Nursing Undergraduates’ Satisfaction of the Clinical Learning Environment in China

Zeng Xia Liu, Xing Shan Liu, Hong Liu and Yu Lei Song

Abstract
Aims: To assess nursing undergraduates’ experiences of the clinical learning environment during clinical practice in hospital, and to compare differences perceptions among groups.
Methods: A cross-sectional study was designed. A sample of 402 nursing undergraduates from two universities in China was participated. Data were collected by the Chinese version of the Clinical Learning Environment, Supervision and Nurse Teacher (CLES + T). Independent-sample t-tests were performed to examine the mean differences between categories of binary demographic characteristics.
Results: The clinical learning environment was evaluated by nursing undergraduates in China in medium level. The sub-dimension Supervisory Relationship displayed the highest mean value, and the lowest score was calculated for the sub-dimension Role of the Nurse Teacher. Students who have won scholarships or had interests in nursing or practiced in affiliated hospital were more satisfied with the clinical learning environment. The items describing the NT as a team member of the nursing team had the overall lowest scores.
Conclusion: The assessment of the results revealed that student nurses were basically satisfied with their clinical placement experiences. The dimension Role of the nursing teacher displayed low scores indicating a general uncertainty among the students in relation to what they could expect from the nurse teacher.

keyword: CLES+T ;Clinical learning environment; Nursing education research; Nursing students

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Background
Nurses’ competence is based on the knowledge and clinical practice. Clinical education is an important part of nursing education, which is the key step from knowledge to practice. Clinical education can cultivate nursing students becoming qualified nurses. Clinical training in a real health care environment has always been in the centre of nursing education supporting students’ transition from the “didactic classroom environment to the hands-on clinical world” [1]. In China, nursing undergraduates attend a four-year program with a Bachelor degree in Science or a five-year program with a Bachelor degree in Medicine. Nursing undergraduates take theoretical courses in school during their first three or four years. In the final year, they start with their clinical internships in mainly hospital-based clinical settings. The clinical learning environment is particularly important for the achievement of the desired learning outcomes within the clinical placement [2]. Clinical learning environment is an interactive network of forces with the clinical setting that affects the effects of nursing students learning. It includes clinical workers, medical students, the service object, education opportunities, learning resources, etc.. Studies have shown that a good clinical learning environment is promoted through co-operation between the nurse teacher and the clinical staff[3,4].The nurse teacher and the nurses are the ones primarily responsible for ensuring that the students have the opportunity to participate in as many learning situations as possible [3]. Although the clinical learning environment has been investigated in various educational respects, there is a scarcity of studies assessing the satisfaction with the clinical learning environment on a worldwide basis. This study aims to assess nursing undergraduates’ experiences of the clinical learning environment during clinical practice in hospital in China.

Methods

Design, participants and setting
This study was based on data from a survey of cross sectional design. A convenience sample of 428 nursing undergraduates from two universities in Jilin and Jiangsu Province, China participated in this study. Of the 428 participants, 402 with response rate of 93.9% completed all of the questionnaires. All of the participants were full-time nursing undergraduates enrolled in their fourth academic year of four-year program. They were provided with information with regard to the purpose of the study, the anonymity of the collected data and the voluntary nature of their participation. Data were collected using hardcopy forms of the questionnaire, which took approximately 15 min to finish.
Research instrument

Socio-demographics
this questionnaire included age, gender learning-teaching characteristics such as the hospital and the ward type, the clinical placement length, Whether had any scholarships, the use of e-contact with the NT.

CLEST + T scale
The CLES + T scale was developed and validated by Saarikoski et al[5] and adapted in many languages as a self-report questionnaire designed to measure the nursing students’ perceptions of their satisfaction of the clinical learning environment. The questionnaire consists of 34 items classified into 5 dimensions: pedagogical atmosphere on the ward; supervisory relationship; leadership style of the ward manager; premises of nursing on the ward; role of the NT in clinical practice. Respondents are asked to score their perception of each item on a 5-point Likert-type scale ranging from “very dissatisfied” to “very satisfied”. Higher scores indicated higher levels of satisfaction of clinical learning environment. The instrument has been adapted to the Chinese language [4,5]. The inventory had a reasonable internal consistency coefficient with Cronbach’s alpha=0.945 [4]. The Cronbach’s alpha for this sample was 0.912.

