

Clinical Placement Experience, Supervision, and Nursing Career Aspirations of Undergraduate Nursing Students in Sarawak, Malaysia

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Abstract: *This study aimed to explore nursing students' perceptions of the clinical learning environment and mentorship during their clinical placement in hospitals and how these factors relate to their intention to work as a nurse upon graduation. A survey was conducted among nursing students who had completed at least 12 months of clinical practice in hospitals located in Kuching, Sarawak, between January 2022 and February 2023. Data were analysed using percentages, frequencies, mean, standard deviation, t-test, Pearson's correlation, ANOVA, and regression analysis. Our findings revealed a significant correlation between the sociodemographic characteristic such as age of students and year of study towards clinical learning experience. Student perceived ward as good learning environment, clinical teacher teaching expertise, and clinical teacher ability to integrate between knowledge and practice rated the most satisfying element in students' clinical experience. Our study established a significant correlation between student age, year of study, and their clinical learning experiences. Students found the ward environment, clinical teacher expertise, and knowledge-to-practice integration to be highly satisfying elements in their clinical education.*

Keywords: *Nursing students, CLES+T, clinical experience, Intention*

1. Introduction

Nursing education comprises both theoretical and practical components. Clinical practicum, which makes up 50% of the educational experience, is an essential part of nursing training. The theoretical component takes place in classrooms and labs, and involves lectures, case studies, and discussions. This aspect of nursing education provides students with opportunities to enhance their knowledge, skills, attitudes, and values. Complementing the theoretical component, clinical practice allows students to develop clinical knowledge and skills, integrate theory into practice, gain insight into the roles of practicing nurses, and strengthen their expectations of their future professions (Liu et al., 2022).

The clinical learning environment (CLE) is an interactive network of factors within a clinical setting that affects students' learning outcomes and their satisfaction with the nursing profession (Saarikoski & Strandell-Laine, 2018). It also influences their practicum preparation. The new framework provides students with an opportunity to apply practical skills and

cooperate with patients, while integrating the theoretical knowledge they have acquired. In addition, nurses' experiences with CLE and mentoring models have an impact on their decisions and motivation regarding professional advancement. Considering the obligation of nurses to continue their professional development, CLE and mentoring models can play a crucial role in their career progression.

In contrast to theoretical courses that are designed to facilitate student learning, clinical settings can present students with unintended challenges, such as difficult patients or relatives, inadequate supervision, and mismatched practicum objectives and duration (Kaihlanen et al., 2021). These situations can cause students to experience high levels of anxiety and stress, which may negatively impact their well-being and future career decisions. Therefore, it is essential to provide high-quality and effective CLE to nursing students, which will help them develop their competence and increase their confidence as independent nursing professionals (Inocian et al., 2022).

There are also negative experiences associated with the learning environment, such as a dislike of one's own department or being in impoverished learning environments with staff who have undesirable attitudes toward working with the elderly. A pedagogical atmosphere characterized by respect, acceptance, and opportunities for learning with both mentors and clinical teachers is essential to create a successful and reliable clinical learning environment (Aliafsari Mamaghani et al., 2018; Bawadi et al., 2019). A satisfied clinical learning environment and effective supervision can support the development of students' clinical competence and significantly impact their overall experience. The importance of learning environments in education is reflected in the numerous tools developed to measure them.

The Clinical Learning Environment, Supervision and Teacher Scale (CLES+T) is one of the tools developed to measure nursing students' perceptions of clinical placement and the quality of clinical education in hospital units (Mueller, Mylonas, & Schumacher, 2018). It was created in 2008 with the goal of providing a multidimensional evaluation of the clinical learning environment. The scale has been translated into over 27 languages, including Swedish, German, Italian, Ghanaian, Spanish, Dutch, Greek, Turkish, and Korean, and is now used in more than 40 countries (Guejdad, Ikrou, Strandell-Laine, Abouqal, & Belayachi, 2022).

Recent studies in various countries have shown that the CLES+T, which includes five elements of clinical learning such as supervision/mentorship, the role of the nurse teacher, a conducive learning atmosphere, nursing care provided on the ward, and the leadership style of the ward manager, is a useful instrument to assess the elements of the clinical learning environment at an international level (Zhao, Xiao, Watson, & Chen, 2021).

