcher listened to the recorded interviews several times to have a better insight and to fully understand the content. The related parts of students' clinical experiences were extracted from the script and placed separately. The relevant and related words, phrases, sentences and paragraphs in terms of content and context were merged and coded (Jamshidi , 2016).

Codes were interpreted in the context of the study and compared for similarities and differences. Categories were created as they were core features for qualitative content analysis (Graneheim & Lundman, 2004). The category was a group of content that shared a commonality (Krippendorff, 1980). It often included several sub-categories or sub-subcategories at varying levels of abstraction (Graneheim & Lundman, 2004). Finally, themes were created as they recured regularly.

Summary

This chapter presented the methodology process including the study design, the studied population and their characteristics, a summary of the settings, the sampling process and how sample size was determined, detailed information about the instruments used, the process of piloting, and the changes done according to its results, a description of validity, reliability, and rigor ensuring how data were collected and the process of data collection identifying the ethical issues related to the study, and finally the data analysis procedure.

Chapter Four

Results

Introduction

This section presented the results of the quantitative part including the independent variables of the CLE ("pedagogical atmosphere", "leadership style of the ward manager", "premises of care on the ward", "supervisory relationship" and the "role of the nurse-teacher"). The academic variables included the type of university, the student's level, the current training site, the type of clinical site, and the training ward. The dependent variables (CL experience) included the "environment", the "student", the "interpersonal" and the "teaching-learning", in addition to the demographic characteristics of the participants including age, gender, marital status, and place of residence. Tables, graphs, and figures were used to illustrate the results.

Moreover, the results of the qualitative part that were collected from the semi-structured interviews using open-ended questions were presented. The focus of the interviews was on the CL experiences of the fourth-year nursing students, mainly a description of one day of clinical experience, positive and negative factors that affected the CL experience, challenges, and ways of improvement of CL experiences of undergraduate nursing students at three Palestinian universities. Tables showed the codes, categories, and themes that emerged as a result of the narratives of the participants' interviews.

Quantitative Results

A total of 306 participants with a response rate of 100 % returned the self - administered questionnaires.

Demographic and Academic Characteristics

Table 3 shows the demographic and academic characteristics of 306 participants. The majority of the respondents (n = 286, (93.5%) had an age range of 19 to 22 years old. Besides, 81.7% (n= 250) were females and 18.3% (n= 56) were males. In addition, 94.8% (n=290) of the respondents were single and only 5.2% (n=16) were married. Finally, 60.8% (n= 186) of the participants came from a village, 31.4% (n= 96) from a city, and 7.8% (n= 24) from a camp.

The academic characteristics included the type of university, student level, training site, type of training site, and training ward. The same table showed that three universities were included in this study. The highest proportion of the students was from a private university (AAUP) with a percentage of 61.1% (n=187), 33.3% (n=102) from a public university (Al-Quds University), and 5.6% (n=17) from a governmental university (NU-VTE). Also, students from the second year formed 33.3% (n= 102), the third year formed 39.2% (n =120), and the fourth year formed 27.5% (n= 84). Additionally, almost all the students 97.7% (n=299) were trained at hospitals while only 2.3% (n=7) were trained at clinics.

Moreover, most of the students (75.8%, (n=232) were trained at governmental sites, while 22.9% (n=70) were trained at private sites and only 1.3% (n=4) were trained at UNRWA training sites. Finally, the students were trained in different wards with different percentages as follows: 33.3% (n=102) in the medical ward, 31.4% (n=96) in the surgical ward, 17.6% (n= 54) in other specialized wards (oncology, operating rooms, coronary care units, emergency), 13.7% (n= 42) in the obstetric ward, 2% (n=6) in the orthopedic ward and 2% (n=6) in the pediatric ward.

Table 3. Demographic and academic characteristics of the participants (N=306)

Characteristic	Characteristic category	Frequency (n)	Percent (%)
Age categories	19-22	286	93.4
	23-28	17	5.6
	29-37	1	0.3
	38-43	2	0.7
Gender	Male	56	18.3
	Female	250	81.7
Marital Status	Single	290	94.8
	Married	16	5.2
Place of residence	City	96	31.4
	Village	186	60.8
	Camp	24	7.8
University	Government	17	5.6
	Public	102	33.3
	Private	187	61.1
Study Level	Second year	102	33.3
	Third year	120	39.2
	Fourth year	84	27.5
Training Site	Hospital	299	97.7
	Clinic	7	2.3
Type of Training Site	Government	232	75.8
	Private	70	22.9
	UNRWA	4	1.3
Training Ward	Medical	102	33.3
	Surgical	96	31.4
	Orthopedic	6	2.0
	Pediatric	6	2.0
	Obstetric	42	13.7
	Others	54	17.6

Levels of the CLE and CL Experience

Table 4 represents the results of CLE levels and their variables and CL experience and its variables. It showed that the "nurse teacher" variable had the highest mean (M= 3.720, SD ± 1.192), while the "leadership style" variable had the lowest value of mean (M= 3.547, SD ± 1.131). The table also showed that the

"student" variable had the highest CL experience mean (M= 3.957, SD ± 1.081), while the "environment" variable had the least mean (M= 3.781, SD ± 1.045).

Table 4. Levels of the CLE and CL experiences (N=306)

		Mean	Std. Deviation
CLE Variables	Pedagogical	3.6816	1.09470
	Leadership	3.5474	1.13143
	Premises	3.6005	1.13906
	Supervisory	3.6479	1.13562
	Nurse -Teacher	3.7197	1.19230
	CLE	3.6584	1.03551
CL Experience Variables	Environment	3.7805	1.04456
	Student	3.9586	1.08093
	Interpersonal	3.8012	1.00652
	Teaching - Learning	3.8353	1.02624
	CL Experience	3.8271	0.94980

Correlations between the CLE and the CL Experience

Table 5 represents the correlations between the CLE and its variables with the CL experience and its variables. The strong correlations between the CLE and CL experience ($r = 0.758$, $p < 0.001$). It showed that the "pedagogical atmosphere" variable had the strongest correlation with CL experience ($r = 0.729$, $p < 0.001$); the "nurse-teacher" variable had the lowest correlation with CL experience ($r = 0.643$, $p < 0.001$).

The "pedagogical atmosphere" variable had the strongest correlation with the "environment" variable ($r = 0.749$, $p < 0.001$) but the weakest correlation with the "teaching-learning" variable ($r = 0.622$, $p < 0.001$). The "leadership style" variable had the strongest correlation with the "environment" variable ($r = 0.653$, $p < 0.001$) but the weakest correlation with the "teaching-learning" variable ($r = 0.572$, $p < 0.001$). The "premises of care" variable had the strongest correlation with the "environment" variable ($r = 0.682$, $p < 0.001$) but the weakest correlation with the "student" variable

($r = 0.558$, $p < 0.001$). The "supervisory relationship" variable had the strongest correlation with the "student" variable ($r = 0.656$, $p < 0.001$) but the weakest correlation with the teaching-learning variable ($r = 0.618$, $p < 0.001$). The nurse-teacher had the strongest correlation with the student variable ($r = 0.652$, $p < 0.001$) but the weakest correlation with the teaching-learning variable ($r = 0.529$, $p < 0.001$).

Table 5. Correlation between the CLE and CL Experience

Correlations: Pearson						
Independent/ Dependent		Environment	Student	Interpersonal	Teaching Learning	CL Experience
Pedagogical atmosphere	Correlation Coefficient	.749**	.636**	.652**	.622**	.729**
Leadership style	Correlation Coefficient	.653**	.606**	.608**	.572**	.668**
Premises of care	Correlation Coefficient	.682**	.558**	.616**	.603**	.702**
Supervisory relationship	Correlation Coefficient	.652**	.656**	.623**	.618**	.699**
Nurse teacher role	Correlation Coefficient	.628**	.652**	.534**	.529**	.643**
CLE	Correlation Coefficient	.741**	.708**	.668**	.649**	.758**

** Correlation is significant at the 0.01 level (2-tailed).

Tests of CL experience across Demographic and Academic Variables

Table 6 represented the mean, t-test, and ANOVA of CL experience according to age, gender, marital status, place of residence, university, study level, training site, type of training site, and training ward. The results revealed that the majority of students' ages lay in the age category between 19 and 22 years with a mean of 3.850. The males had slightly a higher mean ($M = 3.931$; $SD \pm 0.733$) than females ($M = 3.804$, $SD \pm 0.992$) about CL experience. Also, the single participants had a higher

mean (M= 3.851, SD ± 0.953) than the married ones (M= 3.403, SD ± 0.794) about CL experience. Additionally, the students who lived in villages had a higher mean than those who lived in cities or camps (M = 3.853, M=3.840, M=3.790) respectively. The students who studied at a governmental university had a higher CL experience mean than the students who studied at private or public universities (M= 4.070, M=3.845, M=3.804) respectively. Also, the third-year students had a higher CL experience means than the second and fourth-year students (M = 3.897, M=3.845, M=3.768) respectively.

Moreover, the students who trained at hospitals had slightly a higher mean (M= 3.845, SD ± 0.943) about CL experience than the students who trained in clinics (M=3.810, SD ± 1.318). Furthermore, the students who reported UNRWA training site had the highest mean values with CL experience (M= 4.115, SD ± 0.364), while the private training sites had the lowest mean values with CL experience (M= 3.587, SD ± 1.056) as reported by the students, but the government training sites had a mean of 3.917 (SD ± 0.909). Finally, the orthopedic ward had the highest mean value of the CL experience (M= 4.917, SD± 0.146), while the pediatric ward had the lowest mean value (M= 2.969, SD ± 1.318).

There were no significant differences in the mean of CL experience based on gender, marital status, and training site, nor were there significant differences in the mean of CL experience based on age, place of residence, the university, or level of study. However, there was a significant difference in the mean of CL experience based on the type of training site and training ward at the level ($p \leq .05$, $p \leq .05$) respectively.

Table 6. Differences in CL experience according to demographic and academic variables

Demographic And Academic Variables	N	Mean	Std. Deviation	(t or F)	P value
Age categories				1.055	0.368
19-22	286	3.850	0.939		
23-28	17	3.864	1.133		
29-37	1	4.083	0.847		
38-43	2	2.667	0.000		
Gender				.793	0.428
Male	56	3.931	0.733		
Female	250	3.804	0.992		
Marital Status				1.858	0.064
Single	290	3.851	0.953		
Married	16	3.403	0.794		
Place of Residence				.108	0.898
City	96	3.840	0.964		
Village	186	3.853	0.949		
Camp	24	3.790	0.921		
University				.573	0.565
Government	17	4.070	0.915		
Public	102	3.804	0.736		
Private	187	3.845	1.050		
Study level				.454	0.635
Second	102	3.845	1.004		
Third	120	3.897	0.964		
Fourth	84	3.768	0.859		
Training Site				.097	0.923
Hospital	299	3.845	0.943		
Clinic	7	3.810	1.318		
Type of Training Site				3.476	0.032
Government	232	3.917	0.909		
Private	70	3.587	1.056		
UNRWA	4	4.115	0.364		
Training Ward				2.738	0.019
Medical	102	3.858	0.945		
Surgical	96	3.869	0.912		

Orthopedic	6	4.917	0.146
Pediatric	6	2.969	1.318
Obstetric	42	3.747	1.078
Others	54	3.827	0.833

Post hoc results: Type of Training Site and Training Ward with CL Experience

Table 7 represented the post hoc test using the Least Significant Difference (LSD) for the type of training site and training ward about CL experience. The table revealed that there was a significant difference between the governmental and private training sites in terms of CL experience ($p < 0.05$); this meant that CL experience was higher for the students who practiced at governmental training sites compared to those who practiced at private training settings. Concerning the training wards about CL experience, there was a significant difference between the orthopedic and all training wards (medical, surgical, pediatric, obstetric, and others) in favor of the orthopedic ward. Also, there was a significant difference between the medical and pediatric wards in favor of the medical ward, between surgical and pediatric in favor of the surgical ward, and between pediatric with other wards in favor of other wards. This meant that CL experience was higher for the students who practiced in orthopedic wards compared to those who practiced in surgical, medical, others, obstetric and pediatric respectively.

Table 7. Type of Training Site and Training Ward with CL Experience

Multiple Comparisons: Type of Training Site					
LSD					
Dependent Variable	(I) Type of Training Site	(J) Type of Training Site	Mean Difference (I-J)	Std. Error	Sig.
CL Experience	Government	Private	.33002*	.12830	.011
		UNRWA	-.19777	.47447	.677
	Private	UNRWA	-.52780	.48369	.276
Multiple Comparisons: Training Ward					
Dependent Variable	(I) Training Ward	(J) Training Ward	Mean Difference (I-J)	Std. Error	Sig.
CL Experience	Medical	Surgical	-.01106	.13299	.934
		Orthopedic	-1.05915*	.39288	.007
		Pediatric	.88807*	.39288	.025
		Obstetric	.11010	.17147	.521
		Others	.03020	.15739	.848
	Surgical	Orthopedic	-1.04809*	.39356	.008
		Pediatric	.89913*	.39356	.023
		Obstetric	.12116	.17302	.484
		Others	.04126	.15909	.796
	Orthopedic	Pediatric	1.94722*	.53996	.000
		Obstetric	1.16925*	.40817	.004
		Others	1.08935*	.40246	.007
	Pediatric	Obstetric	-.77798	.40817	.058
		Others	-.85787*	.40246	.034
	Obstetric	Others	-.07989	.19241	.678

*The mean difference is significant at the 0.05 level.

