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Original Article

The effectiveness of shared clinical teaching in nursing

Karen F. Phillips [a,*], Lizy Mathew [a], Nadine Aktan [a], Priyadharshiny Sandanapitchai [b]

[a] Department of Nursing, College of Science and Health, William Paterson University, 300 Pompton Rd, Wayne, NJ, 07470, USA
[b] Department of Psychology, College of Humanities and Science, William Paterson University, 300 Pompton Rd, Wayne, NJ, 07470, USA

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ABSTRACT

Aim: Clinical learning is a critical component of a nursing curriculum. Student satisfaction in clinical environment is crucial to foster a positive learning experience. Faculty shortages have made clinical teaching more challenging; as such, alternate models of clinical teaching must be explored by nursing programs. The purpose of this study was to measure the perception of student satisfaction in regard to the effectiveness of shared clinical teaching in nursing.

Methods: Utilizing Chan's Clinical Learning Environment Inventory (CLEI), this quantitative comparative study examined nursing students' preferred and actual clinical learning environment. The CLEI contains 42 questions in six subscales: Individualization, Innovation, Involvement, Personalization, Task Orientation, and Satisfaction in both the actual and preferred clinical learning environment. The sample consisted of 202 nursing students in two groups: the first group had 91 students who experienced shared clinical teaching with two faculty, whereas the second group had 111 students who experienced the traditional, single faculty model. The results were analyzed using independent sample T-tests.

Results: The preferred learning environment was rated highest in all six subscales. Scores of the Satisfaction subscale and the Innovation subscale for Actual Learning Environment, and the score of the Innovation subscale for Preferred Learning Environment of students experiencing shared clinical teaching with two faculty were higher than the scores of students experiencing traditional, single faculty model, with statistically significance ($P < 0.05$).

Conclusion: The results indicated students preferred the shared clinical teaching model with two faculty over the single faculty model. Nursing programs can utilize this model and apply these results to develop and maintain quality clinical teaching.

1. Introduction and background

Clinical experience is a major and crucial component of nursing education [1]. The effectiveness of clinical learning is dependent on teaching-learning interactions between students and faculty [2–6]. A supportive clinical environment is integral to the teaching learning process [7]. Since clinical practice is a key component of any nursing curriculum, student satisfaction with the clinical learning environment must be fostered [8,9]. Student satisfaction is seen as an indicator of program and student success [9,10].

The well-documented nurse faculty shortage has impacted nursing education [11]. Issues such as aging nurse faculty and limited compensation are important factors contributing to this crisis [11,12]. Other barriers include lengthy nurse graduate programs and limited opportunities for tuition reimbursement prohibiting nurses pursuing advanced degrees [12]. One critical area of nursing education affected by this shortage is the clinical learning environment. Many nursing programs are looking for creative ways to address this shortage. Several clinical teaching models are currently being utilized by nursing programs, such as Collaborative Learning Units (CLU), Dedicated Education Units (DEU), Preceptorship, School-Clinical Agency Partnerships, Faculty Supervised Practicum, and Joint Hospital University Appointments, and the Traditional Model (TM) [13].

Typically, schools of nursing use the TM of clinical education where one faculty member supervises 6–10 students in the clinical environment however this may not provide the most effective learning environment [14]. Programs have found it difficult to find

* Corresponding author.
E-mail addresses: phillipsk116@wpunj.edu (K.F. Phillips), MathewL@wpunj.edu (L. Mathew), AktanN@wpunj.edu (N. Aktan), SandanapitchaiP@wpunj.edu (P. Sandanapitchai).

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adjunct or part time faculty due other work commitments. Evidence exists that there is a need for more innovative ways to provide clinical education https://www.sciencedirect.com/science/article/pii/S2352013216301363 [14]. Many clinical courses require students to be in the clinical area for two days a week. The two day commitment, not feasible for many adjunct faculty with the other personal and professional commitments, may be contributing to clinical faculty shortage. Schools of nursing may find it easier to hire adjunct faculty if the commitment to teach is only for one day a week which requires that a clinical course is covered by two faculty members.

This study employed a new model developed by this research team, entitled Shared Clinical Teaching (SCT), which is defined as two faculty sharing responsibilities for a clinical group [15]. The purpose of this research study was to examine student satisfaction regarding the effectiveness of the SCT model. The premise of SCT is that a clinical group will be "shared" by two clinical faculty [15]. Two faculty with expertise in the clinical specialty are partnered for the duration of the rotation. Each faculty are assigned to one day per week of the two day clinical rotation [15]. These two faculty members who "share" the clinical teaching of one group of students work in partnership throughout the rotation to optimize learning for the students [15]. The faculty also collaborate in grading assignments and evaluation of the students [15].