Malaysia, like many other countries, is facing a shortage of nurses (Tamata & Mohammadnezhad, 2023). Therefore, it is essential to attract more students to consider nursing as a career, and one way to accomplish this is by improving the learning experiences of nursing students during their clinical practice period. As part of strategies to enhance the quality of education and healthcare, educational councils also prioritize the well-being of nursing students. In Malaysia, basic nursing education consists of two levels: diploma and bachelor's degree. Despite the differences in the nursing qualification levels, nursing graduates are required to complete supervised experience in a hospital setting, which is an integral component of their nursing education that cannot be replaced.

There is a need to improve clinical nursing education in Malaysia, as clinical placement is a critical component of nursing students' training. During this period, students spend four to eight weeks in public hospitals and health clinics under the supervision of a clinical instructor, who assesses their clinical performance and sets targets. The final assessment of each ward or clinic is used to calculate the student's overall clinical placement mark. While studies in Western countries have shown the importance of good clinical learning environments and nursing students' well-being, there is limited research on the effects of the Clinical Learning Environment in Malaysia. Therefore, it is essential to understand nursing students' perceptions of their own well-being in clinical practice, as this can inform strategies to improve outcomes of clinical learning (Arribas-Marín, Hernández-Franco, Plumed-Moreno, & Blanco-Blanco, 2021).

Despite the strong empirical evidence in Western countries regarding the importance of good clinical learning environments and nursing students' well-being, there are few studies that have focused on the effects of CLE on students' outcomes in Malaysia. Additionally, Malaysian nursing students have limited awareness of the importance of the Clinical Learning Environment, Supervision and Teacher Scale (CLES+T) (Karim, Majid, Rashdan, Besar, & Yaman, 2020). Therefore, there is a lack of clear understanding regarding nursing students' clinical learning environments in Malaysia and their impact on students' career choices. Since all nursing students are required to attend clinical placements, it is crucial to examine their perception of the environment. The objectives of this study were to (1) analyze nursing students' perceptions of the clinical learning environment and supervision and identify the factors that affect them, and (2) analyze the relationship between the clinical learning environment and the intention to stay in the hospitals upon graduation.

2. Methods

Study design

A cross-sectional observational study was conducted among nursing students who were taking part in clinical placement at Universiti Malaysia Sarawak, using a convenience sample. The study was conducted in accordance with the STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) checklist and the Declaration of Helsinki. Prior to participation, all subjects and/or their legal guardians provided informed consent. The survey data was treated confidentially, and the anonymity of respondents was maintained throughout the study.

Participants and setting

Typically, the sample size should be 5-10 times or 10-20 times the number of questionnaire items. However, since there were a limited number of eligible students for the study, we included all students as respondents using purposive sampling. At UNIMAS, nursing students are divided into four years, from Year 1 to Year 4. To be included in the study, students must have been enrolled in clinical practicum for at least four weeks during their study period and have voluntarily agreed to participate in the survey. Consequently, only students from Year 2 to Year 4 were eligible for the study.

Research instrument

The CLES+T scale, which is composed of 34 items, is categorized into five sub-dimensions: 'Role of nurse teacher', 'Supervisory relationship', 'Pedagogical atmosphere at the ward', 'Leadership style of the ward manager', and 'Premises of nursing on the ward' (Barisone et al., 2022). Each item is rated on a 5-point Likert scale, with scores ranging from 1 (fully disagree)

to 5 (fully agree). To assess the level of agreement with the statements, additional questions were included on the program of study and level, with higher scores indicating greater agreement. We estimated the internal consistency of the instrument and each dimension using Cronbach's alpha coefficients.

Data collection

The survey was administered by three Year Coordinators from the department of nursing. The questionnaire was converted into a Google Form platform and distributed through the WhatsApp platform, which is widely used for communication and social networking in Malaysia. Respondents were required to complete all items, and only one response was allowed per IP address. Data collection was monitored in real-time using the Google Form management platform. Based on a preliminary survey of 20 students, the average time to complete the questionnaire was calculated, with the shortest time being more than four minutes. The questionnaires were distributed between December 2022 and January 2023.