Predictors of CL Experience

The data were checked for regression assumptions, and there were no violations of these assumptions. The data were normally distributed. There was a linear correlation between the CLE (independent) and CL experience (dependent) and there were no outliers. The multicollinearity between independent variables was met as the highest correlation in Table 5 was less than 0.8. Finally, homoscedasticity was

checked; it was not violated as the data were dispersed across the entire range of the independent variable (CLE) and there were no patterns in the data.

Table 8 represented the predictors of students' CL experience among the CLE as well as the personal and academic variables. The table showed that there was a significant prediction between the "pedagogical atmosphere" variable and CL experience variable where p value < .001. Also, there was a significant prediction between the "supervisory relationship" and CL experience variable where p value < .005.

Additionally, the table represented the predictors of the demographic and academic variables in relation to CL experience variables. The table showed that there was a significant prediction of the type of training site and the CL experience variable where p value < .005.

Table 8. Predictors of clinical learning experience

Independent variables	Dependent variable: CL Experience			
	Unstandardized Coefficients		Standardized Coefficients	P value
	B	Std. Error	Beta	
CLE variables				
Pedagogical atmosphere	0.316	0.099	0.365	0.000
Leadership style	0.051	0.078	0.061	0.510
Premises of care	0.096	0.097	0.116	0.324
Supervisory Relationship	0.220	0.107	0.264	0.001
Clinical Learning Environment	0.021	0.287	0.023	0.942
Demographic and academic variables				
Age categories	-0.065	0.177	-0.024	0.714
Gender	-0.092	0.144	-0.038	0.522
Marital Status	-0.391	0.272	-0.092	0.153
Place of residence	-0.018	0.095	-0.011	0.850
University	-0.021	0.093	-0.013	0.821
Study level	0.008	0.082	0.007	0.920
Training site	0.334	0.399	0.053	0.403
Type of Training Site	-0.272	0.127	-0.133	0.034
Training Ward	-0.010	0.028	-0.024	0.912

	R	R^2	Adjusted R^2	F	P
CLE	0.768	0.590	0.583	86.170	0.000
Demographic and academic	0.171	0.029	0.000	0.991	0.447

Qualitative Results

A total of 14 students from the fourth year of undergraduate nursing students from the three participating universities were interviewed. The sample size was determined through data saturation in which the obtained information provided a deep insight into CL experiences of nursing students at Palestinian nursing schools. In this study, data saturation was attained as the students no longer provided additional information that might add value to the collected data.

In this study, the semi-structured interviews were conducted to obtain data from the students who trained for different clinical nursing courses; the students talked

about their clinical learning experiences. Seven questions based on literature guided the interviews: a description of CL experiences, factors that affect CL experiences positively, factors that affect CL experiences negatively, helping factors for CL experiences, challenges during CL experience and opinions for improving CL experiences.

Demographics of Qualitative Data

Table 9 presented the demographic data of the students who participated in the interviews; it showed that six of the participants were males while eight of them were females. The participants' ages ranged between 21 and 23 years old.

Table 9. Demographic Data of the Student Interviewees

Students' number	Age	Gender
1.	21	M
2.	21	M
3.	22	F
4.	22	F
5.	22	M
6.	21	F
7.	21	F
8.	23	M
9.	22	F
10.	22	M
11.	22	F
12.	23	M
13.	21	F
14.	22	F

Qualitative data analysis Inductive content analysis was performed to obtain information about nursing students' opinions in order to have a deeper insight about: students' CL experiences, factors that facilitated and hindered CL experience, challenges during clinical trainings and how CL experiences of undergraduate nursing students at Palestinian nursing schools could be improved. The purpose of the inductive approach was to allow the research findings to emerge from the frequent, dominant, and significant themes inherent in the raw data.

The inductive approach described in this study clarified the data reduction process by describing a set of procedures for creating meaning in complex data through the development of a summary of themes and categories from the raw data.

The analysis was carried out through multiple readings and interpretations of the raw data. Data analysis started with organizing the raw data, reading the transcripts, reviewing the material, and making notes and headings in the text of what was called the "Read and Reflect" stage. A coding frame was developed to code the transcripts; the coding frame was changed according to the transcripts reread. Then the researcher transcribed the notes and the headings, reread the material, and identified the categories. Similarities and differences across sub-groups were also explored. The data were grouped, and a number of categories were reduced by combining similar headings into broader categories. A rigorous and systematic reading and coding of the transcripts allowed for conceptualization and emergence of broad themes. Finally, the data were compiled and presented as codes as shown in Table 10.

Table 10. Questions and Codes

Question (1)	Code (1)
Describe one day of your clinical experience	1.1. Assignments 1.2. Cases & care plans 1.3. Rounds & conference 1.4. Competency booklets 21.5. Orientation 21.6. Scientific knowledge 1.7. Suitable environment 1.8. Good learning experience 1.9. Gap between theory & practice 1.10. Feeling comfortable 1.11. Self-esteem and self confidence 1.12. Student task
Question (2)	Code (2)
Tell me about the factors that facilitate your CL experience	2.1. Nursing staff cooperation 2.2. Take theory before clinical 2.3. Theory & clinical are concurrent 2.4. Teacher & instructor are the same 2.5. Orientation 2.6. Environment of learning experience 2.7. Training places 2.8. Training conditions 2.9. Atmosphere 2.10. Relationship 2.11. Opportunity
Question (3)	Code (3)
Tell me about the factors that hinder your CL experience	3.1. Lack of resources 3.2. Number of nursing staff 3.3. Staff exploit us in work 3.4. Wrong behaviors from staff 3.5. Patients refuse students' work 3.6. Unavailable equipment 3.7. Training during exams 3.8. Training at the beginning of the course 3.9. Assignments 3.10. Training at the same place 3.11. Transportation 3.12. Instructor comments 3.13. Gap between learning at school and practice 3.14. Carelessness of students 3.15. Training condition 3.16. Increase number of students 3.17. Rules at private hospitals and closed units
Question (4)	Code (4)
How does the CLE help in your	4.1. Environment without stress

CL experiences?	4.2. Instructors' cooperation 4.3. Learning by observation & experience 4.4. Taking history, rounds, new skills, new diseases in internship 4.5. knowledge and science in clinical training 4.6. Feedback and conference are helpful 4.7. Relationship with staff 4.8. Atmosphere 4.9. Training condition 4.10. Opportunities for learning more skills
Question (5)	Code (5)
In your opinion, what are the challenges you facing during your clinical experience?	5.1. Fear 5.2. Relation between students and instructors 5.3. Shame and obligation to work with females in some clinical 5.4. Lack of some equipment 5.5. Inadequate skills & cases 5.6. Number of students decrease our opportunities 5.7. Uncooperative staff 5.8. Early Time of Training 5.9. Assignments 5.10. Communication and working with patients 5.11. Number of nurses in relation to the number of patients 5.12. Teaching about cases 5.13. Atmosphere 5.14. Training condition
Question (6)	Code (6)
In your opinion, how can CL experience be improved?	6.1. Exchange of students to learn new teaching methods 6.2. Work plan 6.3. Benefits of conference 6.4. Training after taking theory 6.5. Assignments benefits 6.6. Training at different hospitals & wards 6.7. Relationship with the staff 6.8. Instructors' evaluation 6.9. Training condition
Question (7)	Code (7)
Provide additional things that are related to your clinical learning practice.	7.1. Assignments 7.2. Working with cases 7.3. Training during exams 7.4. Training residence 7.5. Focus on practice 7.6. Communication with patient 7.7. Focus on basics of pharmacology

	7.8. Being responsible 7.9. Learning opportunities 7.10. Instructors' feedback 7.11. Good interaction & cooperation from instructor 7.12. Training condition 7.13. Relationship with staff

Themes, categories and Codes

Table 11 represented the themes that were devised according to the answers of the interviewed students. The categories and codes were inducted from the manual analysis of data as they were derived according to descriptions from the interviewees.

Table 11. Themes, Categories and Codes

Themes	Categories	Codes
1. Perceptions of Clinical experience	Clinical environment characteristics	- Suitable - Good - Needs Orientation
	Students' personal characteristics	- Increase Self-esteem - Increase Confidence - Personality progress
	Types of assignments	- Take Cases - Do Care plans - Do Conference
2. Facilitators of CL experience	Instructors' characteristics	- Have Knowledge - Have Experience - Cooperative - Good Communication
	Environmental factors	- Supportive - Comfortable - Have what learnt in theory
	Staff characteristics	- Qualification - Knowledge - Cooperation
3. Barriers of CL experience	Staff related factors	- Exploitation - Bad communication - Malpractice (medication, dressing) - Uncooperative - Decreased level of knowledge

	Instructor related factors	- Work & train at the same time (busy, heavy schedule) - Bad communication - Humiliation - Bias - Focus more on theory - Comments in front of patients & others - Unclear plans for training - Lack of feedback - Lack of seriousness - Lack of trust
	Students' attitudes	- Carelessness - Lack of commitment - Fear of failure - Shame to work with females - Anxiety - Communication with elderly patients
	Opportunities	- Increased number of students - Decreased number of patients - Strict regulations at Private hospitals & closed units' - Lack of competency booklet filling - Patients' refusal - Procedures restrictions
	Training Conditions	- Short training duration - Same training site - Gap between theory & practice - Limited resources - Decreased nurse patient ratio - Doing double shifts - Lack of patient privacy - Difficult political situation (unsafe roads, checkpoints) - Difficult transportation, far distance, cost a lot - Lack of places for presentation or conference - Unsuitable training time (too early, too late) - Training before theory
4. Strategies to improve CL experience	Assignments' improvements	- Short assignments - Working with one case - Doing less papers - Focus on cases not papers - Focus on basic pharmacology

	Student's improvements	- Being Punctual - Being controlled - Exchange with other universities
	Instructor improvements	- Having specialties - Follow clear & organized plans for training - Improve evaluation - Being from the same college - Allow for more procedures - Deal more comfortably - Give Feedback - Being Cooperative - Focus on weaknesses
	Clinical Training improvements	- Availability of equipment - Having more opportunities (to see advanced medical technology) - Start clinical after taking theory - Site orientation before training - Decrease private training - Decrease the number of students' groups - Have nearer training sites - Increase training days - Train at different hospitals & wards
	Environment improvements	- Suitable - Free from stress - Variety of cases
	Staff improvements	- More qualified staff - Staff collaboration

Theme One: Perceptions of Clinical experience

This theme emerged from all the interviews where the students described one day of their own experience at the clinical placement. Almost all the students had identified feelings in their initial clinical placement. Worrying about giving wrong information to the patient was one of the issues brought up by the students.

Paralleling the students' awareness of patients' gains, the students commented about how their contributions to patient care helped them feel useful, positive, and reassured that patients' losses (i.e., time away from family, loss of privacy, fatigue, and pain) were outweighed by their gains, and that they were worthy of patients' time.

Category 1: Clinical Environment characteristics

Regarding the environment suitability and goodness for learning experience category, two students said, “The clinical learning environment is suitable, creation of learning experience by searching and asking questions” (Students 4, 5).

Regarding describing a day of clinical experience, students No. (1, 6, 7, 8, 9) said, “We do routine work (morning care, deliver cases, do rounds, make conferences. Vital signs, dressing cannula, preparing for operations pre-op, giving medication, sending patients to X-rays, changing intravenous fluid (IVF) lines, withdrawing blood.”

A male student also describing the clinical experience said:

> *At the beginning of the day, shift A receives from shift C we receive patients in the ward, see, do morning care, bathing, change position, change linens, make rounds to patients to see what they want, give medications at a time through the hard Kardex. Each nurse takes from 5-6 patients to take care of them and prepare medications for them and to know how to deal with the patients. We learn how to prepare medication under the supervision of the nurse or the instructor, how to deal with supplies such as extension tubes, Intravenous Fluid tubes, ward rules, medication signature, how to follow care for the patients and connect theory with practice through applying our knowledge (Student 5, M).*

Category 2 Students' personal characteristics

Concerning feeling comfortable, self-esteem and confidence when the patient improved and became much better student No. 5 said, “I feel comfortable when I see my patient improving, good feeling when I follow up his laboratory exams and when he becomes better, this increase my self-esteem and self-confidence."

Regarding the student category, one student stated, "I want to talk about my Critical Care course in which I know a lot at this level, not like the Fundamental or the Medical Surgical." When describing his clinical experience, he said:

> *I help the team a lot in their work. I take with their work nearly in everything, and I do many things, like applying cannula, taking a history from patients, being with the physicians, applying for the orders, dealing with ventilators, Electrocardiogram, arterial blood gases, and many things special for this close unit (Student 10, M).*

Student No. 11 was female; she said:

> *My clinical learning experiences differ if it is at the beginning of the semester, at the middle or at the end of the semester, differ if we take theory or not, differ at what ward or hospital we train, differ at what year we are; it advances by the years even dealing with patients or communicating with them or with the team. It also differs according to the number of days of training, according to the types of cases and, differs at what shift we train; the morning is better because of increased number of cases.*

Student No. 12 was male; he mentioned:

> *Labs prepare students for clinical training; medical and surgical training are the best; students personality increases by time; at clinical we connect theory with clinical, and the instructors at clinical help us and answer questions; we also learned how to work on machines.*

The student coded No. 13 was female who added:

> *We work with the team; we start to know things during our training; we divide the tasks, then divided among nurses; this gives us confidence as we work with*

them. At the end of the day, we do conference and discuss what we have done during the day.

Student No. 14 was female too; she said:

Arrival to clinical at 7 am, being late is forbidden, receive patients from the team, doing morning care, the instructor divides the patients among us, then each student goes to his patient and takes a history; at 12 pm we give the medications to patients, finally we do conference where each one of us talks about his case and what he/ she did during the day. I describe my experience as very good starting from arrival at 7:00 am till the end of the day and doing a conference where I present my work and what I did during the day; we focus on one case during the day.