Data analysis
Statistical analysis was performed using SPSS 19.0. Descriptive statistics such as means, standard deviations and percentage distributions were used to organize the data. Responses to the statements in the CLES + T were described by means of mean values (m) and standard deviations (SDs) in order to permit comparison with previous studies. Independent-sample t-tests were performed to examine the mean differences between categories of binary demographic characteristics. p < 0.05 was considered significant.

Results
Socio-demographic characteristics
As evidenced in Table 1, of the 402 nursing students in this study, the majority were female (n = 366, 91.04 %), and they ranged in age from 21 to 24 (M = 22.42, SD = 0.86). There were 62(15.4 %) won scholarships and 43(10.7 %) were member of class committee. The proportion of nursing undergraduates with interests in nursing was 70.1 % (n=282). 189(47%) nursing undergraduates practiced in affiliated hospital.

CLEST + T scale scores and its differences among groups
As presented in Table 2, the comparison of mean score for CLES + T between male and female students showed that female students had higher score than male students, but the difference was not significant. In addition,
those students who won scholarships had a higher level of satisfaction in comparison to those with no scholarships. Those students with interests in nursing had a higher level of satisfaction in comparison to those with no interests, and those students practicing in affiliated hospitals had a higher level of satisfaction in comparison to those practicing other hospitals. There were no significant differences in CLES + T scores by member of class committee.

Nursing students’ assessment of CLES + T scale scores

The mean score for CLES + T among the 402 sampled students was 3.61 (SD = 0.73). With respect to the sub-dimensions, the mean values (ranging from 1 to 5) varied between 3.12 and 3.95. The sub-dimension Supervisory Relationship displayed the highest mean value, and the lowest score was calculated for the sub-dimension Role of the Nurse Teacher.

Table 1. Demographic characteristics and CLES + T score differences by demographic characteristics (N = 402).

<table>
<thead>
<tr>
<th></th>
<th>n(%)</th>
<th>mean</th>
<th>SD</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>366 (91.04)</td>
<td>3.78</td>
<td>0.73</td>
<td>-0.83</td>
<td>0.532</td>
</tr>
<tr>
<td>Male</td>
<td>36 (8.96)</td>
<td>3.69</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you won scholarships</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>62 (15.42)</td>
<td>3.95</td>
<td>0.71</td>
<td>-1.34</td>
<td>0.021</td>
</tr>
<tr>
<td>no</td>
<td>340 (84.58)</td>
<td>3.25</td>
<td>0.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>interests in nursing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>282 (70.15)</td>
<td>4.18</td>
<td>0.77</td>
<td>-2.23</td>
<td>0.003</td>
</tr>
<tr>
<td>no</td>
<td>120 (29.85)</td>
<td>3.03</td>
<td>0.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>member of class committee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>43 (10.70)</td>
<td>3.93</td>
<td>0.85</td>
<td>-0.61</td>
<td>0.621</td>
</tr>
<tr>
<td>no</td>
<td>359 (89.30)</td>
<td>3.72</td>
<td>1.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>practice in affiliated hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>189 (47.01)</td>
<td>3.55</td>
<td>1.12</td>
<td>1.35</td>
<td>0.021</td>
</tr>
<tr>
<td>no</td>
<td>213 (52.99)</td>
<td>4.01</td>
<td>0.87</td>
<td></td>
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</tr>
</tbody>
</table>

Table 2. The nursing undergraduates’ assessment of the learning environment.