Studies done by Chan [7], Brown et al. [16], and Papathanasiou et al. [17] looked at the differences between student perceptions of the actual clinical learning environment and the preferred clinical learning environment. The studies found that students preferred a more positive clinical environment than the environment that they actually experienced. Another study done by Chan and Ip [18] to evaluate nursing student perceptions of differences in actual and preferred clinical experiences had similar results. The mean scores for the preferred learning environment were higher compared to the actual learning environment. The study by Salamonson et al. [6] concluded that the success of clinical learning largely depends on the clinical learning environment and that providing an effective clinical learning environment is crucial in improving quality-based clinical education.

A study done by Lovecchio et al. [19] to assess the implementation of the Clinical Liaison Nurse (CLN) model found that students were more satisfied when assigned to clinical units using the CLN model [19]. Student satisfaction can also be affected by the type of placements. Murphy et al. [8] found that students placed in intensive care, cardiology and high dependency units were more satisfied than students placed with elderly adults, orthopedics, trauma, and in the community. Hardy et al. [20] found that encouraging social interactions between students and professional staff was well received by students. The attitude of the instructor was seen to impact this interaction [20].

In a study conducted by Ali et al. [21], satisfaction with the clinical environment was reported to be the most important domain. D'Souza et al. [4] noted that quality learning was associated with the quality of clinical teaching and the clinical experience. On the other hand, the results of a study of Ironside et al. [1] depicted that what actually occurs in the clinical area may not be what was intended by the faculty. Faculty should be more cognizant of what and how students are actually learning. In addition, the findings of a study by Okoronko et al. [3] reinforced the importance of effective clinical teaching.

2. Methods

The model of SCT was developed by this research team. Shared Clinical Teaching (SCT) is defined as two faculty sharing responsibilities for a clinical group [15]. Two faculty with expertise in the specialty areas of obstetrics, psychiatric/mental health, and medical surgical nursing were selected to "share" the clinical group. One faculty was an experienced practitioner while the other faculty provided the scholarly research aspect. Each rotation lasted five weeks. Each faculty supervised the students one of the two days per week in the clinical area. The faculty collaborated on assignments, mentoring, and evaluations. At the conclusion of the five week rotations, the students were asked to complete the Clinical Learning Environment Inventory (CLEI) indicating their perceptions of the clinical learning environment including their actual and preferred experiences based on whether they experienced the TM (one faculty) or SCT (two faculty) model [7,18,22].

2.1. Study design

The study was a quantitative comparative study of two groups of nursing students. The groups included students who experienced SCT with two faculty as compared to those who experienced the TM of clinical teaching with a single faculty member. The comparison group would be the TM versus the SCT [13,15].

2.2. Setting and sample

The setting was a single public university in northeastern, New Jersey. A convenience sample of junior nursing students was utilized for this study. This group of students was selected primarily because of the diverse population and accessibility. Additionally, this level of nursing students was selected because of the difficulty in staffing the five week rotations. Data was collected over a 2-year period that included four semesters. A total of 202 surveys were obtained.

2.3. Ethical considerations

Approval was sought from The Institutional Review Board (IRB) at the participating university. Information about the study was explained to the students. An invitation to participate in the study was given to all students along with the passive consent. Questions or concerns raised by participants were addressed. All participants were assured of anonymity through the use of passive consent. No identifying information was included on the survey questionnaire.

2.4. Measurements/instruments

The data collection instrument utilized in this study to elicit the students' perceptions of their clinical learning environment was the CLEI [7,18,22]. Permission to use the survey instrument was received from Dr. Dominic Chan, who developed the survey tool. The CLEI is a 42 item, self-administered questionnaire which currently contains six subscales: Individualization, Innovation, Involvement, Personalization, Task Orientation, and Satisfaction [7,18,22]. Each of the six subscales contains seven items. The CLEI uses a four-point Likert type scale, which included Strongly Agree, Agree, Disagree, and Strongly Disagree. Omitted or invalid responses were scored a three [7,18,22].

Previous studies have revealed the strong reliability and validity of the CLEI. On Chan's initial study, the Cronbach's α ranged from 0.73 to 0.84 for the Actual Clinical Learning Environment and 0.68 to 0.80 for the Preferred Clinical Learning Environment [7,18,22]. A Cronbach's α for this study for the CLEI actual form was 0.887 and the preferred form was 0.761. These values have proven that the instrument has a strong internal consistency reliability.

