

PERCEPTIONS OF NURSING STUDENTS REGARDING THEIR CLINICAL LEARNING ENVIRONMENT: A SYSTEMATIC REVIEW

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Abstract:

Perception of undergraduate nursing students regarding clinical environment is essential to improve the clinical training. **Aim of the Study:** This study was conducted to assessing the perceptions of nursing students regarding their clinical learning environment. **Methods:** Peer reviewed research articles related to perception of undergraduate nursing students about CLE were searched using Boolean operators and validated MeSH terms including "perception" AND "nursing student" OR "nursing students" AND "clinical learning environment" in Pub-Med, CINAHL, and Science Direct data bases. **Results:** A total of 941 articles were found, 14 research articles with a total sample size of 2875 participants met the **inclusion criteria**. There was a discrepancy of the highest and lowest mean value for different domains of learning environment, also the relationship between satisfaction and clinical learning was significantly different for various dimensions; the highest correlation value was for the role of the lecturer nurse ($r = 0.544$). **Conclusion:** Despite the satisfactory results from different studies of nursing students' perception concerning their CLE, there is still a space for obtaining more information about nursing students' perspectives in various contexts because each has its own characteristics and circumstances.

Index Terms: Nursing Students, Clinical Learning Environment.

INTRODUCTION:

Nursing education contains two parts: theoretical and clinical. The clinical nursing learning plays a major role in nursing education; it forms more than half of the nursing curriculum, [1]. Many studies had shown that the learning environment is significant with respect to clinical learning and its outcomes; also it is a powerful educational component for acquiring nursing knowledge and skills, [2].

Nursing students' perception about clinical learning environment plays an essential role in providing care to patients, [2]. The quality of learning environment is essential to discover how nursing students perceive clinical environment, [1]. From the nursing students' viewpoint, CLE is an anxiety provoking part in nursing education because it has

to satisfy the learner and the worker, [3]. Student satisfaction is defined as "meeting or exceeding the student's expectations of campus reality", [4].

Student's satisfaction can be a good quality indicator for nursing teaching and learning which eventually has a positive effect on delivering nursing care to patients because satisfied students are more effective and committed to accomplish their goals than unsatisfied students,[5]. The lack of consensus and the discrepancy among the published studies concerning the perception of nursing students about their clinical learning environment makes this topic a global concern, which justifies this review that inclines to answer the question: How do nursing students in different contexts perceive their clinical learning environment?

the quality of nursing learning environments is crucial to discovering how nursing students perceive their clinical learning environments (CLEs) he quality of nursing learning environments is crucial to discovering how nursing students perceive their clinical learning environments (CLEs) he quality of nursing learning environments is crucial to discovering how nursing students perceive their clinical learning environments (CLEs) he quality of nursing learning environments is crucial to discovering how nursing students perceive their clinical learning environments (CLEs).

Aim of the work:

This study is aimed to assessing the Perceptions of Nursing Students Regarding their Clinical Learning Environment.

METHODS:

1- Technical design:

Three databases for searching were used: CINAHL, Pub-Med, and Science Direct. Boolean operators (OR, AND) are used separately to combine and expand the search first, then to narrow down and make the search more focused to have productive results, also validated MeSH terms search is considered. Finally, the following form is used in searching ("perception" AND "nursing student" OR "nursing students" AND "clinical learning environment"). The years included are from January 2017- May 2022. The titles and abstracts of the relevant articles were skimmed carefully; (941) results from all databases (CINAHL= 448, PubMed = 22, Science Direct = 471) were obtained.

The inclusion criteria determined as follows: English language, nursing students: (2nd, 3rd, & 4th year), five years limit, research articles, peer reviewed, and the focus is on articles that talk about perceptions & views of nursing students.

The exclusion criteria: involved the articles of systemic review, simulation, and perception of other health professionals, the first year nursing students, and the articles more than five years. Finally, there are 14 articles included; six of them are shared with the three databases as illustrated in **figure 1 (PRISMA)**, the selected studies were relevant and met the inclusion criteria. These studies were reviewed extensively; ten of

them used quantitative methodology, [3, 6-14]. Three used qualitative methodology, [15-17]. Two of them used the phenomenological approach, [15, and 17]. Finally, one study used a mixed research methodology, [18].