From interviewing, two female students (6, 7) stated together:

The first day in our training in clinical placement was beneficial for us. The most useful situation is when students make a plan for cases, rounds, and conferences at the end of the day; the clinical placement encourages the students to get enough clinical experience to accomplish the task, and do their nursing duties.

Category 3 Types of assignments

Regarding assignment cases and care plan category, student 2 described the clinical day as follows: “I take cases with the instructor's assistance and see Kardex to know about the cases, do dusting, morning care and withdraw the blood sample.”

With regard to rounds and conferences, the same student said:

We make a round with the physician and do a conference at the end of the day where we discuss our cases; in addition, concerning the competency and

books, we write in our competency booklets daily and we have books at clinical; this helps us to learn about our cases.

Moreover, a female student said, "It is like a journey to the country, I seek skills and knowledge, and I achieve and learn new things" (Student 3, F).

Regarding orientation, one student said, "*I understand nursing intervention and the disease, especially if I have good orientation from the instructor, and in the second year I used to search for the cases, and ask questions, especially in the Medical Surgical course" (student 4, F).*

Almost all students felt that their clinical experience played a vital role; it provided greater insight into developing nursing practice and reducing their stress as their training and experience progressed.

Theme Two: Facilitators of CL Experience

Category 1 Instructors' characteristics

This theme surfaced as students discussed the benefits of clinical learning experiences. The majority of nursing students reported that they could look up to the experienced and specialized instructors and trainers in their field. They observed that those in the profession who were cooperative and inspiring in areas like information, technology, and communication, in particular, could serve as role models for them. As an illustration, students 1& 2 stated, "The college instructor ensured that theory and practice did not conflict, and the nursing staff worked in a cooperative and divided manner." Another student (student 3) stated, *"training with instructors who teach and stay with us in clinical and training periods, have good knowledge and experience, communicate and cooperate properly helps a lot."*

Regarding the teacher and the instructor in the same category, students 4 & 13 said:

> *When the teacher is the trainer, it is easier and I feel more comfortable. Communication with the trainer improved our work with the team. Additionally, instructors help a lot; they allow us to deal with a variety of cases and most of them did not neglect his work. The instructor who teaches us in class comes with us to clinical.*

Category 2 Environmental factors

Concerning environment supporting learning experience, student 4 said, “The clinical environment is good and the staff is cooperative, and they give us information when we ask; the CLE supports the learning experience, and encourages learning and there is no challenge.”

Three students (8, 10, & 13) reported, "The hospital atmosphere and teaching atmosphere were positive and comfortable." Student 10 commented:

> *Everything in the clinical is not like the theory; about the discrepancy between theory and practice, I put what I've learned in the classroom into practice using my hands-on training; naturally, there are some differences because the university provides information in a more general and detailed manner, but here at the clinical site, I see the case and the specific treatment that needs to be done. I learn from them and feel free to ask for anything.*

Another student stated, "Break the shame, anxiety, and fear in doing skills and increase my self-esteem and self-confidence; we work as a team and there is flexibility in what to do or not to do; it is more in governmental than in private hospitals” (student 11, F).

Category 3 Assignments

Regarding the assignments, two students said, “The assignment during clinical increased my knowledge; it is positive and has details about the disease and patient (pathophysiology, medications, nursing care plan), and we did a presentation in front of our colleagues.”

Theme Three: Barriers of CL Experience

This theme emerged from most interviews where students described the negative effects experienced at the clinical placement. Almost all of the students had identified feeling entrust and decreased self-confidence in their initial clinical placement. Worrying about giving wrong information to the patient was one of the issues brought up by students.

Category 1: Staff-related Factors

Regarding staff exploitation, one student said:

We as students came for work and learn not just to work as a machine; this loses our opportunities to learn. Students came for clinical and learn as a machine, wrong behaviors of staff; patient and family refuse the students to work; all these decrease our motivation (Student 2, M).

Regarding wrong behaviors from the staff as a negative point, student 2 said:

The staff insists on giving all medication at the same time; the patient and his family refuse the students to work with the patient and look at the student as if he does not know; sometimes when the students do wrong things for the patient his response is aggressive, so he refuses any student to work with him; this decreases our motivation. Nurses don't do things as we learned, such as when dressing, they break sterility a lot; this makes the students imitate them.

Concerning staff uncooperativeness, a student said, “Some nurses do not allow us to do procedures; others told us to wait outside till our instructor comes and they do not allow us to sit in the nursing office” (Student 3, F).

Category 2: Instructor-related Factors

Regarding instructor comments, two students (5 & 12) said, "*Bad communication with students and sometimes the way the instructor comments on students hurt the student and do not help him, a bias of instructors.*" Another student (12) added:

> *Some instructors leave us for a long time in the clinical areas and don’t give enough information in training. The instructors humiliate or curse us in front of the patients or students, which makes the students hate training and working; the instructor can direct the student away from patients.*

Student 14 added, “Some instructors focus more on theory than on clinical, and do not practice some procedures due to restrictions from the staff or hospital; this hinders the learning process in the ward.” Still other students (6, 7, 9, &10) noted, "The instructors concentrate on specific topics, for instance in the Maternity course and during our training, we work on very few cases in the ward and are prohibited from working with them."

Three more students (9,10, &13) said:

> *Some instructors don't have clear plans for training; they just distribute the cases; some of them stay with us teaching and giving instructions; others leave us alone learning by ourselves not giving feedback about our performance; and they don't care.*

Another student added, "*some instructors don't focus on clinical training; instead they focus on theory and explaining; some of them are not serious; others don't trust students"* (Student 14).

Category 3: Students' Attitudes

Regarding the student and relationship, student 8 had a negative point and said, "Carelessness of some students affects our motivation for training, many students are not serious in their training, which affects other students." Moreover, student 11 added, "Type of students who are careless or less interested makes training boring and no cooperation between the students." The negative effect was found in the students; a male student said: "The patients refuse to be cared by us; [they said you are training on us]; this decreases my confidence, and each patient wants to be cared first; they don't understand or care about the priorities in dealing with patients" (Student 1, M). On the other hand, students 5 & 14 said, "The relationship between nurses and physicians is nice and good, they don't fall short explaining to us and discussing the cases of patients with us and they have patience."

Category 4: Opportunities

Regarding opportunity, two students (6 & 7) stated:

> *They had less opportunities in performing procedures as a result of too many students in the same ward with little number of patients; this is mostly in private hospitals, and increased number of students from different colleges and universities made the hospital congested and unable to absorb all increased numbers; additionally, it can be challenging for us to understand cases or handle a variety of cases when we attend training without having completed the theoretical portion of some courses.*

Student 8 also said, “Increased numbers of students in the ward don't not allow cases." Student 12 went beyond this saying, “There is decreased number of patients in private hospitals, so there are not enough opportunities, and work in private hospitals didn’t allow us to work at governmental hospitals; this decreases our benefit.”

Category 5: Training Conditions

Regarding training condition category, the opinion of students had negative points*;* students (9, 10, & 11) said:

> Our training is later approximately two months or more after the beginning of the course, and the time of training is short (one day/week); if we missed a day, we don't compensate it; in addition, the sites of training are far from us, so we leave our homes early morning; we arrive to clinical tired, which affects our learning and we can't concentrate also, just very few cases and sometimes don't allow us to work with them.

Student 11 also said, “Decreased number of staff compared to the increased number of patients and increased number of students limit our learning opportunities; other limitations include lack of equipment e.g. machines (Arterial blood gases, Computers), cannula, masks, level of the instructor's experience or certificate.” One student further said:

> Difficult transportation makes me arrive late at clinical site which led to not making rounds with nurses or physicians and I lose a lot of information about my patients; this is because training sites are far from our residence; other problems include uncooperating from some staff and limitation of resources, for example, unavailability of normal saline bottles (Student 1, M).

Student 12 likewise said, “There is a problem in maternity training; there is no benefit because they don't allow us to enter delivery rooms or deal with women, so we spend our time in corridors; the days of training are too much.”

Concerning rules at private hospitals and closed units, one student mentioned, “In the neonate ward we didn't work; just we observe only (it is not allowed to work with babies). We don't expose to some skills, especially in the private hospitals and in closed units; just we see what the nurse work and only stand with them and observe" (Student 10, M). In addition, some negative points were observed; as another student said, "In private hospitals, they don't allow us to work as the governmental hospitals and this decreases our benefit.”

Regarding lack of some equipment, one student said, “There is lack of some equipment that prevent learning. Furthermore, a number of students decrease our opportunities; the increased number of students from other universities also prevents us from doing some procedures” (Student 2, M).

Regarding the gap between theory and practice, four students reported feeling confused as there was a difference between what they learned at school and what they discovered at clinical settings; they also reported feeling that they learned a lot of information in theory but didn't apply it in practice. For example, student 10 stated, "There is some gap between what we take in the university and what is found in the training site." In addition, student 11 mentioned, “What we have learned at school does not apply at clinical training; there is contradiction between theory and practice, and sometimes we go for training without taking theory.” Still three students added, " There is a gap between theory and practice. We learn a lot of information in the theory

but we don't find them in practice. What we take in university differs from what is found in the training site" (Student 9,10, &11).

Regarding training for two days cut continuity of care, "Training for two days a week only makes us unable to continue care with cases," said student 4. "Training at the same place limits our experience and becomes just a routine with no benefit besides the exploitation of students to do nurses work more than learning."

Concerning not having training during exams, one female student said, "Training during exams and the instructor work at the same time, unavailable equipment and bad treatment from family or doctors affect my clinical experience" (Student 3, F).

Regarding training at the beginning of the course, it was reported that it did not help and too many assignments led to decreased learning experiences and negative points as well. In this respect, a female student (4) said, "Training at the beginning of course with no previous theory together with assignments that are too much and long especially in Pediatric course makes us unable to see more cases as we spend a lot of time working on them."

Regarding the atmosphere, student 9 reported, "For me all training was comfortable, the sites were also comfortable and the instructors were helpful and cooperative."

Regarding challenges in the CLE, two students (1 & 3) said:

> I have fear in front of patients especially at the first training, fear to communicate, fear from doing wrong things and not applying what we have learned, fear from failure, and shame to work with females especially at Maternity or Pediatric wards where mothers stay with their children and in

> Surgical women wards, obligation of instructor to work with females, discussing in front of patients. One day while I'm inserting a cannula for a female patient for the first time, I failed; the patient's family became nervous, the instructor came and discuss in front of patient and his family; this makes the patient not trusting us as students; some patients refuse to work with them; they said that we are trying on them

Reporting on the challenges of clinical learning related to training conditions a female student (4) said:

> It is little, communication with patients especially the elderly, lack of equipment, no privacy for patients because of the increased number of companions with patients, so they hear everything about the patient, also makes a congestion at the hospital, lack of linens and too many patients with few nurses.

In addition, a female student said, “The relatives refuse to allow us to care for their children (during Pediatric course); for example, they don't permit us to apply cannula for their children saying that you are students and you will hurt our children” (Student 9, F).

Regarding challenges of clinical training, four students *(5,8,10, &11)* said, "the main challenges are the situation that we are living in, time arrival to hospitals, difficult roads to reach training sites, unsafety while traveling on checkpoints students.” Other *s*tudents added:

> Some training sites are far from us, especially in Ramadan, so we were obliged to live near to the hospital and this cost us a lot; we can't afford transportation, roads and political situation especially at these days; we don’t know when the

> accidents occur, sometimes we don’t find a place to go to because the roads are closed (Students 9,12, &13).

Finally, with regard to the challenges concerning early attendance to the hospital, lack of staff and procedures, and unavailability of machines, one student said:

> We start early morning (at 7:00 am); we don't concentrate on training at far sites, especially in winter when we arrive late at clinical. The most critical challenge is the knowledge level of staff which affects the quality of care for patients as well as lack of staff, lack of procedures, unavailability of machines; for example, in intensive care there is no intra cerebral pressure monitor in some hospitals (Student 14).

Category 6: Assignments

On top of that, the negative point for some students as one said was “Delivering assignments at a limited time. There is no place for doing our conference and if I want to give a presentation, I don't find a computer or projector for this” (student 13, F). Another student added:

> The training in one hospital doesn't allow us to see different cases or procedures, and we can't fill our competency booklet; lack of experience of staff affects the quality of care which eventually affects the student as he/ she learns from them; poor communication from team also affects the students. Sometimes we train double shifts because we don’t have time or we miss some training days due to an increased number of students and groups. (student 14, F).

Theme Four: Strategies to improve CL Experience

Category 1: Assignments Improvements

Concerning the work plan, one student added:

> Presence of an organized work plan and working with one case individually is better than working many and more comfortable for the patient. At the end of the day each one talks about his case and gives new knowledge, not connecting the marks (Grades) with everything; what is important is to benefit from the training. (student 3)

Regarding the too much assignment, student 2 said, “We don't not need a lot of papers to work in clinical.” Regarding the focus on working with cases increases the student's skills, the student said, “Focus more on cases than papers; we need to see more skills and procedures and not to train during exams.” Student 3 added, “Focus during Pharmacology course on basics.”

Category 2: Students' Improvements

Regarding the opinion on how CL experience could be improved, one student said, “It must have a clear plan for daily work arranged in a sequence, availability of basic and proper equipment for procedures and punctuality and control of students of some universities; some of them came at 8:30 or 9:00" (student 1).