Statistical analysis

Statistical analyses were performed using SPSS 19.0. Demographic data were examined using frequencies and percentages. For each student, an overall mean score was calculated by averaging the scores of all the questions. Similarly, scores on the five sub-dimensions were calculated using the respective question scores. The association between demographic characteristics, clinical placement experience, and mean scores was assessed using appropriate statistical tests, such as t-tests or ANOVA. Linear regression was employed to determine the correlation between the overall mean score on CLES+T and demographic characteristics, which were binary or categorical. Additionally, logistic regression was utilized to evaluate the effect of the CLES+T on participants' attitudes towards their employment choices.

3. Results

Of the 177 UNIMAS nursing students who were eligible and invited to participate in the study, 132 students (74.58%) took part. Most participants were female (n=111, 84.1%), with the remaining being male students. The ethnic distribution was relatively even, with Malay (n=44, 33.3%) and Sarawakian Bumiputera (n=43, 32.6%) being the largest groups, followed by Sabahan Bumiputera (n=31, 23.5%) and Chinese participants (n=12, 9.1%). The largest group of participants was Year 2 students (n=56, 42.4%), followed by Year 3 (n=45, 34.1%), and Year 4 (n=31, 23.5%). Seventy-five percent of the total students chose nursing as their first, second, or third choice.

Table 1: Sociodemographic characteristics of nursing students

Character	<i>n</i>	%
Age (years old)	<i>M</i> =21.81	<i>SD</i> =1.382
Sex		
Male	21	15.9
Female	111	84.1
Ethnic		
Malay	44	33.3
Chinese	12	9.1
Sarawakian Bumiputera	43	32.6
Sabahan Bumiputera	31	23.5
Indian	1	0.8
Others	1	0.8

Year of study

Two	56	42.4
Three	45	34.1
Four	31	23.5

Choice of Nursing Course (upon student's enrolment)

1st	39	29.5
2nd	49	37.1
3rd	15	11.4
4th	10	7.6
5th	14	10.6
Not in my choice	5	3.8

Clinical learning experience supervisor and teacher (CLES + T)

The clinical learning experience supervisor and teacher (CLES+T) had a mean score of 125.79 (SD=21.44). Among the items, the three most satisfying clinical learning experiences were "The ward can be considered a good learning environment" (M=4.083, SD=0.883), "The clinical instructor was able to provide his or her teaching expertise to the clinical team" (M=4.068, SD=0.884), and "I believe the clinical instructor was able to integrate theoretical knowledge and everyday nursing practice" (M=4.015, SD=0.847). On the other hand, the three lowest items rated as the most dissatisfying clinical learning experiences were "The staff learned the students' personal names" (M=3.121, SD=1.146), "The staff showed interest in student supervision" (M=3.182, SD=1.010), and "I felt comfortable participating in discussions during staff meetings (e.g., before shifts)" (M=3.205, SD=1.103).

Table 2: Clinical Learning Experience and Supervisor (CLES + T)

Clinical Learning Experience and Supervisor	M	SD
My supervisor showed a positive attitude towards supervision	3.7727	0.843
I felt that I received individual supervision	3.5152	0.953
I continuously received feedback from my supervisor	3.7879	0.981
Overall, I am satisfied with the supervision I received	3.7121	0.937
The supervision was based on a relationship of equality and promoted my learning	3.7652	0.972
There was a mutual interaction in the supervisory relationship	3.6591	0.972
Mutual respect and approval prevailed in the supervisory relationship	3.7955	0.994
The supervisory relationship was characterized by a sense of trust	3.7879	0.957
The staffs were easy to approach	3.5152	0.945
During staff meetings (e.g., before shifts) I felt comfortable taking part in the discussions	3.2045	1.103
I felt comfortable going to the ward at the start of my shift	3.4091	0.957
There was a positive atmosphere on the ward	3.3712	0.894
The staff was generally interested in student supervision	3.1818	1.010
The staff learned to know the students by their personal names	3.1212	1.146
There were sufficient meaningful learning situations on the ward	3.7576	0.857
The learning situations were multi-dimensional in terms of content	3.9318	0.831
The ward can be regarded as a good learning environment	4.0833	0.883
In my opinion, the clinical instructor was capable of integrating theoretical knowledge and everyday practice of nursing	4.0152	0.847
The clinical instructor was capable of operationalizing the learning goals of this placement	3.9318	0.926
The clinical instructor helped me to reduce the theory-practice gap	3.9545	0.940
The clinical instructor was like a member of the nursing team	3.8939	1.010
The clinical instructor was able to give his or her teaching expertise to the clinical team	4.0682	0.884
The clinical instructor and the clinical team worked together supporting my learning	3.9318	0.884

The common meetings between myself, mentor and clinical instructor were comfortable experience	3.6970	0.972
The atmosphere meeting my clinical instructor was harmony	3.6894	0.884
Focus on the meetings was in my learning needs	3.8030	0.903

M = mean, SD = standard deviation

Association between sociodemographic characteristics and CLES+T

The study found a significant negative correlation between the age of participants and CLES+T ($r=-0.344$, $p<0.001$). Additionally, an ANOVA test showed that the year of study was associated with CLES+T ($F(2, 129) = 15.47$, $p < 0.001$).