2.5. Data collection/procedure

Questionnaires were given to students at two intervals during the semester after completion of the clinical rotations. Students were asked to complete the questionnaire based on whether they had one or two clinical faculty during the rotation. The majority of students who participated had experienced having both one and two clinical faculty in two of their three rotations. Students were asked to complete both sides of the questionnaire, which contained questions about their actual learning environment as well as their preferred learning environment. They were asked to mark in the upper right hand corner a one or two depending on whether they experienced the TM or SCT model. The questionnaires and data sheets were collected, analyzed, and stored in a locked cabinet in the researcher's office.

2.6. Data analysis

The Statistical Package for Social Sciences (SPSS version 23) was used to perform data analysis. Surveys regarding clinical learning experiences from two hundred and two undergraduate nursing students were statistically analyzed for differences to determine the effectiveness of shared clinical teaching. One hundred and eleven students experienced one clinical instructor whereas ninety-one students experienced two clinical instructors. An independent samples *t*-test was used for the data analysis, focusing on the six subscales of the CLEI.

3. Results

Table 1 shows the mean scores of actual and preferred CLEI subscales for both one and two clinical faculty. The average scores for CLEI subscales in the preferred learning environment were higher compared to those of the actual learning environment. In the actual learning environment, personalization subscale had the highest mean score (*Mean*= 4.06, *SD* = 0.85), where as in the preferred learning environment, satisfaction subscale had the highest mean score (*Mean*= 4.65, *SD* = 0.43) (See Table 1).

As shown in Table 2, the findings suggested that the scores for the personalization subscale were the highest for both the groups who had one instructor (*Mean* = 4.02, *SD* = 0.87) and two instructors (*Mean* = 4.09, *SD* = 0.82) in the actual learning environment. In the preferred clinical environment, the satisfaction subscale had the highest mean score for one instructor (*Mean* = 4.60, *SD* = 0.46) and two instructors (*Mean* = 4.67, *SD* = 0.39). Paired sample *t*-tests revealed that there were statistically significant differences across all the subscales between actual and preferred clinical sharing environment. Results of *t*-tests from independent samples showed statistically significant differences between two groups on the satisfaction subscale for actual experiences (4.06 ± 0.94 vs. 3.76 ± 0.88), the innovation subscale for actual learning environment (3.40 ± 0.66 vs. 3.22 ± 0.58) and the innovation subscale for preferred learning environment (4.08 ± 0.99 vs. 3.85 ± 0.52) (see Table 2).

4. Discussion

In a comparison of students who had one versus two instructors for their clinical experience, students who had two instructors scored higher in both actual and preferred clinical learning environment in all six subscales. The results of the study suggest that students had a more positive experience with two instructors for their clinical rotation compared to one. It is unknown why students preferred two faculty as compared to one. One explanation could be that one faculty member may have been stronger in research, while the other may have been a practicing clinician. Students may have benefitted from this combination of faculty expertise.

The individualization subscale had the lowest score in both the actual and preferred clinical learning environment for both one and two instructors. This finding indicates that students would prefer more autonomy in the clinical setting and prefer to be treated as individuals. In addition, the satisfaction subscale scored higher for both actual and preferred clinical learning environments. The satisfaction subscale was the only one to show statistically significant results. These findings suggest that students did perceive a difference in the satisfaction subscale for both actual and preferred. The findings of this study support the results of a similar study done previously by Chan [7].

In regards to the innovation subscale, students preferred to have faculty who planned a greater number of new, interesting, and productive clinical experiences, teaching techniques, and learning activities than they had actually experienced. This suggests that faculty should incorporate innovative teaching strategies to enhance the clinical experience. Overall, in all six subscales, the preferred clinical learning environment had the highest scores. This suggests a gap between actual and preferred clinical learning environments and that students prefer a more positive clinical environment than actually experienced.

These findings suggest that the scores for the personalization subscale were the highest for both the groups in the actual learning environment. In the preferred clinical environment, the satisfaction subscale had the highest mean score. In addition, the results revealed that there were statistically significant differences across all the subscales between actual and preferred clinical sharing environment. Additional findings showed statistically significant differences on the satisfaction subscale for actual experiences and the innovation subscale for preferred learning environment.

Table 1
Mean and standard error for subscales of the actual and preferred clinical learning environment.