<table>
<thead>
<tr>
<th></th>
<th>mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedagogical atmosphere(PA)</td>
<td>3.91</td>
<td>0.65</td>
</tr>
<tr>
<td>PA1 The staff was easy to approach</td>
<td>4.21</td>
<td>0.68</td>
</tr>
<tr>
<td>PA2 I felt comfortable going to the ward at the start of my shift</td>
<td>4.15</td>
<td>0.87</td>
</tr>
<tr>
<td>PA3 During staff meetings (e.g., before shifts) I felt comfortable taking part in the discussions</td>
<td>3.47</td>
<td>0.95</td>
</tr>
</tbody>
</table>
PA4 There was a positive atmosphere on the ward 4.12 0.72
PA5 The staffs were generally interested in student supervision 3.56 0.88
PA6 The staff learned to know the students by their personal names 3.95 1.12
PA7 There were sufficient meaningful learning situations on the ward 4.17 0.78
PA9 The ward can be regarded as a good learning environment 4.11 0.82
Leadership style of the ward manager (WM) 3.58 0.84
WM10 The WM regarded the staff on his/her ward as a key resource person 3.46 1.32
WM11 The WM was a team member 3.17 0.71
WM12 Feedback from the WM could easy be consider a learning situation 3.81 0.82
Premises of Nursing on the ward (NC) 3.65 0.81
NC14 The ward nursing philosophy was clearly defined 3.68 0.92
NC15 Patients received individual nursing care 3.55 0.79
NC16 There were no problem in the information flow related to patients’ care 3.72 0.83
NC17 Nursing Documentation (e.g., nursing plans, daily procedures etc.) was clear 3.75 0.92
Supervisory relationship 3.95 0.82
SR18 My supervisor showed a positive attitude towards supervision 4.14 0.92
SR19 I felt that I received individual supervision 3.72 0.91
SR20 I continuously received feedback from supervisor 3.91 0.79
SR21 Overall I am satisfied with the supervision I received 3.85 1.12
SR22 The supervision was based on a relationship of equality and promoted my learning 4.15 1.14
SR23 There was a mutual interaction in the supervisory relationship 4.11 0.93
SR24 Mutual respect and approval prevailed in the supervisory relationship 3.78 0.86
SR25 The supervisory relationship was characterized by a sense of trust 3.94 0.93
Role of the nurse teacher (NT) 3.12 0.95
NT26 The NT was capable of integrating theoretical knowledge and everyday practice 2.98 0.83
NT27 The NT was capable of operationalize the learning goals of this placement 3.25 0.94
NT28 The NT helped me to reduce the theory-practice cap 3.05 0.82
NT29 The NT was like a member of the nursing team 3.04 0.92
NT30 The NT was able to give his or her pedagogical expertise to the clinical team 3.17 0.81
Discussion

In this study, we investigated the level of Chinese nursing undergraduates’ satisfaction of the clinical learning environment. On the whole, the assessment of the results revealed that student nurses were basically satisfied with their clinical placement experiences. While CLES + T scale scores was higher among females than males, there was no significant difference in CLES + T scale scores between the two genders in our study. This is consistent with the finding regarding CLES + T in Italian [4]. Those students with interests in nursing had a higher level of satisfaction in comparison to those with no interests. Interest is the best teacher and students with more interests in nursing assessed higher scores of CLES + T. They were more objectively evaluated the teaching method and teachers’ quality. They often had a better relationship with the nurse teacher and have more opportunity to try some operation. The students who having won scholarships assessed higher scores of CLES + T, who got higher score in the school exam and had better performance in clinical internship. About half of the nursing students’ who participated in this study practiced in affiliated hospital and were taught by a nurse teacher employed by the university. These nursing teachers had more opportunity attending clinical teaching training. This shows that school and hospital need to further strengthen the professional nursing students’ education.

The dimension Role of the NT displayed low scores indicating a general uncertainty among the students in relation to what they could expect from the nurse teacher. More specifically, the items describing the NT was capable of integrating theoretical knowledge and everyday practice and the NT and the clinical team worked together supporting my learning had the overall lowest scores, didn’t concordant to previous results [4,5]. In China the shortage of clinical nurses is very serious, and they have heavy burden of clinical work so that have very little time on clinical teaching. The NT in hospitals that were not the affiliated hospital of university are most the common nurses and without equivalent qualification and they may have few opportunities to attend teaching training. Students may feel abandoned when they have no or few visits, especially when they were placed in new environments [4].

The scores of CLES + T scale among Chinese nursing undergraduates are moderate in the present study. Nursing educators should pay more attention to
clinical learning environment of nursing undergraduates by strengthening clinical teachers training. In addition, further research is needed to identify appropriate interventions to improve clinical learning environment of nursing undergraduates.

References