RESULTS:

There were, [12] studies that either talked about, recommended, or encouraged further studies to go deep or explore more about the perceptions and the experiences of nursing students regarding their CLE. One study, [6] recommended that the nursing educators at Sohag University should collaborate with the clinical learning administrations to pay more attention to the obstacles in clinical environment and to take an assertive action to overcome the challenges and problems in order to have a more comfortable CLE, also they urged to conduct further studies later on to see the alteration in the students' perception, [18] in their study recommended the challenges in CLE with the curriculum design be addressed well. Another study recommended the problems experienced by nursing students should be identified through regular meetings and proper communications among nursing lecturers, nursing students, and staff members in order to improve the working environment and to support and address the concerns of the students, [9]. Two further studies focused on the collaboration and partnership with different stakeholders (nursing institutions, nursing educators, clinical sites, clinical administrators) in order to enhance positive sense towards the students, to have an organized orientation program, and to hold regular meetings to discuss the challenges related to the clinical learning environment, [7, 11]. In their study, [10] they called for further qualitative studies to collect more data to explain more the factors and causes related to the students' clinical experiences and to replicate their study on larger population from different nursing institutions to examine the different experiences of nursing students to understand the factors related to clinical environment better and to have a more representative view to improve the learning environment. One study emphasized the characteristics of the nursing team, nurse tutor, and nursing students involved in ward activities concluded that the results should prompt a deeper reflection on the components of the supervisory process and the CLE, [17]. Three studies discussed the dimensions or sub dimensions related to the clinical learning environment; the findings of one study recommended that the CLE be evaluated through the assessment of its sub-dimensions (pedagogical atmosphere & relationship with supervisors) and showed that the results of this study can be used for further research to assess the nursing schools, the hospitals, and the clinical environment, [8]. Moreover, the perceptions of the nursing students regarding the content of the role of the nurse teacher, the supervisory relations, and the pedagogical atmosphere subsidize the creation of a conducive clinical learning environment greatly, [12]. Furthermore; it should be considered that different nursing students from different universities have different clinical experiences and so different themes will emerge, [15].

Fifty six point seven (56.7%) of the students reported that there was a good relationship between nurses and physicians, and they rated this as the highest factor of positive clinical environment, [14] while there was poor relationship between nurses and students which caused a barrier for an effective and meaningful learning in the clinical environment, [18]. One study

showed that resources' adequacy and staffing were rated as the lowest factor,[14] but another study showed 97.3% of students reported that they were absent from the clinical training because they covered the shortage of staff,[9]. Also the unwilling of staff nurses to teach and help the nursing students and the shortage of resources were considered as factors that made the clinical environment not optimal for learning, [18].

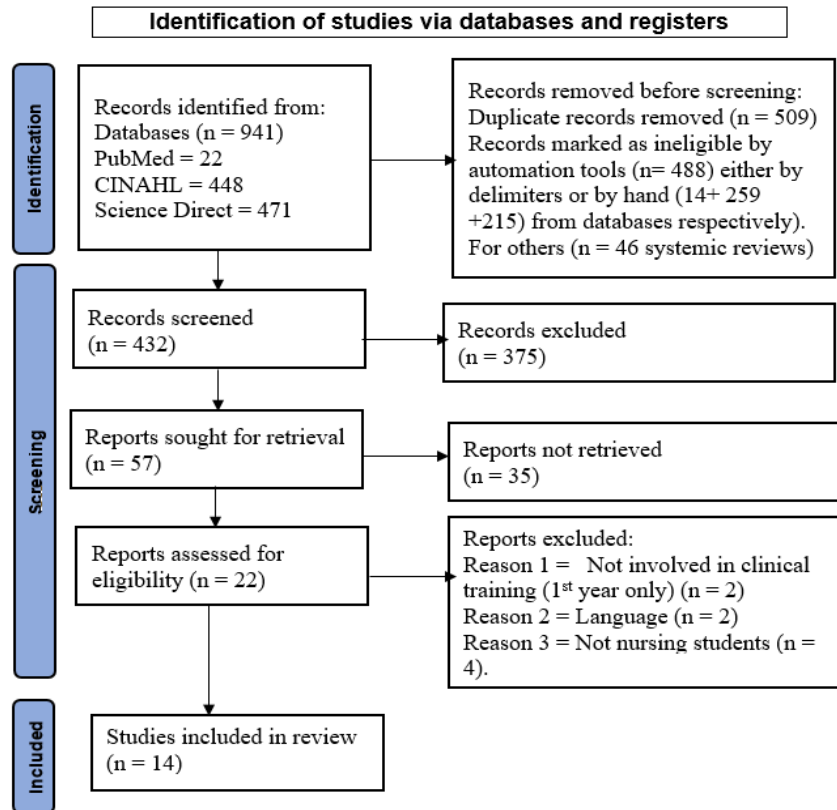
In the end, two studies discussed the strengths and weaknesses of the clinical environments of nursing practice and the factors that would enhance or impede the nursing students learning and showed that studying and understanding the perceptions of the students provide accurate and detailed information for the nursing managers. Besides, the future studies should focus on evaluating the learning environment in order to identify the challenges and the factors that ease or impede the students' learning during their clinical training, [13-14].