Regarding the fact that exchange of students allows learning new teaching methods and creates motivation, a student’s opinion read as follows:

> Provide opportunities for students to see advanced medical technology in other countries because we lack these things. Exchanging students with other universities either locally or abroad gives opportunity to learn new teaching

> methods which motivates us and focuses on the weaknesses of students. (student 3)

Category 3: Instructors' improvements

Regarding responsibility, student 4 said, “The CL experience required responsibility.” Regarding that the instructor's feedback increased maturity, a student said, “Feedback from my instructor increases my maturity in nursing interventions.” Two other students added, “I prefer to have the instructors the same as those who give us the theory as we see from other students in other colleges” (students 6 & 7). Regarding instructors’ cooperation, one student said, “There must be cooperation with the instructor and focus on weaknesses from the instructor” (student 2). Other students said, “The instructors need to improve their evaluation, especially for the cases and presentations” (students 5, 6, & 7).

Regarding the relationship, the students (6 & 7) said, “The instructor and staff should deal with students more comfortably and allow them to do more procedures.”

Category 4 Clinical Training Improvements

Regarding training condition and opportunities, three students said:

> Officials must decrease training in private hospitals as it is a waste of time due to the rules which prevent us from doing many procedures, decrease the groups in the same hospitals because we lose a lot of opportunities and have a specialized instructor for each course; this means that the instructors should have a specialty not general, especially in close units and critical care units; they should choose the nearer settings for training to avoid arriving late due to the military barriers and do the conferences and discussions that fix the information. (students 6, 7, & 8)

Besides, other students mentioned, "Officials must increase the number of shifts for training giving the opportunity to train and rotate in different sites or at least different wards in the same hospital; this will help us and see more cases and learn more" (students 9, 12, & 13).

Additionally, regarding training conditions, two students said:

> Officials must increase the number of training days; for some courses we train just 10-12 days; this is not enough; they must increase the clinical days; one day in the week is not enough especially for courses such Medical Surgical or Critical. Finally learning depends mostly on the student if he wants to learn or not; increasing the knowledge of staff or having more qualified staff improves the quality of care. (students 10 &14)

The opinion of one student was "70-80% of learning is taken from the training, see an emergency case and see how it is treated and how the team work and give the medication for the patients and know about the doses" (student 10).

Concerning that clinical training gave knowledge and science and learning opportunities were enough, three students said:

> Clinical training gives knowledge and science about medications; even just to see medications is important and teaches me; variety of cases and skills, knowing different diseases, help from the staff, especially for the new skills they have and learning opportunities is enough. (students 5, 8, &10)

Additionally, some students said:

> The presence of different types of cases gives opportunities also the motivation of staff that they give us during training. See the ventilator and how it works,

see the arterial lines; everything you see by your eyes you learn more about it than you just hear it during the lecture.

Two female students also added, “When I work with the patients in clinical, I become more confident as I do procedures and skills correctly; this increases my confidence” (students 6 & 7).

Regarding that the students think the CLE helps students’ CL experiences, some questions were raised; one student said, “How is the CLE basic for nursing? We take case by case, see symptoms on real patients, connect theory with practice and go with staff for new (strange) procedures to see them and correct what we think is wrong; we see alternatives especially in case of lack of resources” (student 1).

Among the students who approved of training after taking the theory, two students (1 & 11) said, “Do training after taking theory.” In their opinion on the assignment category, they added the assignment benefits but should not be too much. They noted, “We encourage many assignments but not those which make the student bored and not to have long assignments which distract the students.” Furthermore, training at different hospitals and wards supports learning experience; one student said, “We have to train in more than one hospital and more than one ward and work with the patient himself for a long period to know his case better” (student 1).

Category 5 Environment Improvements

About the environment category, “A suitable environment is without stress,” said students (2 & 13). “If we train in more than one hospital, we will see more and see the rights and the wrongs.”

Regarding atmosphere, two other students said, “Clinical training is more beneficial than the theory and make us more confident” (student 9, 11).

Concerning that taking history, doing rounds, new skills, new diseases, internship all support our learning experiences, student 4 said, “Taking the history about the patient increases my knowledge during the round with the physicians, and new skills about any new disease also progresses during my internship.”

Concerning reality, two students added:

> We learned about paracentesis at school; when I went to training, I saw how they do it, how they insert cannula, so what it is applied here in training fixes the information. Our presence in the hospital and seeing the reality of work affect us either positively or negatively; for example, when we see the staff give medications in a wrong way, this affects us negatively (Students 12 & 14)

Category 6: Staff Improvements

Regarding the relationship and teaching, three students were quoted:

> We must improve the relationship with the staff, may visit the training site before going to it to know the staff there and learn how to use the forms in hospitals before training e.g. (Health record system, In and output charts, fluid charts, Kardex; to have an orientation of these forms before training.

One student said, “The challenges are decreased by clear instructions from instructor, properly correcting the student away from patients or others and commitment of students comes from the instructor's commitment and the laws set by the school, hospital and wards” (Student 11, F).

Summary

This chapter described the findings of both the quantitative and the qualitative parts. The results from the quantitative data showed that there was a strong correlation between the CLE and CL experience. The CL experience was higher for the students

who trained at governmental training sites compared to those who trained at private training settings. Also, the CL experience was higher for the students who trained in Orthopedic Wards compared to those who trained in other wards. Moreover, there was a significant prediction between the "pedagogical atmosphere", the "supervisory relationship" variables and the type of training site and the CL experience variable. The results from the qualitative data showed that there were four themes namely: perceptions of clinical experience, facilitators of CL experience, barriers of CL experience, and strategies to improve CL experience. In addition, there were seventeen categories related to the clinical environment, students, instructors, nursing staff, assignments, opportunities, and training conditions and ninety codes.

Chapter Five

Discussion

Introduction

The current study employs mixed methods. It is a distinct one in Palestine and the region as it is aimed at discussing the relationship between the CLE and CL experience of undergraduate nursing students at Palestinian universities.

This section discusses the results of both the quantitative and qualitative parts of the study to have a comprehensive view. The findings were discussed in light of the available literature.

CLE Variables

The study showed that the "pedagogical atmosphere" variable has the highest mean. These results are consistent with Strandell-Laine's results in which the "pedagogical atmosphere" variable got the highest mean (Strandell-Laine, 2022). Another study also found that the "pedagogical atmosphere" variable has the highest satisfaction (Benti Terefe & Gemeda Gudeta, 2022). In contrast, our results differ from Alatawi's results which showed that the "pedagogical atmosphere" variable has the lowest mean (Alatawi et al., 2020). The reason behind these results may be that the students trained at different clinical sites where various pedagogical atmospheres and different approaches were used preferring one over the other; nursing students preferred or were more satisfied with one atmosphere than another (Strandell-Laine, 2022).

The results displayed that the "leadership style" variable has the least mean. This is similar to what was found in two studies which showed that the "leadership style" variable had the lowest mean (Gurkova & Ziakova, 2018; Warne et al., 2010).

Also, "the leadership style" variable of the manager and the ward atmosphere were ranked as the least important factors for students' learning (Papastavrou et al., 2010). But these results are not similar to Zhang's who found that the "leadership style" variable had the highest mean score (Zhang et al., 2022). This may be attributed to the fact that the students felt they were regarded by the managers with whom they work; successful supervisory experience contributes to better students' perceptions of leadership style, and students supervised by ward managers have higher score in leadership style subdimension (Gurkova & Ziakova, 2018).

In this study, the "premises of care" variable has almost the lowest mean. These results are consistent with what was found in Rashwan's study that showed more than 50% of students were moderately satisfied with the "premises of care" variable (Rashwan et al., 2022). Alternatively, our results contradict the results of Alatawi's study where the mean of the "premises of care" variable was the most apparent (Alatawi et al. , 2020). This could be explained by the fact that the procedures, documentation, and information related to the patient's care enhance CL experience. Student satisfaction increases when learners involve in individual patient care, clear information flow and specific documentation of nursing care (Papastavrou et al., 2016).

The findings of this study showed that the "supervisory relationship" variable has a mean that is less than the pedagogical and the "nurse-teacher" variable means. These results are consistent with the results of a study which showed that the "supervisory relationship" variable had a low effect on the students' perception of their CLE (Tomietto et al., 2012). Similarly, in another study, the overall evaluation of the "supervisory relationship" variable got the lowest mean (Papastavrou et al., 2010). Our

results contradict what was found in a study done in 45 educational institutions in different countries in which the "supervisory relationship" variable got the highest mean (Strandell-Laine, 2022). Furthermore, the results of Arora's study emphasized the supervisory relationship as the most important factor in nursing students' learning (Arora, 2015). This might be accounted by the fact that the supervisory relationship between nursing students and those who supervise them is affected by the mutual interaction and the individual supervision the nursing student receives (Arora, 2015).

The results of this study indicated that the "nurse-teacher" variable that assists in decreasing the gap between theory and practice (Alatawi et al. , 2020) has the highest mean. Our results are consistent with the results of another study which indicated that the most apparent mean is for the clinical instructor (Alatawi et al. , 2020). The results of this study contradict with what was found in a study in which the "nurse-teacher" variable had the lowest mean score among other CLE domains (Gurkova & Ziakova, 2018; Warne et al., 2010). Also, the results of this study contradict Benti and Gemeda's results which indicated that the "nurse-teacher" variable had the least satisfaction (Benti Terefe & Gemeda Gudeta, 2022). This could be rationalized by the role of the nurse-teacher who facilitates or hinders the CL experience of his students as he can integrate the theory with the clinical and employ his educational expertise to meet the learning needs of his students. The nurse-teacher enables integration of theory and practice, helps to reduce the theory practice gap, and supports the students' learning (Alatawi et al. , 2020).

CL Experience Variables

In general, nursing students agree that CL experience variables, namely the student, the environment, the interpersonal, and the teaching-learning have an

influence on CL experience. These variables are significant because they may shape the students' CL experience to become professional nurses (Alshammari et al., 2020). The study showed that the "student" variable had the highest mean. This is consistent with the Alshammari's study which investigated the factors that influenced CL experience and found that the highest mean was for the "student" factor. This may be because of student-related factors that have an impact on students' CL experience. There are several student-related individual factors that may affect the clinical experiences of students (Strandell-Laine, 2022).

The "environment" variable in our study has the lowest mean; a finding that is not consistent with Alshammari's findings where "the interpersonal" factor had the lowest mean (Alshammari et al., 2020). These discrepancies may be due to differences in the demographic and academic characteristics of the participants as they are from different contexts taking into consideration their gender and level of study. Perceptions of the environment factor were based on gender and the year of the study; perceptions of interpersonal factor were based on gender, while perceptions of the teaching learning factor were based on age and the year of the study (Alshammari et al., 2020). Also, the conditions of the training settings may vary, which makes the participants' responses contrast (Alatawi et al., 2020).

Correlation between CLE and CL Experience variables

In this study, as found there is a strong correlation between the CLE and CL experience. Also, the "pedagogical atmosphere" variable has the strongest correlation with CL experience, and the "nurse-teacher" variable has the least correlation with CL experience.

The "pedagogical atmosphere" variable has the strongest correlation with the environment variable. This may be explained by the fact that the educational environment is supportive, provides enough resources for clinical learning, is student friendly, and meets the learning needs of the students. Nursing students actively get involved in individual patient care within a welcoming and educationally structured environment

(Papastavrou et al., 2016). While the nurse-teacher variable has the least correlation with the teaching-learning variable. These results are not consistent with what was found in Alatawi's and Papastavrou's studies where a strong correlation was between the "pedagogical atmosphere" and the "premises of care" variables (Alatawi et al., 2020; Papastavrou et al., 2016). This may be due to that the provided teaching methods were not helpful and went on a routine basis; nursing students prefer clinical activities to be clear and organized (Gurkova & Ziakova, 2018).

Regarding the detailed correlations between the CLE variables and CL experience variables, it is found that the "pedagogical atmosphere" variable has the strongest correlation with the "environment" variable, and the weakest correlation is with the "teaching-learning" variable.

The "leadership style" variable has the strongest correlation with the "environment" variable and the weakest correlation with the "teaching-learning" variable. This may be explained by that the leadership style mostly affects the teaching area and the general atmosphere for learning by encouraging teaching and providing supportive resources. Attractive clinical leadership style provides a safe learning environment when students know what is expected from them (Zhang et al., 2022).

The "premises of care" variable has the strongest correlation with the "environment" variable. This may be rationalized by that the welcoming and educationally supportive environment with a well-defined ward philosophy, clear ward records and documented patient procedures affects the delivered patient care as it increases the student satisfaction. Student satisfaction is increased when learners get involved actively in individual patient care, and when there is clear information flow and precise documentation of nursing care (Rashwan et al., 2022) .

The "supervisory relationship" variable has the strongest correlation with the "student" variable. This means that as the student has good supervision, receives feedback continuously, has mutual interaction, trust, and respect with the supervisor, he/she will be more satisfied and show interest and a positive attitude toward his supervisory relationship (Strandell-Laine, 2022) . These results are not in line with those of a study in which there was a strong correlation between the "supervisory relationship" variable and both the "pedagogical atmosphere' and the "premises of care" variables (Cant et al., 2021). In addition, the results contrast the results of a study conducted on Egyptian nursing students, in which there was a strong correlation between the "supervisory relationship" variable and the educational atmosphere (Rashwan et al., 2022).

The nurse-teacher has the strongest correlation with the student variable. This may be explained by that as the nurse-teacher can reduce the gap between theory and clinical, operationalize the learning goals, provide his educational expertise and give support to his students, their learning outcomes will be achieved and they can learn best and grow professionally. Positive and beneficial supervision from both preceptors

and teachers contribute to the fulfillment of intended learning outcomes (Alatawi et al. , 2020).