The first finding indicates that as the age of participants increased, their satisfaction with their clinical learning experience with supervisors and teachers decreased. This suggests that older students may have different expectations or needs from their clinical learning experiences or may perceive different challenges or barriers compared to younger students. However, it's important to note that correlation does not imply causation, and other factors could be at play that affect both age and satisfaction with clinical learning.

The second finding suggests that the year of study is associated with satisfaction with clinical learning experience. Specifically, there was a significant difference in CLES+T scores between students in different years of study. This could indicate that as students' progress through their nursing program, their clinical learning experience changes in ways that affect their satisfaction. For example, they may have different responsibilities, encounter different patient cases, or receive different levels of support from their supervisors and teachers. It's worth noting that this finding could also be influenced by other factors, such as differences in the clinical sites where students are placed based on their year of study.

Table 3: Effects of students' demographic characteristics on clinical learning environments (CLES + T)

Sociodemographic criteria	n	M (SD)	F/r/t	p
Age	132	21.81 (1.38)	-0.344r	<0.001*
Sex				
Male	21	125.38		
Female	111	125.86	-0.094t	0.925
Ethnic				
Malay	44	127.80 (22.41)		
Sarawakian Bumiputera	43	124.91 (20.15)		
Sabahan Bumiputera	31	125.79 (21.41)	0.456F	0.714
Others	14	128.93 (23.49)		
Year of Study				
Two	56	133.91 (21.19)		
Three	45	126.69 (17.48)	15.47 F	<0.001*
Three	31	109.80 (18.64)		
Choice of Nursing (Unit Pengambilan Universiti)				
First	39	124.97 (23.76)		
Second	49	126.96 (21.13)		
Third	15	126.80 (21.62)		
Forth	10	123.60 (23.35)	0.267 F	0.931
Fifth	14	127.71 (16.34)		
Not in my choice	5	116.60 (15.08)		

r = Pearson's R correlation, t = Independent t Test, F = Analysis of Variance (ANOVA)

Effect of CLES+T towards intention to work as nurse in future

In terms of the intention to work as a nurse in the future, a binary logistic regression analysis indicated that there were no sociodemographic characteristics that were related. Furthermore, the study found that neither the CLES+T score nor its subdomains were a predictor of the intention to work as a nurse in the future.

Table 4: Effects of clinical learning environments on students' intention to be a nurse

Scales/subscales	M (SD)	B	S.E.	Wald	P	OR	95% CI
Total scores	125.79 (21.44)	0.019	0.020	0.861	0.353	1.019	0.980 1.059
Dimensions of CLES + T							
Supervisory relationship	29.80 (6.147)	0.023	0.090	0.065	0.799	1.023	0.857 1.221
Pedagogical atmosphere at the ward	31.56 (6.198)	0.069	0.090	0.593	0.441	1.072	0.898 1.279
Role of nurse teacher	34.98 (6.972)	0.033	0.101	0.110	0.741	1.034	0.848 1.261
Leadership style of the ward manager	14.83 (3.146)	0.252	0.187	1.806	0.179	1.286	0.891 1.857
Premises of nursing on the ward	14.60 (3.169)	-0.424	0.243	3.035	0.081	0.655	0.406 1.054

M = Mean, SD = Standard deviation, CI = confidence interval

Table 5: Single items with 3 highest and 3 lowest mean score

Scores	Scales/subscales	M (SD)
The 3 highest score	The ward can be regarded as a good learning environment	4.083 (0.883)
	The clinical instructor was able to give his or her teaching expertise to the clinical team	4.068 (0.884)
	In my opinion, the clinical instructor was capable of integrating theoretical knowledge and everyday practice of nursing	4.015 (0.847)
The 3 lowest score	The staff learned to know the students by their personal names	3.121 (1.146)
	The staff was generally interested in student supervision	3.182 (1.010)
	During staff meetings (e.g., before shifts) I felt comfortable taking part in the discussions	3.205 (1.103)

M = Mean, SD = standard deviation

4. Discussion

A study by Hanum, Hu, Wei, Zhou, and Ma (2023) found that nursing students who reported higher levels of satisfaction with their clinical learning experiences had higher levels of intention to remain in the nursing profession. Similarly, a study by Zhang et al. (2022) found that nursing students who reported higher levels of clinical competence (measured using the CLES) also had higher levels of intention to work as a nurse.

