Original Article

# Clinical Belongingness and its Relationship with Clinical Self-Efficacy among Nursing Students: A Descriptive Correlational Study

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**Abstract**

**Background:** Clinical self-efficacy (CSE) plays a pivotal role in safe and quality nursing care delivery. Clinical Belongingness (CB) is a major factor in the clinical practice of nursing students. **Objective:** This study aimed to assess CSE and CB and their relationship among nursing students. **Methods:** This descriptive, correlational study was conducted in 2019 in the Faculty of Nursing and Midwifery of Urmia University of Medical Sciences, Urmia, Iran. Participants were 216 eligible 3rd- and 4th-year nursing students. Data were collected using a demographic questionnaire, the Belongingness Scale-Clinical Placement Experience, and the Self-Efficacy in Clinical Performance Questionnaire. The Pearson correlation analysis, the independent-sample *t*-test, the one-way analysis of variance, and the linear regression analysis were performed for the data analysis. **Results:** The total mean scores of CSE and CB were, respectively, 134.02 ± 20.62 and 121 ± 16.79, indicating moderate CSE and high CB. CB had significant positive correlation with CSE and was a significant predictor of it ($P < 0.05$). **Conclusion:** Nursing students have high CB and moderate CSE, and their CB is a significant positive predictor of their CSE. University authorities are recommended to develop clear strategies to improve nursing students' CSE through improving their CB.

**Keywords:** *Belongingness, Clinical Performance, Iran, Nursing student, Self-efficacy*

## Introduction

The mission of nursing education is to prepare the students for safe and quality care delivery.[1] An important component of nursing education is clinical education.[2] Clinical education should help students acquire the necessary skills for professional practice.[3]

Self-efficacy (SE) is an essential prerequisite for safe and quality care delivery. Bandura defined SE as the individual's belief in his/her ability to successfully perform tasks.[4] SE is a critical component in the successful performance[5] and a significant predictor of academic success, decision-making, and judgment.[6] It plays a pivotal role in acquiring knowledge, developing skills, and using knowledge and professional skills.[5] SE is affected by many different factors, including personal, cognitive, and social factors and personality traits.[7]

Sense of belongingness is one of the most influential factors in students' behaviors and success.[8] It is considered as the basis of individuals' emotional and behavioral reactions.[9] Professional belongingness, as a basic human need, is a meaningful common social sense that creates the senses of security and solidarity. The experience of professional belongingness is unique to each individual and depends on the immediate context and environment.[10] Belongingness is a deep personal and contextual experience formed in response to how much individuals feel secure, accepted, respected, valued, and connected in a group and to what extent their values are in agreement with the professional values of the

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group.[9] It is an important factor in nursing education.[1] Many scholars in education believe that nursing students need belongingness to efficiently act in learning environments.[9] In other words, without the fulfilment of the need for belongingness, nursing students' higher level needs cannot be addressed.[11,12] Belongingness can predict academic outcomes, motivation,[13] attitudes toward learning, and SE among students.[14]

Many studies have assessed students' belongingness and SE.[1,15-18] However, there are limited studies into the relationship of SE with belongingness conducted on school students[19] or engineering students.[20] To the best of our knowledge, there is only one study into the relationship of SE with clinical belongingness (CB) among nursing students which showed that SE had a significant positive relationship with CB.[21] On the other hand, both SE and CB are affected by the personal characteristics and the immediate sociocultural and environmental factors, and hence, studies are needed to assess SE and CB and their relationship among nursing students in the different contexts. Such studies can promote nursing professional values and practice and pave the way for developing SE- and CB-promoting programs for nursing students.

### Objectives

This study aimed to assess clinical self-efficacy (CSE) and CB and their relationship among nursing students.