CL Experience in relation to Academic Variables

Type of training site

The responses of the undergraduate nursing students showed that there was a significant preference for governmental training sites when compared with private settings. This is consistent with the results of a study conducted in Ethiopia where the students were more satisfied in attending a primary hospital than attending a specialized clinical center (Benti Terefe & Gemeda Gudeta, 2022). This might be due to the more opportunities and flexible rules on doing nursing activities as well as the good relationship with the nursing staff. Nursing students prefer to train in governmental centers than in private ones because of the attitudes of the nursing staff and the strong support at primary hospitals compared to private care centers (Benti Terefe & Gemeda Gudeta, 2022).

Training Ward

The findings of this study assured that for training to gain their best clinical experience, the students prefer the Orthopedic Ward more than other wards, followed by the Surgical, Medical, Other Wards, Obstetrics and finally the Pediatric Ward. These results are consistent with the results of a study conducted in Cyprus where the students had the lowest satisfaction when they trained in the Pediatric Ward compared to other wards (Papastavrou et al., 2016). However, our results are not consistent with those of a study conducted in Italy which found that the Pediatric and Emergency Wards were more favorable for students than the Surgical and Medical Wards (Magnani et al., 2014). In addition, there were no significant differences among the

students who trained in different specialty departments (Cardiology) (Papastavrou et al., 2010). This is may be due to different work circumstances where the students do their training and gain their clinical experience. Also, the opportunities in other wards may be better, which encourages their learning more than in Pediatric Ward. In clinical environments where nursing students do not take part in clinical activities and have reduced contacts with patients, their learning experience is disappointed (Magnani et al., 2014; Papastavrou et al., 2016).

Predictors of CL Experience

The results showed that the "pedagogical atmosphere" variable had significant prediction for the CL experience variables. This is consistent with what had been found in a study done at a governmental university in Spain for third-year nursing students which showed that the "pedagogical atmosphere" variable was a significant feature among other CLE variables (Vizcaya-Moreno et al., 2015).

The findings displayed that the "supervisory relationship" variable had a significant prediction for the CL experience variable. This is consistent with the results of a study that was done in Spain for third-year nursing students and showed that the "supervisory relationship" variable was the most significant variable among those of the CLE (Vizcaya-Moreno, et al., 2015). This means that the supervision relationship during clinical training is more related to CL experience. Supervisory relationship has the greatest impact on how nursing students experience their clinical learning (Alshammari et al., 2020). Also, there is a strong correlation between supervisory relationship and the educational atmosphere on ward (Rashwan et al., 2022).

The type of training site predicts the CL experience. These findings can be explained by that the type of training sites affects the CL experience of the nursing

students. The students perform more various nursing procedures at governmental hospitals than private settings (Benti Terefe & Gemeda Gudeta, 2022).

Qualitative Results' Discussion

The results of this study showed that the students' CL experience was affected by the time they spent in clinical training. This is similar to what was found in a study done at Slovakian universities where there was a significant difference between clinical placement durations in which some students trained for two weeks while others trained for four weeks (Gurková & Žiaková, 2018). These results are supported by a qualitative study conducted in Uganda where the students talked about the short time of training at the clinical sites considering this challenging for their CL experience (Drateru, 2019). Also, the students were more satisfied as they had longer clinical stays (Prescott-Carter & Onuoha, 2016). This can be explained by the fact that as the students have more training days, they will have more opportunities to see more cases and do more skills so their CL experience improves, and as a result they become more interested in their clinical trainings. Students with longer clinical placement have higher satisfaction levels than those with short clinical stay (Prescott-Carter & Onuoha, 2016). Moreover, the results emphasized the rotation between hospitals or at least between the wards in the same hospital. This is consistent with what was found in a study conducted at a Caribbean hospital which reported that the rotation should coincide with the theoretical part given in the classroom (Prescott-Carter & Onuoha, 2016). This may emphasize that the time spent in clinical training and the rotation in different wards or hospitals can affect the CL experience of nursing students. It is more beneficial as the time is increased or if the rotation between wards occurs (Prescott-Carter & Onuoha, 2016).

The qualitative results of this study led to derive eighteen categories and eighty-six codes. Also, four main themes emerged including perception of clinical experience, facilitators of CL experience, barriers of CL experience and strategies to improve CL experience.

Perceptions of CL Experience

The results of this study interviews revealed three categories. The first category addressed the clinical environment which was described as suitable but needed orientation. The second category as reported by the students focused on the students' personal characteristics including self-esteem, self-confidence, and personality progress as they were involved in practice and as they transferred to higher levels. CL experiences differed based on student's level of study (Rozario, 2022). This is consistent with what was found in Rozario's (2022) study which showed that 50% of the students felt confident as they applied what they learned in classes and laboratories (Rozario, 2022). The third category was related to the assignments taken by the students including cases, care plans as well as making rounds and conducting conferences. This is consistent with Rozario's study which reported that group work and assignments assisted in learning practice (Rozario, 2022). These views can indicate that the environment, student and assignments are all necessary to gain more CL experience and increase the competence and confidence of nursing students. Assignments' flexibility, good students' orientation, having a welcoming environment, and adapting the teaching styles to meet the learning needs improve nursing students CL experience and foster their competence (Hari, 2021).

Facilitators of CL Experience

The study showed that three factors played an important role in facilitating the students' CL experience. The first factor dealt with instructors' characteristics, which included their knowledge, experience, cooperation and good communication. This is consistent with the results of Rozario who talked about the factors that affected the clinical practice experience including instructors' experience, clinical supportive nurses' role, and effective communication (Rozario et al., 2022). The second factor came across the learning environment which was described as supportive and comfortable. The results, however, contradict Mbakaya's study which reported that learning environment was unattractive and unwelcome (Mbakaya et al., 2020). In our case the two previous factors: the instructor and the environment play a major role in CL experience because the clinical instructors are qualified, selected carefully, and have good experience. The students also get training at different sites which are rich in training and learning opportunities which all may affect the students' CL experience (Mikkonen et al., 2020; Rozario et al., 2022). The third factor facilitating CL experience was related to the staff and focused on the qualification and cooperation of the nursing staff at clinical sites. This is supported by one study in which 90% of nursing students agreed that support from the nursing staff in clinical training influences their learning (Lawal, 2019). Also, the findings of O'Mara's (2014) study indicated that clinical learning is always influenced by student-faculty relationships and the nursing unit context and culture (O'Mara et al., 2014).

In this study, the nursing staff at training sites welcome the nursing students and involve them in work as they believe in their abilities to help in daily care. This is similar to one study which showed that nursing students are more motivated and can

learn more efficiently if they are allowed to be involved in practice by nurses (Arkan et al., 2018). Also, nursing students become highly confident and seek new opportunities for CL experience as they feel they are a part of the nursing team (Hari, 2021). This can be justified by that the staff's cooperation and good relationship with nursing students enhance nursing students clinical learning and improve their CL experience and decrease training challenges as they become more involved in nursing procedure (Berhe & Gebretensaye, 2021; Lawal, 2019; Panda et al., 2021).

Supportive clinical learning and accepting nursing students as care providers help students learn properly (Berhe & Gebretensaye, 2021). Professional socialization for novice nursing students during clinical training affects their decision to stay in the nursing career or not (Gao et al., 2022). In this study, the results of facilitating factors related to the staff also focused on qualification and cooperation of the nursing staff in clinical sites. All these can be explained by that nursing students feel highly comfortable and obtain effective clinical learning as they have good relationship with the staff, professional clinical instructor, good communication, and integrate theory with practice. An expert clinical instructor, supportive role of clinical nurses, responsible communication and relationship, job description, theory-practice integration, availability of resources, and social and psychological factors are all important for effective clinical learning (Rozario et al., 2022).

Barriers of CL Experience

The results of this study revealed that many hindering factors affected CL experience negatively including nursing staff-related factors, instructor-related factors, student-related factors, opportunities, and training conditions.

The hindering factors that were related to the nursing staff were malpractice, exploitation, bad communication, low level of knowledge, and staff uncooperativeness. This is consistent with Kamphinda and Chilemba's (2019) results in which poor nurse-student relationship was considered as a barrier to meaningful learning (Kamphinda & Chilemba, 2019). Also, the CL experience of nursing students is affected negatively due to poor relationships with some clinical staff (Mbakaya et al., 2020). Nonsuppurative communication and communication among students, instructors, and staff are considered challenges for nursing students (Baraz et al., 2015; Berhe & Gebretensaye, 2021). Teachers' empathy is necessary for positive communication and can motivate students to express their concerns and ask questions related to their clinical training (Mikkonen et al., 2020). In this study malpractice, poor communication and uncooperativeness of staff may be due to that the nurses are not highly educated-as many of them have diplomas-. Incompetence and insufficient qualification of clinical instructors are considered as a challenge for nursing clinical learning (Baraz et al., 2015). Also, they may not have enough time because they are loaded and have a shortage in the number of nurses, compared to the large number of patients. Shortage of clinical staff, understaffing, service pressure, clinical workload, and unsupportive interpersonal communication hinder the CL experience of nursing students (Drateru, 2019; Panda et al., 2021).

The hindering instructor-related factors include having busy schedules as instructors work and train at the same time, giving comments in front of patients and others and not giving feedback to the students. This is similar to what was confirmed in Mbakaya's (2020) study which reported that giving criticism in front of peers decreases students' confidence, and not receiving feedback regularly is a challenge in

clinical teaching (Mbakaya et al., 2020; Kamphinda & Chilemba, 2019). In Palestine, nursing schools usually employ part-time nursing instructors to train their nursing students. Such instructors, being often unfamiliar with teaching and training, have difficulty meeting their students' needs. Therefore, it becomes necessary for nursing schools to subject such instructors to special clinical orientations to decrease their undesirable practices. This can be rationalized by that clinical instructors who are not experienced, not oriented, not supportive, and not giving feedback hamper nursing students' clinical learning and decrease their opportunities during clinical training. Some factors that affect the nursing students' CL experience are clinical instructor expertise, his supportive role and not giving continuous feedback (Rozario et al., 2022).

The present study confirmed that the instructors did not have clear plans for training during the clinical day. This is similar to an Egyptian study, in which the students stated that their instructors hardly had planned activities for training when they came to clinical training (Mahmoud, 2014). This may be due to lack of instructor’s experience and ignorance of clinical training objectives. The absence of clear plans for training is due to unclear clinical learning objectives, which prevents the students from gaining the desired CL experiences (Berhe, & Gebretensaye, 2021; Mahmoud, 2014; Rajeswaran, 2016).

The results of this study showed that the students' related factors that hindered CL experiences were being under stress, anxiety and fear. This is similar to what Arkan (2018) found in his study where the nursing students felt stressed during clinical training and evaluation, especially in the first year (Arkan et al., 2018). The most significant problems during nursing students' clinical training are rising stress,

tiredness, and lack of an effective stress-support system and accommodation (Bakhshialiaba et al., 2019). Students become stressed and anxious about being evaluated, caring for difficult cases, or having challenging relations with patients, families or staff (Chicca & Shellenbarger, 2020). One study describes emotional reaction as a theme and reveals that students have stress due to new events or experiences or giving care (Jamshidi et al., 2016). Inadequate knowledge and skills, discrimination, and improper treatment make students feel stressed and inferior (Jamshidi et al., 2016). Students also fear of their first clinical experience and of making mistakes (O'Mara et al., 2014; Panda et al., 2021). Initial clinical anxiety, stress, and fear of harming patients or making mistakes are reported by the second and third-level students (Neupane et al., 2018). Academic workload and little time allocation for procedures produce anxiety (Rajeswaran, 2016) which, in turn, lessens self-confidence (Papastavrou, 2010). Palestinian nursing school students have stress, fear or are anxious because of being sent for training for the first time, being evaluated, doing errors, unable to deal with patients properly or when they do not know about their cases. They also become stressed especially when they deal with elderly patients. All of these hampers the CL experience of nursing students. Nursing Students become under stressed especially in the first year with clinical evaluation (Arkan et al., 2018) or when having multiple assessments within a short period (Mbakaya et al., 2020) and afraid of being evaluated and caring for difficult patients (Chicca & Shellenbarger, 2020), of facing new experiences (Jamshidi et al., 2016), and of doing errors (Panda et al., 2021).

Good and enough opportunities allow students to have better CL experience as they work with a variety of cases. Lack of opportunities, in contrast, prevents students

from improving their competencies and affects their learning, which may hinder the care delivered to patients (Lawal et al., 2016). Learning opportunities can be achieved by spending sufficient time (seven weeks or more) in clinical placement (Warne et al., 2010). The results of this study assured that there were not enough opportunities due to the decreasing number of patients against the increased numbers of students' groups. This is consistent with Mbakaya's results which confirmed that the students were fighting for patients especially when there were many students in the same ward (Mbakaya et al., 2020). Additionally, Arkan emphasized that the increased number of students and limited resources affect students' learning negatively (Arkan et al., 2018).

Lack of opportunities was more apparent in private clinical settings due to rules and regulations. Prescott-Carter and Onuoha mentioned that organizational restrictions decrease clinical opportunities (Prescott-Carter & Onuoha, 2016). Also, Jamshidi in his study found that the students missed opportunities because they went to labs and X-ray Departments during their training (Jamshidi et al., 2016). Moreover, one of the study's results showed that the inadequate presence of clinical instructors with students decreased students' learning opportunities (Berhe & Gebretensaye, 2021). However, the results of this study contradict the results of Kamphinda and Chilemba's study which revealed rich CL experiences because of the presence of sufficient number of patients and a variety of health problems (Kamphinda & Chilemba, 2019). The previous results that were associated to clinical opportunities are relevant to the Palestinian situation because Palestinian universities have started many nursing programs in the last ten years and nursing schools have increased the number of student admissions, which has increased the load on clinical training sites, especially governmental ones. This has doubled or even tripled the number of training

groups, making it difficult for these sites to absorb the great number of nursing students and causing a shortage of opportunities for students' clinical experience. The rising number of nursing students at clinical sites results in fighting over patients, which makes clinical opportunities limited; this is one of the most CL experience barriers (Mbakaya et al. , 2020).