Subscales		*n*	*Mean*	*Std. Error Mean*
Pair 1	Personalization Actual	191	4.06	0.06
	Personalization Preferred	191	4.50	0.04
Pair 2	Student Involvement Actual	190	3.63	0.06
	Student Involvement Preferred	190	4.34	0.03
Pair 3	Satisfaction Actual	189	3.88	0.07
	Satisfaction Preferred	189	4.65	0.03
Pair 4	Task Orientation Actual	187	3.70	0.06
	Task Orientation Preferred	187	4.44	0.03
Pair 5	Innovation Actual	190	3.30	0.05
	Innovation Preferred	190	3.95	0.06
Pair 6	Individualization Actual	192	3.16	0.05
	Individualization Preferred	192	3.69	0.04

Table 2
Comparison of Independent Sample T-Tests of the Actual and Preferred Clinical Learning Environment in SCT and TM groups (*Mean* ± *SD*).

Subscales		*n*	SCT	*n*	TM	*t*	*P*
Pair 1	Personalization Actual	88	4.09 ± 0.82	108	4.02 ± 0.87	−0.56	0.57
	Personalization Preferred	86	4.55 ± 0.75	110	4.45 ± 0.41	−1.17	0.24
Pair 2	Student Involvement Actual	89	3.64 ± 0.74	107	3.63 ± 0.91	−0.11	0.91
	Student Involvement Preferred	87	4.38 ± 0.38	109	4.30 ± 0.39	−1.56	0.12
Pair 3	Satisfaction Actual	87	4.06 ± 0.94	108	3.76 ± 0.88	−2.31	0.02*
	Satisfaction Preferred	86	4.67 ± 0.39	109	4.60 ± 0.46	−1.18	0.24
Pair 4	Task Orientation Actual	87	3.74 ± 0.82	105	3.65 ± 0.78	−0.77	0.44
	Task Orientation Preferred	88	4.47 ± 0.42	108	4.40 ± 0.42	−1.18	0.24
Pair 5	Innovation Actual	88	3.40 ± 0.66	108	3.22 ± 0.58	−2.00	0.04*
	Innovation Preferred	86	4.08 ± 0.99	109	3.85 ± 0.52	−2.07	0.04*
Pair 6	Individualization Actual	87	3.20 ± 0.63	108	3.11 ± 0.74	−0.91	0.36
	Individualization Preferred	87	3.72 ± 0.62	110	3.66 ± 0.54	−0.70	0.49

Note: SCT: Shared Clinical Teaching. TM: Traditional Model. *Statistically significant at the 0.05 level.

5. Limitations

There are several limitations to this study. First, the study was conducted in a single, medium-sized public university in the northeastern United States; therefore, the results may not be generalizable. Second, no demographic data were collected. The sample was primarily female, typical of most nursing programs, which limits other potential perspectives. A larger male population may have elicited different results. Third, the students were not asked to indicate which clinical rotation (obstetrics, psychiatric/mental health, or medical surgical nursing) they were in at the time of the survey. The clinical rotation and/or student perception of faculty (i.e. whether they had a positive view of the faculty) could impact the student's perceptions of the clinical learning environment. Finally, this study's use of a convenience sample increased the risk of bias, as the available participants could have been atypical of the general population [23].

6. Conclusions and implications

In conclusion, the preferred clinical learning environment in all subscales yielded higher scores than the actual clinical learning environment. Students preferred a more positive, supportive clinical learning environment than the environment they experienced. The study results indicated a gap between students' actual clinical experiences and their preferred clinical learning environments. In addition, students reported a more positive experience with two instructors as compared to one instructor for a clinical rotation.

Study results indicate that clinical experiences should be designed to promote student satisfaction. The results of this study showed that students preferred this model of SCT. Other programs may utilize this model to develop and maintain quality clinical teaching to address the clinical faculty shortage. Future research could include replication of the study in a larger population in multiple schools to solicit more generalizable findings and determine the effectiveness of this model in a variety of settings. Based on the study findings, future research should focus on strategies to promote high quality innovative clinical experiences.

Conflict of interest

The authors declare no conflicts of interest regarding this research.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijnss.2019.03.002.