## Methods

### Design and participants

This cross-sectional, descriptive, correlational study was conducted in 2019 in the Faculty of Nursing and Midwifery of Urmia University of Medical Sciences, Urmia, Iran. Study population consisted of all 216 3rd- and 4th-year undergraduate nursing students in the study setting. With a CSE-CB correlation coefficient of 0.42,[22] a confidence level of 95%, and a power of 90%, sample size was determined to be 167 [Figure 1]. However, due to the possibility of attrition, all 216 nursing students in the study were selected through a census. Unwillingness to stay in the study was the only exclusion criterion.

$$n = 4 \times \left( \frac{\left( Z\frac{\alpha}{2} + Z_{\beta} \right)^2}{\ln\left( \frac{1+r}{1-r} \right)^2} + 3 \right) = 4 \times \left( \frac{(1.96 + 1.64)^2}{\ln\left( \frac{1+0.42}{1-0.42} \right)^2} + 3 \right) = 167$$

**Figure 1:** Sample size calculation

### Data collection instruments

Data were collected using a demographic questionnaire, the Belongingness Scale-Clinical Placement Experience (BES-CPE), and the self-efficacy in clinical performance (SECP) Questionnaire. The items of the demographic questionnaire were on age, gender, marital status, clinical work experience, residential status, and interest in nursing. The SECP questionnaire was developed by Cheraghi *et al*.[23] and consists of 37 items on the four main dimensions of nursing students' CSE, namely patient assessment, nursing diagnosis and planning, implementation, and evaluation. Items are scored on a five-point Likert scale as follows: "Not confident at all:" scored 1, "Not confident:" scored 2, "Fairly confident:" scored 3, "Confident:" scored 4, and "Completely confident:" scored 5. The possible total score of the questionnaire is 37–185, with higher scores indicating the higher levels of CSE. Scores 37–86, 86.1–135, and 135.1–185 are interpreted as low, moderate, and high CSE. Cheraghi *et al*. confirmed the content and construct validity and the reliability of the questionnaire and reported that the Cronbach's alpha values of the questionnaire and its dimensions were 0.70–0.90.[23] BES-CPE was also used in the present study for CB assessment developed by Levett-Jones *et al*.[24] BES-CPE has 31 items in three main dimensions, namely esteem (thirteen items), connectedness (ten items), and efficacy (eight items) as well as three individual items (i.e., items 6, 12, and 22). Item scoring is done on a five-point scale as follows: "Never true:" scored 1, "Rarely true:" scored 2, "Sometimes true:" scored 3, "Often true:" scored 4, and "Always true:" scored 5. Items 10, 14, 22, and 26 are reversely scored. The possible total score of this scale is 34–170, with higher scores indicating the higher levels of CB. Ashktorab *et al*. culturally adapted BES-CPE for the context of Iran and reported its acceptable validity and reliability. They reported that the scale-level content validity index of the Persian BES-CPE was 0.92 and the Cronbach's alpha values of the scale and its dimensions were 0.80–0.92.[25]

### Data collection

Data collection was performed by the first author. At the beginning of the academic semester, she provided participants with the study instruments, informed them about the possibility of completing the instruments at home and asked them to return the completed instruments back to her at the 1st day of their clinical education course.

### Ethical considerations

This study was approved by the Student Research Committee and the Ethics Committee

of Urmia University of Medical Sciences, Urmia, Iran (codes: 2476 and IR. UMSU. REC.1397.432). The first author ensured the participants that their data would confidentially be managed, their participation in and withdrawal from the study would be voluntarily, and their refusal to participate or their withdrawal from the study would never affect their grades. Eligible students who agreed to participate signed the written consent form of the study.

### Data analysis

Data analysis was performed using the SPSS software version. 16.0 (IBM Corp., Somers, New York, NY, USA). The Kolmogorov–Smirnov test was used to assess the normality of CSE and CB scores. The measures of descriptive statistics such as mean, standard deviation, and frequency were used to describe the data, and the Pearson correlation analysis was used to examine the relationship of CB with CSE. The progressive linear regression analysis was performed to predict CSE based on CB, adjusted for the effects of the demographic characteristics which had significant relationships with CSE in the univariate analysis (namely age, clinical work experience, and marital status). The level of significance in all analyses was set at <0.05.

## Results

All 216 participants completely filled out and returned their questionnaires. The mean of their age was 22.73 ± 3.56, and most of them were female (56%) and single (89.8%).