However, this study suggests that the clinical learning environment may not significantly affect student intention to become a nurse. This could be due to several reasons, including the clinical learning environment being only one of many factors influencing a student's career decision, other factors having a more significant impact, or the clinical learning environment not being perceived as a direct determinant of future career intentions. Overall, the relationship between the CLES and intention to become a nurse is complex and may depend on a variety of factors, including the specific population being studied, the measurement of both variables, and the other variables that are included in the analysis.

Regarding clinical learning experience, this study found that as participants' age increased, their satisfaction with their clinical learning experience with supervisors and teachers decreased. This suggests that older students may have different expectations or needs from their clinical

learning experiences or may perceive different challenges or barriers compared to younger students.

The study also found that the year of study was associated with satisfaction with clinical learning experience. This finding was in concur with Papastavrou, Dimitriadou, Tsangari, and Andreou (2016) where they found Year 1 students were more satisfied in their clinical learning experience. Students in different years of study had significantly different CLES+T scores, indicating that their clinical learning experience changed as they progressed through their nursing program. This could be due to differences in responsibilities, patient cases, or support received from supervisors and teachers. Contrary to the findings of Karim et al. (2020) who reported no statistically significant correlation between year of study and students' satisfaction, the present study yielded contradictory results.

Additionally, limitations in methodology or sample size could have affected the study's results, and further research with larger samples and more comprehensive assessments may be necessary to understand the relationship fully.

The study found no significant difference in sex regarding the intention to work as a nurse in the future. Additionally, unequal groupings of male and female students could have reduced the statistical power to detect a significant difference between the sexes.

Collaboration between the clinical instructor and ward managers is essential in recognizing and resolving the underlying factors responsible for the students' negative perception (Subke, Downing, & Kearns, 2020). Actions may include offering extra support and guidance to students, such as increased feedback frequency, facilitating opportunities for reflection and debriefing, and addressing workload or patient care concerns that might impede effective learning for the students.

The clinical instructor should also work with the students to help them develop strategies for coping with any challenges they may be facing in the clinical environment. This could involve providing guidance on time management, stress reduction techniques, and effective communication with colleagues and patients (Nyqvist, Brodin, Nilsson, & Lindström, 2020). Additionally, the clinical instructor can encourage the students to provide feedback on their experiences and work with the ward managers to implement changes based on this feedback. It is important for the clinical instructor to maintain a supportive and positive learning environment, while also addressing any issues that may be affecting the students' learning experience. By taking an active role in addressing these issues, the clinical instructor can help to improve the students' perception of the ward environment and enhance their learning outcomes.

5. Conclusions

The study aimed to explore the active participation of students in the learning and training process during clinical placements, which can be enhanced by support, supervision, and interaction with peers. It is suggested that ward managers play a crucial role in building a positive clinical teaching environment that promotes opportunities for theoretical and practical connections among students through effective feedback mechanisms. A dedicated work team can also be an effective strategy to improve the clinical learning experience of nursing students, which can lead to a better clinical learning environment and meaningful experiences to build their professional roles and competencies.

Recommendation

In future study, it is recommended to investigate the long-term career outcomes of nursing students based on their perception of their clinical learning environment. This study found a significant correlation between nursing students' perception of their clinical learning environment and their intention to work as a nurse. Future research could follow up with nursing students after graduation to explore how their perception of their clinical learning environment during their studies may have influenced their career outcomes.

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Declaration of conflicting interest

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Declarations

Ethics approval and consent to participate

This participatory action research was not required ethical rigour. However, all methods were carried out in accordance with the Declaration of Helsinki. Informed consent was obtained from all subjects and/or their legal guardian(s). We handled survey data confidentially and maintained anonymity of respondents throughout the study.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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