Characteristics

Author /Year	Country	Sample size	Students' course level	Clinical placement	Response Rate %
(Alammr et al., 2020)	Saudi Arabia	90	Final year	Hospital	89.1%
(Ali et al., 2017)	Egypt	183	2nd year	Nursing college	NA
(Doyle et al., 2017)	Australia	150	Final year	Private & public hospitals	NA
(Khan et al., 2020)	Pakistan	259	2nd, 3rd, 4th	Nursing college	NA
(Magobolo et al., 2019)	South Africa	152	2nd, 3rd, 4th	Nursing college	93%
(Ming & Wenjie, 2020)	Singapore	301	3rd	Polytechnic/ nursing students	NA
(Mosia et al., 2020)	South Africa	160	3rd year	Nursing school	91.25%
(Nahariani et al., 2018)	Indonesia	164	Final year	Three different nursing schools	84.1%
(Ramsbotham et al., 2019)	Australia & Vietnam	891	2nd, 3rd, 4th	Four different universities / nursing students	97%
(Rodríguez et al., 2021)	Spain	180	3rd, 4th	University hospital	NA
(Cengiz et al., 2021)	Turkey	30	4th year	University nursing students	100%
(Raghavan et al., 2021)	Oman	30	2nd , 3rd	Public University/ nursing students	100%
(Vizcaya-Moreno et al., 2018)	Spain	48	1st, 2nd, 3rd	University/ nursing students	100%
(Kamphinda & Chilemba, 2019)	Malawi	219	3rd , 4th year	Nursing College	96%
		2875			

Note. NA represents not available

Figure 1: PRISMA



Studies' characteristics:

The revised studies were conducted in various settings where each population had its unique experiences and lived in different circumstances; this supported the generalization of those shared or had similar characteristics. A brief description of the characteristics of the included studies is illustrated in table 1. The overall purposes of the studies were to assess, analyze, explore, describe, investigate, and evaluate the perception and views of nursing students about the clinical environment where they practiced their training and to determine the factors, challenges, obstacles and problems that eased or hindered the nursing clinical education except for one study that described the perceived personal and clinical related area and reasons for nursing students' absenteeism, [9]. The majority of the quantitative studies used the cross-sectional research designs while the phenomenological methodology was used in two of the qualitative studies, so all the studies lay within the third level of evidence according to the Johns Hopkins Nursing Evidence-Based Practice Rating Scale (JHNEBP, 2005). The participants in all studies were nursing students from either public or private universities or nursing schools and from different study levels: the 2nd, 3rd, and 4th years; except for one study which included the first year with the second and the third year students, [17]. The students training period ranged from 4 – 24 weeks at different clinical sites such as medical,

surgical, maternity, psychiatry, and primary health care centers where they trained either in governmental or private hospitals; in addition, to one study included overseas students,[7]. The sample size of the studies ranged from 30-48 participants in the qualitative studies and from 90-891 in the quantitative studies to have a total of 2875 participants in all reviewed studies. The sample selection was either convenient in quantitative or purposeful in qualitative studies. The age groups of the participants ranged from 18–46 years old,[8-9]respectively. The percentage of female nursing students was more in all studies except for,[15] study which was equal with the male students and for,[8] study where the percentage of male nursing students was higher than the females' percentage. With regard to the difference between the males and females perception of the CLE, the females had higher mean scores of leaning environment domains than the males,[6] and they perceived more opportunities for career advancement,[14] while the male students rated the clinical environment more than females,[13] but they were the least satisfied,[8].