The results of this study showed that there were limited resources in the training sites, such as lack of equipment, no places for conferences, and unequal nurse-patient ratios. According to the students, such limitations were considered hindering factors that affected their clinical experience negatively. This is consistent with what was stated in different studies conducted in different places. (Drateru, 2019; Kamphinda & Chilemba, 2019; Mahmoud, 2014; Mbakaya et al., 2020; Panda et al., 2021; Prescott-Carter & Onuoha , 2016). The studies assured that lack of resources was a barrier to nursing students' clinical experience and clinical learning. Palestinian clinical training sites have limited resources most of the time due to the Israeli constrictions imposed on Palestinians, such as confiscating their money and preventing or hampering the entry of medical equipment, which hinders the availability of such equipment in clinical training sites and as a result, affects the eligibility of these sites for nursing students to obtain good training.

In this study, there was lack in the number of nurses in relation to the number of patients, lack of patients' privacy, and a difference between what was learnt in classrooms and what was seen in the clinical area. This was confirmed in Kamphinda and Chilemba's study in which they stated that unequal nurse-patient ratios, lack of nurses caring for patients, lack of patients' privacy, and the gap between theory and practice are all vital components that affect CL experience of nursing students

(Kamphinda & Chilemba, 2019). The nurse-teacher variable plays a vital role in integrating the theory with practice. This is what Rozario referred to as the theory-practice integration (Rozario, 2022). The students in this study said that they learned the proper and standard ways to care for their patients in classrooms or laboratories. This is likely because most Palestinian nursing schools have simulation labs, where students apply what is presented in books. However, when they go to clinical sites, they find things different than what they have learned. These results are in line with the findings of internationally different studies (Arkan et al., 2018; Berhe & Gebretensaye, 2021; Drateru, 2019; Mahmoud, 2014; Panda et al., 2021; Tomietto et al. , 2012). The incongruency between what is learned and what is found at Palestinian clinical training sites is probably due to the absence of protocols, standards, guidelines, and job descriptions and unavailability of equipment as well which affect the CL experience of nursing students. Barriers to acquiring skills and achieving clinical objectives focus on lack of resources and failure to follow standards and guidelines (Mbakaya et al. , 2020). Also, other factors that affect nursing students' CL experience include job description, theory-practice integration, and availability of resources (Rozario et al., 2022).

A special factor hindering the CL experience of Palestinian nursing students is late arrival at clinical sites due to traffic jams and shackles the Israeli occupation frequently imposes on the movement of Palestinian students while traveling to training sites through military checkpoints, which often force them to pass through long minor unpaved and crowded ways. This is consistent with a Turkish study, which found that nursing students arrived at their training sites late because of traffic crowding. Nursing

students have difficulties getting to clinical training in time due to traffic (Arkan et al., 2018).

The results of hindering factors, in this study, focused on staff exploitation, bad communication, malpractice, decreased level of knowledge, and uncooperativeness. This is similar to the results of a study that showed lack of support and undesirable attitudes of the staff had negative effects on nursing students' learning (Baraz et al., 2015). Unprofessional and unsupportive attitudes, such as discrimination, disrespect, lack of cooperation and competence from the nursing staff toward nursing students really challenged CL experience (Berhe & Gebretensaye, 2021). Unsupportive interpersonal relationships and interpersonal communication made CL experience challenging (Drateru, 2019). Improper treatment and discrimination also emerged as subcategories of ineffective communication (Jamshidi et al., 2016).

The poor relationship with the staff and lack of support from the clinical teacher was reported as a challenge for nursing students' CL experience, and clinical tutors could continue or cut the clinical experience of the nursing student (Panda et al., 2021). One study conducted in Rwanda showed that the majority of participants reported that lack of organizational support and resources might delay communication and contribute to ineffective clinical learning (Rajeswaran, 2016).

Strategies to improve CL Experience

The results of this study showed that CL experience could be improved by short assignments, few papers and working with one case. Palestinian instructors sometimes request many assignments or papers and give their students more than one patient, which makes them unable to focus on their major cases. Assignments and group work are greatly helpful in clinical practice (Rozario et al., 2022). One of the

prominent factors, in this study, to improve CL experience is orienting the students about their training sites before going for actual training. Palestinian nursing students often spend only two to three hours in the first day being oriented to the hospital and the targeted ward. Good orientation for nursing students is one of the factors that facilitate students' learning (Hari et al., 2021). This is consistent with what was found in a study which revealed that students had to be familiar with the physical place (Chicca & Shellenbarger, 2020).

One important result of this study to improve CL experience is instructor-related factors including instructors' specialties, improving evaluation, giving feedback on a regular basis, being cooperative, following clear and organized plans for training, being from the same college, allowing for more procedures and dealing with students more comfortably. This is similar to what was found in a study conducted in Finland, which focused on instructors' clinical expertise, knowledge, familiarity with clinical sites and regular monitoring which are all necessary for nursing students' learning experience (Mikkonen et al., 2020). Another study, conducted in Australia, found that assessment flexibility and adapting teaching styles to meet the student's learning needs were necessary to improve nursing students' CL experience (Hari et al., 2021). Support, guidance, and positive reinforcement from clinical instructors in clinical learning increased students' motivation (Baraz et al., 2015). While negative attitudes, harshness, incompetence and insufficient qualifications of instructors were considered challenging factors for students' CL experience (Baraz et al., 2015), positive nursing instructors' characteristics might enhance and improve CL experience of nursing students.

Moreover, the students assured that clinical training could be improved by making the equipment available, providing site orientation before starting training, starting clinical training after taking theory, decreasing training in private sites, decreasing the number of students' groups, having nearer training sites, increasing the training days, and training in different hospitals and wards.

Integration of quantitative and qualitative key findings

The results of the quantitative part revealed that the type of training site affected the CL experience of undergraduate nursing students. The qualitative part emphasized this as the students reported that their training at governmental training sites was more beneficial than their training at private sites. That was likely because there were more opportunities and cases, and the students were allowed to perform many procedures and fill their competency booklets. In addition, rules and regulations at private sites were too strict to allow performing different tasks, which hindered the students' CL experience.

The quantitative results showed that the students' CL experience was better and more beneficial in Orthopedic and Other Wards than in Pediatric Wards. This was confirmed by the qualitative results where some students stated that in pediatric courses, they did many and long assignments that consumed much time, which gave them few chances to practice, carry out procedures or see various cases. Others added that CL experience varied depending on which ward the student trained in. The reason beyond this may be likely that students in Orthopedic Wards work on cases different from what they used to work in other wards and they might find them more useful.

The quantitative results indicated that the "pedagogical atmosphere" variable had significant prediction with "environment", "student", "interpersonal" and

"teaching-learning" of the CL experience variables. This was assured by the qualitative results where the students stated that the hospital and educational atmosphere were positive and comfortable, and their self-esteem and self-confidence were increased by performing skills.

"The leadership style" variable had no significant prediction with the CL Experience variables; this significance was not assured by linear prediction. This may be explained by that the management style in the wards does not affect the interpersonal relations and the teaching methods used by instructors in clinical training.

"The premises of care" variable had significant prediction with the "student" variable. This may be explained by the fact that the individual nursing care and flow of information related to patient care affect the CL experience of nursing students in the wards where they train. While "the premises of care" variable had significant relationship with the "teaching learning" variable, yet they did not have linear prediction with it. This is probably because the teaching-learning acquired by students during training does not apply much to patient care.

The quantitative results revealed that there was a significant prediction between the "supervisory relationship" variable and all the CL experience variables except the "environment variable". This was emphasized by the qualitative results, where the students gave positive comments, such as the environment was suitable, comfortable, supportive, and free from stress. The students' knowledge increases as they advance in level, and hence they become more confident. Assignments are important and beneficial and make students aware of their cases and diseases. Besides, the students commented negatively that the environment needed extra orientation;

there were wrong behaviors on the part of the staff who exploited the students, which decreased the students' motivation. This is attributable to the fact that some of the staff are uncooperative, not allowing the students to perform procedures, and they do not communicate with them respectfully either. Fear of failure makes students feel anxious when they have gone training for the first time; they also have a problem communicating properly with patients, especially the elderly.

The "nurse-teacher" variable had significant prediction with the "student" variable. This was confirmed by the qualitative results in which the interviewed participants emphasized that the instructors who had knowledge, experience, cooperation, proper communication, stayed with their students, gave them opportunities, taught them at the same school, and trained them at the site, all of which increased the students' CL experience, making them very comfortable.

The nurse-teachers who humiliate students, give comments in front of patients, leave students alone for a long time, and have poor communication with their students hinder their learning process. Additionally, such teachers who focus on theoretical parts very much, do not have clear plans for training, and do not give students enough feedback will affect the students' CL experience negatively. This is likely due to the vital role the nurse-teacher plays in providing his students with CL experience as he/she remains with them all the time, and consequently, their progress depends mostly on the teacher.

The results of this study revealed that there was a significant relationship between the CLE and "environment", "student", "interpersonal", "teaching-learning" and CL experience. This was emphasized by the narratives of the interviewed participants who stated that the clinical environment was good and CLE supported

learning experiences and encouraged learning. The CLE was basic for clinical nursing to connect theory with practice, to learn new procedures, to be in real situations, and to learn alternatives, especially in lack of resources.

The noteworthy results in the qualitative part, but not clear in the quantitative section, were about describing CL experience. Most students talked about the nursing care routine including morning care, working with cases and doing assignments and care plans, making rounds, giving medications either with their instructors or with staff, following their patients' care and conducting conferences. Most students mentioned that they felt comfortable as they took care of their patients and saw them improve. Also, they had high self-esteem, felt so confident, their personality matured and became less stressful as they went up in their education. Furthermore, the more experience they gained, the better their skills improved; the more involvement in the nursing care team, the more competent they became. Additionally, the students stated that taking the theoretical part before going to clinical training helped them much, and the procedures and skills they performed in laboratories prepared them better. Alternatively, they said they found a difference between what they learnt theoretically at university and what they found at training sites, which increased the gap between what was learnt and what was seen in reality.

As the students assure, facilitating factors mean for students to be with an instructor from the same college is rather good and makes training so easy and comfortable. Fear, anxiety and shyness are decreased as students progress in their clinical training. Some students confirm that taking assignments is positive and important, increases their knowledge and enables them to search more for cases, diseases and medications etc. especially when they present and discuss them in front

of their colleagues. Other students talk about good relationship with physicians who are good, helpful and patient when they work together.

Among the hindering factors, mentioned by the participants, are staff exploitation, wrong doing of procedures and uncooperativeness. Besides, some students say training at the beginning of the course before taking theoretical parts is useless. They also add that taking exams during the training period lessens their concentration. They complain about the quantity and length of assignments, which consume their time and prevent them from having true opportunities to gain good CL experience.

Other students mention that a two-day training is not enough pointing out that some students are careless and uncommitted, and thus they need much monitoring. Still, others elaborate on bad training conditions, some of which include lack of resources and equipment, a large number of students groups that decrease their opportunities, far training sites, inability to compensate for missing days, delayed training either at the end of the semester or in the evening shift. Furthermore, some students talk about difficult transportation, refusal of some patients to be cared, for-long detention and humiliation by Israeli soldiers at checkpoints, and frequent closures preventing them from arriving at clinical sites or returning home after duty on time.

Implications

Clinical learning is multifaceted and needs an ongoing progress and advancement considering all efforts from different parties. The findings of this study may urge different applications in nursing education in Palestine at different levels in order to improve the CL experience of undergraduate nursing students. Various parties are involved including the policy makers, nursing education leaders, managers of

clinical training sites, patient care delivery institutions, nursing staff, nursing instructors, nursing curriculum designers, and nursing researchers.

Clinical Practice

Clinical training sites can apply effective strategies to improve the CL experiences of nursing students through

- Having better conditions for nursing students to increase their opportunities and gain more clinical experience
- Decreasing the number of training students' groups
- Initiating orientation programs for nursing staff to increase their awareness about clinical learning atmospheres and students’ needs.
- Developing protocols, standards, and descriptions for nursing procedures to allow the application of nursing skills
- Relating the theory part with the clinical part that will reflect positively on providing better care for patients.
- Increasing the students' professional roles and competencies based on competency checklists.
- Fostering collaboration with nursing schools and sharing courses for staff development as well as orienting the newly hired clinical instructors.

Policy Makers

Nursing schools' administrators and clinical sites managers especially governmental ones can work together to create conducive clinical training environments that enable nursing students to gain required clinical experience based on competency checklists. Also, clinical training sites should provide necessary

equipment and resources to improve the nursing students' CL experience and enhance their clinical learning.

Nursing Education

Nursing schools should apply innovative teaching and pedagogical methods to bridge the gap between theoretical and clinical learning, devise new evaluation techniques, and reduce assignment loads, students' boredom, and other inconveniences. Nursing teachers can also plan and organize training-day assignments and activities and set objectives clearly in accord with clinical learning goals.

Future Research

Universities, nursing educators, and nursing researchers can promote research culture in their institutions and apply different approaches to study this phenomenon more as the CLE and CL experience are wide-ranging and change with time, include more universities and clinical sites in future research, include more wards or units as CL experience vary from one ward to another, compare the outcome of CL experience for nursing students at different nursing schools and training sites, and study the perceptions of nursing staff and nursing instructors related to the CLE and CL experience as they are involved in nursing students training.