References

[1] Ironside P, McNelis A, Enright P. Clinical education in nursing: rethinking learning in practice settings. Nurs Outlook 2014;62:185–91.
[2] Girija KM. Effective clinical instructor-a step toward excellence in clinical teaching. International Journal of Nursing Education 2012;4(1):25–7.
[3] Okoronkwo I, Onyia-Pat J, Agbo M, Okpala P, Ndu A. Students' perception of effective clinical teaching and teacher behavior. Open J Nurs 2013;3:63–70. https://doi.org/10.4236/ojn.2013.31008.
[4] D'Souza M, Venkatesaperumal R, Radhakrishnan J, Balachandran S. Engagement in clinical learning environment among nursing students: role of nurse educators. Open J Nurs 2013;3:25–32. https://doi.org/10.4236/ojn.2013.31004.
[5] Newton J, Jolly B, Ockerby C, Cross W. Clinical learning environment inventory: factor analysis. J Adv Nurs 2010;66(6):1371–81. https://doi.org/10.1111/j.1365-2648.2010.05303.x.
[6] Salamonson Y, Everett B, Halcomb E, Hutchinson M, Jackson D, Mannix J, et al. Unraveling the complexities of nursing students' feedback on the clinical learning environment: a mixed methods approach. Nurse Educ Today 2015;35:206–11. https://doi.org/10.1016/jnedt.2014.08.005.
[7] Chan D. Validation of the clinical learning environment inventory. West J Nurs Res 2003;25(5):519–32.
[8] Murphy F, Rosser M, Bevan R, Warner G, Jordan S. Nursing students' experiences and preferences regarding hospital and community partners. Nurse Educ Pract 2012;12:170–5.
[9] D'Souza M, Karkada S, Parahoo K, Venkatesaperumal R. Perception of and satisfaction with the clinical learning environment among nursing students. Nurse Educ Today 2015;25:833–40. https://doi.org/10.1016/jnedt.2015.02.005.
[10] Chen H, Lo H. Nursing student satisfaction with an associate nursing program. Nurs Educ Perspect 2015;36(1):27–33.
[11] American Association of Colleges of Nursing. Nursing faculty shortage fact sheet. Retrieved from, http://www.aacnnursing.org/News-Information/Fact-Sheets/Nursing-Faculty-Shortage.
[12] Siela D, Twibell K, Keller V. The shortage of nurses and nursing faculty: what critical care nurses can do. AACN Adv Crit Care 2009;19(1):17–33.
[13] Callaghan D, Watts W, Mc Cullough D, Moreau JT, Little MA, Gamroth LM, et al. The experience of two practice education models: collaborative learning unit and preceptorship. Nurse Educ Pract 2009;9:244–52.
[14] Niederhauser V, Schoessler M, Gubrud-Howe P, Magnussen L, Codier E. Creating innovative models of clinical nursing education. J Nurs Educ 2012;51(11):603e8.
[15] Phillips K, Mathew L, Aktan N, Catano B. Clinical education and student satisfaction: an integrative literature review. Int J Nurs Sci 2017;4(2017):205–2013.
[16] Brown T, Williams B, McKenna L, Palermo C, McCall L, Roller L, et al. Practice education learning environments: the mismatch between perceived and preferred expectations of undergraduate health science students. Nurse Educ Today 2011;31:e22–8. https://doi.org/10.1016/j.nedt.2010.11.013.
[17] Papathanasiou J, Tsaras K, Sarafis P. Views and perceptions of nursing students on their clinical learning environment: teaching and learning. Nurse Educ Today 2014;34:57–60.
[18] Chan D, Ip W. Perception of hospital learning environment: a survey of Hong Kong nursing students. Nurse Educ Today 2007;27:677–84. https://doi.org/10.1016/j.nedt.2006.09.015.
[19] Lovecchio C, DiMatteo M, Hudacek S. Clinical Liaison Nurse Model in a

community hospital: a unique academic partnership that strengthens clinical nursing education. J Nurs Educ 2012;51(11):608–15. https://doi.org/10.3928/014834-20121005-02.
[20] Hardy E, Koharchik L, Dixon H. The professional nurse-student nurse academic partnership. Teach Learn Nurs 2015;10:71–5. https://doi.org/10.1016/j.teln.2014.11.002 .03.010.
[21] Ali WG, El Banan SH, Al Seraty W. Effective clinical learning environment as perceived by nursing students at Al Dawadmi, Applied Medical Sciences College: actual versus preferred characteristics. Int J Nurs Didact 2015;5(5):1–6. https://doi.org/10.15520/ijnd.2015.vol5.iss05.94.01-06.
[22] Chan D. Development of an innovative tool to assess hospital learning environments. Nurse Educ Today 2001;21:624–31. https://doi.org/10.154/nedt.2001.0595.
[23] Polit D, Beck C. Essentials of nursing research: appraising evidence for nursing practice. ninth ed. Phila, Pa: Wolters Kluver; 2017.