Measures:

Five studies used the CLE supervision and teacher role (CLES+T) instrument, [3,7-8,12,18] this scale is a well- known questionnaire scale with five domains; pedagogical atmosphere, leadership style, nursing care premises, supervisory relationship, and the nurse teacher role) and 34 items. The CLES+T instrument uses a five-point Likert scale. The Cronbach alpha for the original tool ranged from 0.77 to 0.96, [19]. The English version of the instrument was used in the five studies. One study used the modified form of CLES+T, which is the clinical learning environment inventory (CLEI), [10]. Two studies used the CLEI with other instruments such as the Vietnamese versions of the Dundee Ready Education Environment Measure (**V- DREEM**), [13] and the Obstacles to Learning Clinical Skills Tool (OLCS), [6]. One study used the PES-NWI questionnaire,[14] and four studies used structured self-administration and focus group,[11,17]semi-structured,[16]and face to face interviews,[15]. Still one study used the Simelane and Thobakgale, which is related to factors contributing to absenteeism of student nurses, [9].

RESULTS:

The data were analyzed by different methods such as the Statistical Package for Social Sciences (SPSS) in which nine studies used different versions, [6-10, 12-14, and 18]. One study used the Statistical Analysis Software (SAS), [11]. The Qualitative data were analyzed using the content analysis approach, and NVivo10 program was used for coding, [15]. Frequencies and percentages were used for categorical data. Descriptive statistics summarized students' demography namely means, medians and percentiles to calculate the continuous data, standard deviation, t. test for comparison (eg. males & females), Chi square, and Fisher Exact Test. Spearman's rank correlation coefficient as well as multiple linear regression were used to examine the relationship between the constructs. Also, Mann Whitney U-test were also carried out to compare the scores of the means of PES-NWI subscales by an academic year and unit type, [14].

Domains and sub-dimensions:

One study revealed that leadership style of the ward manager reported the highest mean ($M = 3.80$, $SD = 0.86$), [3] while another study showed that nursing care in the ward had the highest mean ($M = 3.87 \pm 0.77$), [8]. A third study indicated that the role of the lecturer nurse had the highest correlation value ($r = 0.544$), [12]. The lowest mean value was given to the role of the teacher and the supervisory relationship ($M = 3.57$, $SD = 0.80$) and ($M = 3.71 \pm 0.84$) respectively, [3, 8]. In addition, one study indicated that the role of the nurse tutor was not well defined as the students stated, [17]. Finally, in the CLEI constructs, the personalization and task orientation got the highest scores while individualization and innovation got the lowest scores, [10]. There were many studies addressing the factors, obstacles and challenges that the nursing students might face during their clinical training and had negative impact on their clinical learning; among these factors were the lack of cooperation between the clinical departments in hospitals and the nursing educators, [3] poor quality of CLE represented by lack of appropriate educational facilities, unsuitability of clinical climates, crowding numbers of students in clinical sites, [6] and the students not receiving feedback, [18]. While having four weeks of training led to a better quality learning environment, the interpersonal relationship between the instructors and the staff had key factors influencing the students' learning, [13]. Besides, how the ward staff behaved toward the undergraduate nursing students was reported as the second strongest factor that made the learning environment more comfortable, [7].

Satisfaction:

Eight studies reported a relationship between the CLE and the students' satisfaction with different percentages, [3, 6-7, 10, 12-14, 18]. The majority of nursing students were satisfied, [3]. 72.2% of the students were moderately satisfied, [6]; 90% of nursing students were highly satisfied and the culture of the nursing unit had the most effect on satisfaction rates by making the nursing students feel comfortable, [7]. While the students were dissatisfied with clinical support and supervision, [18]. A significant relationship was between the students' satisfaction and the CLE, [3, 12, and 14]. The majority of the students showed moderate satisfaction and positive views toward their CLE, [6, 10]. The highest correlation was for the role of the nurse teacher ($r = 0.544$), the coefficient of β adjusted highest to 2.075, [12]; the nurse teacher role had the highest impact of nursing students satisfaction, [12] and 62.8% of ($n = 113$) were satisfied with the learning practice environment, [14]; other students perceived their CLE as somewhat satisfied or favorable, [13-14].