The total mean scores of CSE and CB were 134.02 ± 20.62 and 121 ± 16.79, respectively. Most participants had moderate CSE (53.2%) and high CB (52.8%) [Table 1]. The independent-sample *t*-test showed that CSE and CB had significant relationships with age, marital status, and clinical work experience ($P < 0.05$) and no significant relationships with other demographic characteristics [$P > 0.05$; Table 2]. Moreover, CB had significant positive correlations with CSE [$r = 0.52$; $P = 0.001$; Table 3] and all its dimensions, namely efficacy [$r = 0.489$; $P = 0.001$], connectedness [$r = 0.362$; $P = 0.001$], and esteem [$r = 0.529$; $P = 0.001$] [Table 3].

In linear regression analysis, the results of the analysis of variance showed that the regression model was valid and significant ($P < 0.001$). The results of regression analysis showed that after adjusting the effects of age, clinical work experience, and marital status, CB was a significant predictor of CSE [$P < 0.001$; Model 1 in Table 4]. Moreover, after adjusting the effects of age, clinical work experience, marital status, gender, and interest in nursing, CB was still a significant predictor of CSE [$P < 0.001$; Model 2 in Table 4].

## Discussion

The results showed that most participants had moderate CSE. In line with this finding, two former studies reported moderate-to-high CSE among nursing students.[5,17] High SE for learning is associated with self-motivation, quality nursing care, and attempt to gain greater clinical learning experience. Our findings also showed that more than half of the participants had high CB. Similarly, two former studies showed that nursing students had high CB.[1,26] High CB among nursing students might be due to their effective professional communication with nurses and clinical environment as well as the experience of observing their instructors' effective professional communication with nurses.

We also found a significant positive relationship between CSE and CB. A former study also showed that SE had a significant positive relationship with clinical performance among nursing students.[27] Another study also highlighted the importance of theory-based practice as a prerequisite for professional performance and CB.[1] Interactions between nursing students and hospital staff have the significant effects on students' CB, clinical experience, and clinical learning.[18] A study noted that although students considered themselves as novice in clinical environment, they tended to engage in professional communication with nurses.[28] Learning experiences in the clinical environments play a key role in the development of clinical nursing skills, professional identity, and self-concept, enable nursing students to perform their professional responsibilities with higher SE and self-esteem, and help them more efficiently perform

**Table 1: The levels and the mean scores of participants' clinical self-efficacy and clinical belongingness**

| Variables | Level | *n* (%) | Dimensions | Dimensions, mean±SD | Total, mean±SD |
|---|---|---|---|---|---|
| CSE | Low | 3 (14) | Assessment | 42.45 ± 7.17 | 134.02 ± 20.62 |
| | Moderate | 115 (53.2) | Nursing diagnosis and planning | 31.67 ± 5.74 | |
| | High | 98 (45.4) | Implementation | 38.14 ± 6.19 | |
| | | | Evaluation | 21.75 ± 4.11 | |
| CB | Low | 102 (47.2) | Esteem | 47.38 ± 6.6 | 121 ± 16.79 |
| | High | 114 (52.8) | Connectedness | 32.65 ± 6.31 | |
| | | | Efficacy | 31.06 ± 4.75 | |

CSE: Clinical self-efficacy, CB: Clinical belongingness, SD: Standard deviation

**Table 2: Participants' demographic characteristics and their relationships with clinical self-efficacy and clinical belongingness**