Limitations

This study was bound with the following limitations that are worth considering. First, this cross-sectional study conducted at a specified time for a specified population, which limits its generalizability. Second, the sample was convenience so the participants had unequal chances. Third, the sample was collected from three nursing schools (from the north and middle only) despite the presence of thirteen nursing schools in Palestine; therefore, the results of the current study may not

be generalized totally to all Palestinian nursing schools. Fourth, the number of nursing students at the governmental university was low in comparison to that of public and private universities, which might have affected the results in some ways, especially regarding generalizations. Fifth, the training days of different courses and levels at different training sites were not the same, which might have affected the students' responses regarding their CL experience at different wards as some students, until then, might not have been familiar with the CLE.

Strengths

The present study has the following points of strength which make it considerable. As far as I know, this is the first study in Palestine that has discussed the relationship between the CLE and CL experience, and thus the results will be valuable for future clinical nursing studies. This study uses both quantitative and qualitative approaches, which strengthens its results, especially after being validated. Besides, the participants who answered the questionnaire are from three different student levels, which makes the responses variant often in favor of the third-year students. Additionally, the participants belong to three types of universities: governmental, public, and private, which represent all university categories in Palestine. Moreover, two valid scales are used: one for independent variables and another for dependent variables. Furthermore, careful and detailed data analysis for both quantitative and qualitative data was used. Finally, the response rate (100 %) is high, which validates the results.

Recommendations

Based on the results of this study, here are some recommendations which, after consideration, may hopefully minimize any shortcomings and help improve clinical learning and CL experience at nursing schools and training sites in Palestine.

Research

The results of this study form a base for further nursing research on clinical learning of nursing students. In this respect, different research approaches are needed to tackle this topic to deeply understand the CLE and its impact on CL experience at different levels and in different nursing courses, which improves clinical learning and learning experience of nursing students. Moreover, further research is needed at different settings to investigate the relationship, if any, between student learning outcomes and care quality and CL experiences. Finally, further research on nursing educators and nursing staff perception and experiences of clinical learning will be worthy to understand the facilitating and challenging factors.

The Ministry of Education, the Ministry of Health, and the Nursing and Midwifery Council should

- Enhance supervision and monitoring of clinical training sites
- Agree on the required skills necessary for the completion of basic requirements for undergraduate nursing students.
- Increase support and funds for clinical sites to meet training needs.

Nursing Schools

Nursing schools are requested to

- Employ experienced clinical instructors

- Support and follow up their students more to have better CL experience
- Select suitable training sites for their students
- Improve teaching methods to suit the students' capacities and interests
- Develop clinical assignments that fit the requirements of clinical training

Nursing Teachers

Most of the burden lies on nursing teachers to enhance the CL experience of their students by connecting the theoretical part with practice, using different teaching methods, setting clinical objectives clearly, updating their knowledge and welcoming new experiences, giving continuous feedback, communicating respectfully, dealing unbiasedly, giving pretraining orientation, and supporting students to alleviate their anxiety and stress.

Students

Nursing students are held responsible for gaining better skills and improving their CL experience to be professionally competent; their responsibility is manifested by commitment, hard work, opportunity seeking, and question-raising when necessary.

Conclusion

This study explores that the CLE has a strong relationship with CL experience. It shows that the "nurse teacher" variable has the highest mean, while the "leadership style" variable has the least value of mean. For the CL experience -as a dependent variable- the "student" variable has the highest mean while the "environment" variable has the least mean. The pedagogical atmosphere has the strongest correlation with the CL experience, while the nurse-teacher has the weakest correlation. Also, there is a significant difference in the means of CL experience based on the type of training site in favor of the governmental and the training ward in favor of the Orthopedic.

Moreover, there is a significant prediction of CL experience in relation to the "pedagogical atmosphere", and the "supervisory relationship" variables and the type of training site.

The qualitative part resulted in four themes, seventeen categories, and eighty-six codes. The themes are perceptions of CL experience, facilitators of CL experience, barriers of CL experience, and strategies to improve CL experience. The categories are related to the clinical environment, students, instructors, nursing staff, assignments, opportunities, and training conditions.

The results of this study emphasize on many aspects that are essential for improving clinical learning of nursing in Palestine that includes more investigation, comprehensive evaluation, and effective plans and strategies.

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Appendices

Appendix 1. Questionnaires

Dear Student,

My Greetings,

This study aims to identify the relationship between the clinical learning environment and the clinical learning experience of the undergraduate nursing students at West Bank universities. Your participation is voluntary and confidential; you can withdraw at any stage without any penalty.

Please be informed that all the data gained by this study will be used for scientific research purposes only, so no need to write your name.

You are kindly requested to answer all the questions according to your opinions and experience with all sincerity and objectivity.

If you have any inquiry or further questions now or then, please feel free to contact me at this number; Mobile 0562402188 (Nihad Hamid)

Thank you for your cooperation.

استمارة بحث علمي

عزيزي الطالب/ة

تحية طيبة وبعد,,,

تهدف هذه الدراسة الى التعرف على العلاقة بين بيئة التعلم الأكلينيكي وخبرة التعلم السريرية لطلبة بكالوريوس التمريض في جامعات الضفة الغربية. مشاركتك طوعية وسرية, يمكنك الأنسحاب في أي وقت دون أي عقوبة.

علما بأن جميع البيانات المستخلصة من استمارة الدراسة سوف تستخدم لأغراض البحث العلمي فقط، لذلك لا ضرورة لكتابة الاسم.

يرجى من حضرتك التكرم بتقديم الإجابات وفقا لآرائك وتجربتك الشخصية بكل صدق وموضوعية.

اذا كان لديك أي استفسار أو أسئلة اخرى الان أو مستقبلا , يرجى الأتصال بي على الرقم التالي 0562402188 (نهاد حامد)

شكرا لتعاونك.

I- This part focuses on general information about the participants. Please answer the following questions related to your demographic and academic characteristics.

How old are you? ……...

Gender:

1. Male 2. Female

Marital Status:

1. Single 2. Married 3. Divorced 4. Widow

Place of residence:

1. City 2. Village 3. Camp

University you are enrolled in:

1. Government 2. Public 3. Private

What is your level at school?

1. Second year 2. Third Year 3. Fourth Year

What is the current training site for your clinical training?

1. Hospital 2. Clinic 3. Others

Type of Training Site:

1. Government 2. Private 3. UNRWA

Training Ward:

1. Medical 2. Surgical 3. Orthopedic 4. Pediatrics

5. Obstetrics 6. Clinics 7. Others

This part focuses on your opinions related to the clinical learning environment you are doing your training in. Please read the following statements and state your opinion based on the following rating scale:

1: Fully disagree

2: Disagree to some extent

3: Neither agree nor disagree

4: Agree to some extent

5: Fully agree

Clinical Learning Environment Scale

		Fully Disagree	Disagree to some extent	Neither agree nor disagree	Agree to some extent	Fully Agree
	Pedagogical Atmosphere					
1.	The staff were easy to approach					
2.	I felt comfortable going to the ward at the start of my shift					
3.	During staff meetings (e.g., before shifts) I felt comfortable taking part in the discussions					
4.	There was a positive atmosphere on the ward					
5.	The staff were generally interested in student supervision					
6.	The staff learned to know the students by their personal names					
7.	There were sufficient meaningful learning situations on the ward					
8.	The learning situations were multi-dimensional in terms of content					
9.	The ward can be regarded as a good learning environment					
	Leadership Style of the Ward Manager (WM)					
10	The Ward Manager regarded the staff on her/his ward as a key resource					
11	The Ward Manager was a team member					
12	Feedback from the Ward Manager could					

	easily be considered as a learning situation
13	The effort of individual employees was appreciated
	Premises of Care on the Ward
14	The Ward's nursing philosophy was clearly defined
15	Patients received individual nursing care
16	There were no problems in the information flow related to patients' care
17	Documentation of nursing (e.g. nursing plans, daily recording of nursing procedures etc.) was clear
	Supervisory Relationship
18	My supervisor showed a positive attitude towards supervision
19	I felt that I received individual supervision
20	I continuously received feedback from my supervisor
21	Overall, I am satisfied with the supervision I received
22	The supervision was based on a relationship of equality and promoted my learning
23	There was a mutual interaction in the supervisory relationship
24	Mutual respect prevailed in the supervisory relationship
25	The supervisory relationship was characterized by a sense of trust
	Role of The Nurse Teacher
26	In my opinion, the nurse teacher was capable of integrating theoretical knowledge and everyday practice of nursing
27	The teacher was capable of operationalizing the learning goals of this clinical placement
28	The nurse teacher helped me to reduce the theory-practice gap
29	The nurse teacher was like a member of the nursing team
30	The nurse teacher was able to give his or her educational expertise to the clinical team
31	The nurse teacher and the clinical team worked together in supporting my

	learning
32	The common meetings between me, mentor and nurse teacher were comfortable experience
33	In our common meetings I felt that we are colleagues
34	Focus on the meetings was within my learning needs

This part focuses on your opinions related to the clinical learning experience.

Please read the following statements and state your opinion based on the following rating scale:

1: Strongly disagree

2: Disagree

3: No opinion

4: Agree

5: Strongly agree

Clinical Learning Experience Scale

		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
	Environmental Factors					
1.	The clinical area was student-friendly					
2.	The clinical area helped me to meet my learning needs					
3.	The clinical area was supportive for nursing students' learning					
4.	The clinical environment provides resources that motivate self-initiated learning					
5.	Learning has taken place since placement in the clinical area					
6.	The general atmosphere encouraged learning					
	Student Factors					
7.	I learn best when I observe.					
8.	I learn best when I do return demonstration					
9.	The clinical experience had a positive impact on my professional growth					
	Interpersonal Factors					
10	The relationship between clinical staff and nursing students influenced the learning experience					
11	There were enough opportunities for me to participate, learn in ward/clinic/ unit activities					

12	The interpersonal relationship with preceptors/mentors influenced my learning
13	The preceptor/mentor played a significant role in my learning experience
14	Positive interpersonal relationship between students and staff of the clinical unit was clear
15	Communication between staff and learners was effective
	Teaching - Learning Factors
16	The teaching methods used were helpful
17	Ongoing teaching was given as part of the ward routine
18	My opinion of the clinical area has changed positively since placement
19	Integration of theory into practice has taken place
20	Feedback on my progress was given; it was relevant and helpful

Appendix 2. Interview questions

1- Describe one day of your clinical experience

2- Please talk about the factors that facilitate your CL experience.

3- Please talk about the factors that hinder your CL experience.

4- How does the CLE help your CL experiences?

5- In your opinion, what are the challenges you are facing during your clinical experience?

6- In your opinion, how can CL experience be improved?

7- Provide additional things that are related to your CL experience.

Appendix 3. Informed Consent

AAUP-IRB Code No.: 2023/A/118/N **AAUP-IRB Date:** 12th June 2023

I…… *(Name of Participant / optional)* hereby agree to take part in the study questionnaire/ interview specified below:

Title of Study: The relationship of Clinical Learning Environment with the Clinical Learning Experience of Undergraduate Nursing Students in West Bank Universities/ Palestine: Mixed Methods Study for Fulfillment of a PhD degree, in Nursing, at AAUP.

The nature and purpose of which has been explained to me by the researcher, and interpreted by him to the best of his/her ability in English.

I have been told about the nature of the study in terms of methodology, possible adverse effects and complications.

After knowing and understanding all the possible advantages and disadvantages of this study, I voluntarily consent of my own free will to participate in this study specified above.

I understand that I can withdraw from this study at any time without assigning any reason what so ever.

Signature: ……..……..

In the presence of ……

Date: ……

I confirm that I have explained to the student the nature and purpose of the above-mentioned study.

Date: 00/00/2023 **Signature:** Nihad Hamid

Appendix 4. Participant Information Sheet

AAUP-IRB Code No.: 2023/A/118/N

AAUP-IRB Date: 12th June 2023

Study Title: The relationship of Clinical Learning Environment with the Clinical Learning Experience of Undergraduate Nursing Students in West Bank Universities/ Palestine: Mixed Research Study

We would like to invite you to take part in a research study. Before you decide whether to participate, you need to understand why the research is being done and what it would involve. Please take time to read the following information carefully; talk to others about the study if you wish.

Ask us if there is anything that is not clear or if you would like more information.

Take time to decide whether or not you wish to take part.

1. **What is the purpose of this study?**

This study will

(1) Identify the factors that facilitate or hinder the learning experiences of undergraduate nursing students.

(2) Explore the relationship between the Clinical Learning Environment (CLE) and the Clinical learning (CL) experience of undergraduate nursing students.

2. **Why is this study important?**

This study will investigate the factors that facilitate and hinder the learning experiences of undergraduate nursing students during their training in the clinical learning environment, explore more about the experiences of undergraduate nursing students in the Palestinian CLE, form a base for future nursing studies in Palestine and new different group of nursing students' experiences regarding CLE will be reflected

and explained.

What is the procedure that is being tested? *(If applicable)*

No procedures will be done; it is a descriptive study that will explore the lived experiences of the nursing students and the factors that facilitate and hinder these experiences during the undergraduate nursing students clinical training.

3. Why have I been invited to participate in this study?

Because you are an undergraduate nursing student included as a target population within the inclusion criteria of this study, also the purpose of the study is applicable to you as a Palestinian nursing student and your clinical experience is worthy and it will add new information to the study and its results and the nursing literature as a whole.

4. Who should not participate in the study?

First year nursing students, non-Palestinians, part time students, not registered in the semester when the data collection is taking place, those who don't train during data collection, and those who don't accept to participate voluntarily.