Qualitative studies:

Three studies extracted different categories and themes; one of them emphasized the nurse tutor and student nurse relationship, [17]. Another one considered the clinical instructor central for clinical training, [16]. While two of them reassured the interpersonal skills and communication, [15-16].

The bias:

One study talked about the response bias; in which the participants in self-administered surveys may answer in an acceptable social manner rather than reflecting their real own

experiences, [10]; this also may be applied to other studies that had a self-administered questionnaire, which may affect the quality of these studies.

Quality assessment:

Referring to the (JHNEBP, 2005) Rating Scale the reviewed studies lie between good and high levels as several studies used appropriate methodologies, valid and reliable measures, and adequate sample size and reported the response rate. Besides, their findings and recommendations were consistent with the literature.

DISCUSSION:

The reviewed studies show that the nursing students from various settings perceive their CLE differently; this means that there are different points of views about the dimensions or domains of CLE among the nursing students in different contexts, which mostly affect the nursing students' clinical learning. Three studies indicate that the highest mean values for different domains is the leadership style, nursing care, and the supervisory relationship, respectively, [3, 8, 12]. This also applies to the dimensions with the lowest mean values. One study shows that the role of the teacher has the lowest mean value, [3]. While another study reveals that the role of the tutor nurse is not clearly defined, [17]. The findings of another study are different, in which the supervisory relationship has the least mean value, [8]; this contradicts with the results of, [12] study which indicates that the supervisory relationship has the highest mean value.

Regarding the gender differences, a study at sohag university in Egypt reveals that the mean scores for CLE domains are higher in female students than in male students; these findings differ from the results of a study done on a large sample at four different universities in both Australia and Veitnames, which shows that the environment domains for the male nursing students rated higher rates than female nursing students, [6,1].

The current evidence shows that nursing students' satisfaction is another important indicator in the CLE that affects the students' attitudes toward learning as many studies confirm this relationship with varied percentages; this also emphasizes the satisfaction variable in further studies as an indicator of delivered quality care. The findings of a study in Indonesia shows that the role of the nursing teachers has the highest correlation with satisfaction. Another study's findings in Australia indicate that the nursing unit culture has the most impact on comfort and satisfaction for nursing students while another study done in Turkey reveals that effective communication has the highest impact on the students' satisfaction, [7,15]. An additional study in Malawi shows that the nursing students are not satisfied with the clinical support and supervision and this makes the clinical environment not optimal for learning, [18]. This is different from the findings of, [12] study which indicates that the role of the lecturer has the highest correlation value of satisfaction. Concerning the satisfaction among male and female nursing students, the findings of a study in Pakistan point out those female nursing students are more satisfied than male nursing students, [8].

Regarding the level of years for nursing students' perception, one study conducted in Singapore shows that the final year nursing students have moderate positive views of their clinical environment while the findings of two other studies-- one in Spain and the other in Australia & Vietnam-- are similar claiming that as the students' progress, they become more able to compare and more critical, but their perception and satisfaction trend down, [10, 13-14].

The results of the thematic analysis of two qualitative studies conducted recently in Turkey and Oman show communication as a theme; one of these studies also encourages further research on different students at other universities as new themes might emerge, [15]. This review suggests that the qualitative studies should be encouraged in the future research because many of these studies may extract different categories of themes related to the challenges, problems, and factors facing nursing students during their clinical training. It is also recommended that further mixed studies be done as they may strengthen the evidence, produce new themes and add an additional input to the literature.

Most of this evidence draws our attention to the obstacles facing the nursing students during their training in clinical sites and focuses more on their perception and experiences in the CLE which must be studied in other contexts with larger population in order to clarify more these experiences and perceptions ; there is also a focus on the collaboration and partnership between the nursing schools and the clinical settings; this review apparently promotes future studies in these aspects to highlight these issues and encourage to explore more about making the CLE and the nursing students training more comfortable as the administrators of both academic institutions and clinical settings will be more involved and become aware of the circumstances of nursing students training which will enable them to work and to solve the related problems and make the students' trainings more satisfactory. One can conclude that future studies, more investigation and in-depth research in other contexts regarding the nursing students perceptions may reveal different results.