| Characteristics | *n* (%) | Variables | | | |
|---|---|---|---|---|---|
| | | CSE, mean±SD | Test result | CB, mean±SD | Test result |
| Age | | | | | |
| 19-29 | 205 (94.9) | 133.01 ± 20.46 | $F$=5.15, $P$=0.007[a] | 120.24 ± 16.80 | $F$=4.27, $P$=0.015[a] |
| 30-40 | 9 (4.2) | 154.22 ± 13.94 | | 134.22 ± 8.67 | |
| 41-50 | 2 (0.9) | 147.00 ± 15.55 | | 139.00 ± 7.07 | |
| Gender | | | | | |
| Male | 95 (44) | 136.71 ± 21.38 | $t$=1.68, $P$=0.093[b] | 123.24 ± 18.94 | $t$=1.69, $P$=0.092[b] |
| Female | 121 (56) | 131.92 ± 19.83 | | 119.24 ± 14.72 | |
| Marital status | | | | | |
| Married | 22 (10.2) | 145.00 ± 18.38 | $t$=2.66, $P$=0.008[b] | 129.91 ± 11.95 | $t$=2.66, $P$=0.008[b] |
| Single | 194 (89.8) | 132.78 ± 20.53 | | 119.99 ± 16.98 | |
| Clinical work experience | | | | | |
| Yes | 22 (10.2) | 144.82 ± 16.34 | $t$=2.62, $P$=0.009[b] | 129.27 ± 12.92 | $t$=2.46, $P$=0.014[b] |
| No | 194 (89.8) | 132.80 ± 20.73 | | 120.06 ± 16.94 | |
| Residential status | | | | | |
| Urmia | 111 (51.4) | 133.53 ± 19.12 | $t$=0.339, $P$=0.735[b] | 119.62 ± 17.48 | $t$=1.117, $P$=0.241[b] |
| Other cities | 105 (48.6) | 134.49 ± 22.02 | | 122.31 ± 16.07 | |
| Interest in nursing | | | | | |
| Yes | 164 (75.9) | 135.44 ± 19.55 | $t$=1.801, $P$=0.073[b] | 122.22 ± 15.56 | $t$=1.907, $P$=0.058[b] |
| No | 52 (24.1) | 129.56 ± 23.32 | | 117.15 ± 19.85 | |

[a]The results of the one-way analysis of variance, [b]The results of the independent-sample *t*-test. CSE: Clinical self-efficacy, CB: Clinical belongingness, SD: Standard deviation

**Table 3: The correlation of clinical belongingness with clinical self-efficacy and its dimensions**

| Pearson correlation coefficient | CSE | | | |
|---|---|---|---|---|
| | Total | Efficacy | Connectedness | Esteem |
| CB | $r$=0.522 | $r$=0.489 | $r$=0.362 | $r$=0.529 |
| | $P$=0.001 | $P$=0.001 | $P$=0.001 | $P$=0.001 |

CSE: Clinical self-efficacy, CB: Clinical belongingness

**Table 4: The results of the linear regression analysis to predict participants' clinical self-efficacy based on their clinical belongingness**

| Variable | Crude $r$ | $R^2$ (model 1) | $R^2$ (model 2) | $P$ |
|---|---|---|---|---|
| CB | 0.522 | 0.503 | 0.491 | <0.001 |

Model 1: Adjusted for age, clinical work experience, and marital status, Model 2: Adjusted for age, clinical work experience, marital status, gender, and interest in nursing. CB: Clinical belongingness

challenging tasks even in the face of obstacles.[29] All these findings highlight the importance of interpersonal relationships among nursing students, nurses, and clinical instructors for improving students' CB. CB and SE among nursing students can also be improved through enhancing their decision-making ability, clinical skills, and autonomy which can in turn improve their satisfaction.

Our findings also showed that except for age, marital status, and clinical work experience, other demographic characteristics of students had no significant relationships with their CSE and CB. In agreement with this finding, a study showed that nursing students' CB can be affected by their clinical work experience and interest in nursing.[9] Similarly, a study reported that the presence of a nurse in the family and nursing students' marital status had the positive effects on the development of their CB.[30] Contrary to our findings, a study concluded that compared with female students, male students had higher professional belongingness.[31]

This study was conducted on a small sample of nursing students in a city in Iran, and hence, its findings should cautiously be interpreted and generalized to other students. Large-scale studies are needed to produce more reliable results about CSE and CB among nursing students. Moreover, participants' mental status might have affected their responses to the study instruments. In order to manage this limitation, we provided participants with the opportunity to respond the study instruments at home.

## Conclusion

Nursing students have high CB and moderate CSE, and their CB is a significant positive predictor of their CSE. University managers are recommended to develop clear theoretical and practical strategies to improve nursing students' CSE through improving their CB.

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## Conflicts of interest

There are no conflicts of interest.

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