5. Can I refuse to take part in the study?

Yes, you can

6. What will happen to me if I take part?

You will complete a questionnaire form that will take about 15 minutes, or you will be interviewed for 40 minutes to be asked related questions to your training in the clinical sites. No harm or risk during completing the questionnaire or during an interview is expected.

7. How long will I be involved in this study?

15 minutes for completing the questionnaire and or 40 minutes for the interview.

8. What are the possible disadvantages and risks?

No risks or disadvantages as the study is descriptive, no intervention will be given or done for the participants.

9. What are the possible benefits to me?

As a nursing student participating, this study will allow you to know more about the clinical learning environments where you practice and learn skills and to be aware of the components of this environments, the factors that facilitate your training and the clinical learning experiences gained.

10. Who will have access to my medical records and research data?

Only the researcher and the supervisors of the study will have access to the research data. No medical records are needed in this study.

11. Will my records/data be kept confidential?

Yes, it will be kept in the researcher's personal computer, so no one will have access to them.

12. What will happen to any samples I give? *(If applicable)*

Not applicable; no samples are required.

13. What will happen if I don't want to carry on with the study?

Nothing; it is your decision; no one can oblige you.

14. What will happen to the results of the research study?

They will be kept by the researcher till the research ends, then they will be delivered to the university (AAUP) to be kept according to its protocols.

15. Will I receive compensation for participating in this study?

No compensation or beneficial interest will be offered.

16. Who should I contact if I have additional questions/problems during the study? The researcher

Researcher contact details:

Nihad Hamid, nihadhamid2003@yahoo.com, Tel. No. +00972-562402188

17. Who should I contact if I am unhappy with how the study is being conducted?

Ethical Review Committee

Deanship of Scientific Research

Arab American University-Palestine (AAUP)

Email: src@aaup.edu

Appendix 5. Ethical Clearance (IRB Approval)

Arab American University- Palestine
Deanship of Scientific Research
IRB committee
Tel: 04-241-8888, ext 1196
E-mail: irb.aaup@aaup.edu

الجامعة العربية الامريكية- فلسطين
عمادة البحث العلمي
لجنة أخلاقيات البحث العلمي
تلفون: 1196 ext 04-241-8888
البريد الالكتروني: irb.aaup@aaup.edu

IRB Approval Letter

Study Title: The relationship of Clinical Learning Environment with the Clinical Learning Experience of the Undergraduate Nursing Students in West Bank Universities/ Palestine: Mixed Methods Study

Submitted by: Nihad Anees Fahed Hamid

Date received: 17th May 2023

Date reviewed: 12th June 2023

Date approved: 12th June 2023

Your Study titled "**The relationship of Clinical Learning Environment with the Clinical Learning Experience of the Undergraduate Nursing Students in West Bank Universities/ Palestine: Mixed Methods Study**" With archived number 2023/A/118/N was reviewed by the Arab American University IRB committee and was approved on 12th June 2023

Reham Khalaf-Nazzal, MD, PhD
IRB committee chairman
Arab American University of Palestine

IRB
ARAB AMERICAN UNIVERSITY

General Conditions:

1. Valid for 8 months from date of approval.
2. It is important to inform the committee with any modification of the approved study protocol.
3. The committee appreciates a copy of the research when accomplished.

تسهيل مهمة بحث علمي

حضرة أ.د. رزق اسليمية المحترم

رئيس جامعة نابلس للتعليم التقني والمهني

تحية طيبة وبعد,

تهديكم كلية الدراسات العليا في الجامعة العربية الامريكية اطيب التحيات وبالاشارة للموضوع اعلاه , يرجى تسهيل مهمة البحث العلمي لطالب الدكتوراه في التمريض الاستاذ نهاد حامد برقم جامعي 202012240

وهو طالب دكتوراه في برنامج وبحثه بعنوان

"The relationship of Clinical Learning Environment with the Clinical Learning Experience of Undergraduate Nursing Students in West Bank Universities/ Palestine": Mixed Methods Study

بناء على تعليمات رئيس الجامعة،
مع الموافقة وتسهيل مهمة الباحث

وهو احد متطلبات درجة الدكتوراه

يرجى تسهيل مهمته في جامعتكم الموقرة

الفئة المستهدفة : مدربي وطلاب التمريض

ملاحظة : الاستبانة ومقترح البحث

جامعة نابلس للتعليم المهني والتقني
الوارد: 382
التاريخ: 30/8/2023

مع الاحترام

د. عماد ابو خضر

مساعد عميد كلية الدراسات العليا للشؤون الطبية والصحية

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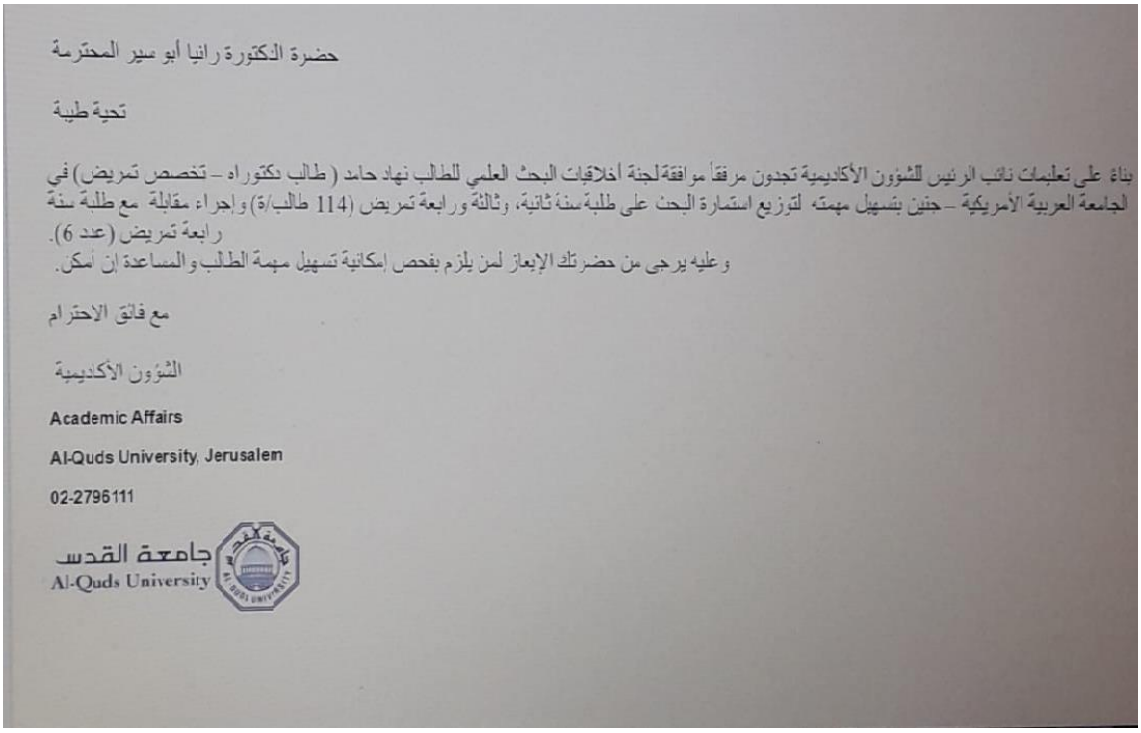

حضرة الدكتورة رانيا أبو سير المحترمة

تحية طيبة

بناءً على تعليمات نائب الرئيس للشؤون الأكاديمية تجدون مرفقاً موافقة لجنة أخلاقيات البحث العلمي للطالب نهاد حامد (طالب دكتوراه – تخصص تمريض) في الجامعة العربية الأمريكية – جنين بتسهيل مهمته لتوزيع استمارة البحث على طلبة سنة ثانية، وثالثة ورابعة تمريض (114 طالب/ة) وإجراء مقابلة مع طلبة سنة رابعة تمريض (عدد 6).

وعليه يرجى من حضرتك الإيعاز لمن يلزم بفحص إمكانية تسهيل مهمة الطالب والمساعدة إن أمكن.

مع فائق الاحترام

الشؤون الأكاديمية

Academic Affairs

Al-Quds University, Jerusalem

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جامعة القدس
Al-Quds University

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Mon, Oct 16 at 9:07 PM

تحياتي

انقل الى حضرتك موافقة عميدة كلية المهن الصحية دكتورة رانيا لاجراء البحث في جامعة القدس \كلية المهن الصحية بالتوفيق وشكرا

On Sun, Oct 15, 2023 at 2:43 PM nihad hamid <nihadhamid2003@yahoo.com> wrote:

حضرة الأستاذة دعاء أبو صوي المحترمة

رئيسة دائرة التمريض/ كلية المهن الطبية المساندة / جامعة القدس

تحية طيبة وبعد ...

مرفق كتاب تسهيل مهمة بحثي الخاص برسالة الدكتوراه , الاستمارة وأسئلة المقابلة

علما بأن الاستمارة سيتم تعبئتها من قبل طلبة سنة ثانية , ثالثة ورابعة تمريض (114 طالب/ة) , والمقابلة ستكون مع طلبة سنة رابعة تمريض .

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الملخص

خلفية الدراسة

تلعب بيئة التعلم السريري دورا مهما في تعليم التمريض السريري ولها تأثير مهم على الخبرة التعليمية السريرية لطلبة التمريض الذين يتدربون في بيئات التدريب العملي. وتؤثر الخبرة التعليمية السريرية في نوعية الرعاية المقدمة للمرضى كما تحدد كفاءة طلبة التمريض في حياتهم المهنية المستقبلية.

هدف الدراسة

تهدف هذه الدراسة الى كشف العلاقة بين بيئة التعلم السريري والخبرة التعليمية السريرية لطلبة التمريض في الجامعات الفلسطينية

طرق الدراسة

تم أستخدام دراسة متعددة المنهجيات لتحديد وكشف الخبرات التعليمية السريرية لطلاب التمريض من ثلاث جامعات مختلفة (حكومية , عامة وخاصة). تم جمع البيانات الكمية من 306 طالب وطالبة تمريض من سنة ثانية , ثالثة ورابعة من خلال أستبيان ذاتي مستخدما العينة العفوية. تم جمع البيانات النوعية باستخدام مجموعة محورية مكونة من 14 طالب وطالبة من سنة رابعة تمريض من خلال المقابلات الشخصية المنظمة.

التحليل

تم تحليل البيانات الكمية بواسطة الحزمة الأحصائية للعلوم الأجتماعية نسخة 26 مستخدما التكرارات , الوسط الحسابي , الأنحرافات المعيارية , النسب المئوية , فحص ال t , اختبار ANOVA والأنحدار. البيانات النوعية تم تحليلها عن طريق تحليل المحتوى الأستقرائي.

النتائج

أظهرت النتائج وجود فروقات في الوسط الحسابي لمستويات بيئة التعلم السريري وخبرة التعلم السريري , وجود فروقات ذات دلالة إحصائية بين نوع مكان وجناح (قسم) التدريب والخبرة التعليمية السريرية على مستوى قيمة $p \geq .05$ ($p = .019, p = .032$) على التوالي وجود ارتباط قوي بين بيئة التعلم السريري والخبرات التعليمية السريرية,($r = .758$) , أيضا تنبأت متغيرات بيئة التعلم السريري بمتغير الخبرة التعليمية السريرية تحديدا تنبأ متغيرالجو التربوي ومتغير العلاقة الأشرافية بمتغير الخبرة التعليمية السريرية على مستوى قيمة $p \geq 0.01$, $.05 \geq$ ($p = .000, p = .001$) على التوالي , وتنبأ متغير مكان التدريب بمتغير الخبرة التعليمية السريرية على مستوى قيمة $p \geq .05$ ($p = .034$).

نتج عن تحليل البيانات النوعية ايجاد أربع مواضيع تحديدا توجهات الخبرات التعليمية السريرية, العوامل الميسرة للخبرة التعليمية السريرية, العوامل المعيقة للخبرة التعليمية السريرية واستراجيات تحسين الخبرات التعليمية السريرية. أيضا تم تحديد سبعة عشر تصنيفا لها علاقة بالبيئة السريرية , الطلاب, مشرفوا التدريب العملي , طاقم التمريض , الواجبات , فرص التدريب وظروف التدريب.

الخاتمة

أجابت الدراسة على أسئلة البحث حيث تبين وجود علاقة قوية بين بيئة التعلم السريري وخبرة التعلم السريري , وجود فروقات في الوسط الحسابي لمستويات بيئة التعلم السريري وخبرة التعلم السريري, وجود فروقات ذات دلالة إحصائية في الوسط الحسابي لنوع مكان التدريب ولقسم التدريب مع خبرة التعلم السريري, تنبأ متغيري الجو التربوي والعلاقة الأشرافية للخبرة التعليمية السريرية. بالأضافة الى ظهور أربع محاور لها علاقة بوجهة نظر الطلاب للخبرة التعليمية السريرية , العوامل الميسرة والمعيقة لخبرة التعلم السريري والأستراتيجيات لتحسين الخبرة التعليمية السريرية. ان هذه النتائج تساهم في المعرفة الموجودة عن طريق ايجاد نتائج محددة لها علاقة بالسياق الفلسطيني والتي تشكل أساسا للباحثين . توصي هذه

الدراسة باجراء المزيد من البحث للحصول على المعرفة حول بيئة التعلم السريري والخبرة التعليمية السريرية لطلاب التمريض الجامعيين في كليات التمريض المختلفة ولمساقات عملية متعددة في بيئات تدريبية مختلفة.

الكلمات المفتاحية : بيئة التعلم السريري , طلبة التمريض الجامعيين, الخبرة التعليمية السريرية, فلسطين