Implications:

The implication of this review can be employed in nursing education to develop baccalaureate nursing curriculums, assist in decision making and implementation of successful programs, improve different learning modalities, and initiate alternative teaching methods in clinical education , also it can be employed in clinical settings to do assessments and evaluation of the sub- dimensions of the clinical learning environment and act on improving them, , enhance more collaboration between nursing instructors and nurses in the clinical sites, and promote partnerships between nursing institutions and clinical learning sites.

Recommendations:

It is recommended that further future quantitative and qualitative studies be conducted at students' levels representing various nursing schools from varied countries, increasing the sample size and involving both the academic institutions and the clinical learning settings to explore more various challenges and obstacles to minimize the related problems and to improve the quality of the delivered care. In addition, there must be an emphasis on further studies to explore other variables and to focus on the perception of the nursing students

concerning the pedagogical atmosphere and the relationship with supervisors among both sexes and different levels of nursing students. Furthermore, studying and understanding the perceptions of the nursing students may reveal important, accurate, and detailed information to the nursing managers and nursing academics about the challenges that face nursing students and hinder their learning during their clinical training.

Limitations:

The limitations in this review can be categorized as follows. First, some studies deal with one cohort of students at one campus or one university. Second, other studies talked about studying homogenous participants with small sample size, which makes results difficult to generalize, as they are not representative. Third, there is low ranking in the hierarchy of the research evidence as most of the studies are cross sectional and qualitative; many of them have high response rate though. Fourth, there is also a social desirability bias because most of the studies use self-administered questionnaires, which restrict collecting profound and pertinent information. Fifth, cultural differences may affect the comparisons among different studies. Finally, the majority of the studies conducted in countries with limited resources; however, if other high resource countries are involved, different results might be obtained

Strengths:

The strength of this review is that the students are from 12 different countries, 16 different public, private, and polytechnic universities and nursing colleges, and three different public, private, and university hospitals, which aids in collecting varied perspectives.

CONCLUSION:

Perception of nursing students about their CLE plays a major role in understanding how the nursing students deliver competent and high quality nursing care to their patients, and help the managers of the clinical settings and the nursing educators to better facilitate the training conditions for the nursing students as they become more aware of these conditions. More future mixed studies that focus on different dimensions of the clinical environment in various contexts with more involvement of stakeholders will improve nursing students' performance and make them more satisfied.

Abbreviation:

CLE: Clinical Learning Environment

SAS: Statistical Analysis Software

SD: Standard Deviation

M: Mean

SPSS: Statistical Package for Social Sciences

OLCS: Obstacles to Learning Clinical Skills Tool

CLEI: clinical learning environment inventory

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References:

- 1) Alatawi, A., Domantay, A. A., ALatawi, et al. Nursing Students' Satisfaction of the Clinical Learning Environment in Saudi Arabia. *International journal of Nursing Didactics* 2020; 10(6):09-17. DOI: <https://doi.org/10.15520/ijnd.v10i06.2999>.
- 2) Neupane, N., Pandey, N., & Sah, S.K. Perception of Clinical Learning Environment among Nursing Students. *International Journal of Advanced Microbiology and Health Research* 2018; 2(1):36-41. ISSN: 2457-077X. Volume 2, Issue 1 (January to March 2018), PP. 36-41 Available online at www.ijamhr.com.
- 3) Alammar, K., Ahmad, M., Almutairi, S., et al. Nursing students' perception of the clinical learning environment. *The open nursing Journal* 2020; 14(1). <http://dx.doi.org/10.2174/1874434602014010174>.
- 4) Boylston, M. T., & Jackson, C. Adult student satisfaction in an accelerated RN-to-BSN program: A follow-up study. *Journal of Professional Nursing* 2008; 24(5):285-295. <https://doi.org/10.1016/j.profnurs.2007.10.006>.
- 5) Kabanya, C. N., Karani, A. K., & Mirie, W. Determinants of satisfaction with training process among final year nursing students at kenya medical training college. *Biomedical Journal of Scientific & Technical Research* 2017; 1(4):1-6. <https://doi.org/10.26717/BJSTR.2017.01.000331>.
- 6) Ali, G. E. N., & Ali, N. M. Clinical learning Environment and the Influential Factors from Nursing Students perspectives. *kufa Journal for Nursing sciences* 2017;7(2). DOI prefix: 10.36321.
- 7) Doyle, K., Sainsbury, K., Cleary, S., et al. Happy to help/happy to be here: Identifying components of successful clinical placements for undergraduate nursing students. *Nurse education today* 2017; 49:27-32. <https://doi.org/10.1016/j.nedt.2016.11.001>. Epub 2016 Nov 17
- 8) Khan, A., Begum, H., Rehman, A. U., et al. Experiences of healthcare students and the challenges posed by their clinical learning environment. *CEJNM* 2020; 11(1):19-24. <https://doi.org/10.15452/CEJNM.2020.11.0004>.
- 9) Magobolo, G. N., & Dube, B. M. Factors influencing high absenteeism rate of student nurses in clinical areas at a nursing college in the Lejweleputswa District. *Curationis* 2019; 42(1):1-6. Published online 2019 Aug 26. <https://doi.org/10.4102/curationis.v42i1.1985>
- 10) Ming & Wenjie. Nursing students' views and satisfaction of their clinical learning environment in Singapore. *Nursing Open* 2020; 7(6):1909–1919. <https://doi.org/10.1002/nop2.581>.
- 11) Mosia, S. J., & Joubert, A. Primary healthcare practice learning environment: A description of students' perspectives. *International Journal of Africa Nursing Sciences* 2020; 13:100230. <https://doi.org/10.1016/j.ijans.2020.100230> Corpus ID: 2266346191

- 12) Nahariani, P., Kurdi, F., & Priyanti, R. P. The perception of Indonesian nursing students on the learning environment in clinical practice. *Jurnal Ners* 2018; 13(2):233-238. <http://dx.doi.org/10.20473/jn.v13i2.9770>
- 13) Ramsbotham, J., Dinh, H. A., Truong, H., et al. evaluating the learning environment of nursing students: A multisite cross-sectional study. *Nurse education today* 2019; 79: 80-85. *Nurse education today*, 2019 Cited by 32 Related articles All 8 versions
- 14) Rodríguez-García, M. C., Márquez-Hernández, V. V., Granados-Gámez, G., et al. Undergraduate nurses' perception of the nursing practice environment in university hospitals: A cross-sectional survey. *Journal of Nursing Management* 2021; 29 (3):477-486. 29(3), <https://doi.org/10.1111/jonm.13184>
- 15) Cengiz, Z., Gurdap, Z., Karaca, E., et al. Opinions of nursing students about clinical practice; A qualitative study. *Annals of Medical Research* 2021; 28(12):2168-2173. Yıl: 2018 Cilt: 35
- 16) Raghavan, D., Divya, K. Y., Francis, F., et al. Clinical Learning Triad in Nursing Education: Qualitative Analysis of Perceptions of Undergraduate Nursing Students. *International Journal of Research in Education and Science* 2021; 7(3):735-746. <https://doi.org/10.46328/ijres.2046>
- 17) Vizcaya-Moreno, M. F., Pérez-Cañaveras, R. M., Jiménez-Ruiz, I., et al. Student nurse perceptions of supervision and clinical learning environment: a phenomenological research study. *Enfermería Global* 2018; 17(3):306-331.
- 18) Kamphinda, S., & Chilemba, E. B. Clinical supervision and support: perspectives of undergraduate nursing students on their clinical learning environment in Malawi. *Curationis* 2019; 42(1):1-10. <https://doi.org/10.4102/curationis.v42i1.1812>
- 19) Warne, T., Johansson, U. B., Papastavrou, E., Tichelaar, E., Tomietto, M., Van den Bossche, K. ... et al., (2010). an exploration of the clinical learning experience of nursing students in nine European countries. *Nurse education today*, 30(8), 809-815. the quality of nursing learning environments is crucial to discovering how nursing students perceive their clinical learning environments (CLE) <https://doi.org/10.1016/j.nedt.2010.03.003>.