Developing the Short Version of a Scale Assessing Clinical Instructors’ Effective Clinical Teaching Behaviors

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Purpose

The evaluation of clinical teaching plays a vital role in the teaching–learning process for both clinical instructors and nursing students. Clinical instructors must acquire effective teaching behaviors, such as professional knowledge, role modeling, and clinical competence with communication skills, to facilitate optimal clinical teaching. Although a scale assessing the Effective Clinical Teaching Behaviors (ECTB) is extensively used, a shorter instrument would be desirable for nursing students to evaluate clinical instructors in nursing clinical practicum conveniently. Therefore, this study aims to develop the short version of a scale evaluating the ECTB of clinical instructors in Japan.

Methods

In this cross-sectional questionnaire survey, we enrolled 784 nursing students who conducted nursing clinical practicum at a university hospital between April 2014 and March 2015 in Japan. The ECTB translated into Japanese, a five-point Likert-type scale comprising 32 items with four subscales, was used for assessment. This study comprised the following three phases: (a) assessment of content validity by the evaluation of the scale by one teacher of nursing and three clinical instructors; (b) item analysis and selection through a survey; and (c) evaluation of the scale’s reliability and validity by the exploratory factor analysis (EFA).

Definition: A clinical instructor is a registered nurse employed by the university hospital who is responsible for helping nursing students achieve their learning outcomes.

Item analysis: Item analysis included the analysis of ceiling and floor effects using the standard deviation and mean value. In addition, the item–total correlation and correlation between each item were calculated using the Spearman’s correlation coefficients.

Factor analysis: We conducted the EFA with the maximum likelihood method and Promax rotation. Items with factor loadings of more than 0.4 on only one factor and factors with Eigenvalues over 1 were extracted. In addition, we used the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity to judge the validity of the factor analysis.

Reliability and validity testing: Reliability was tested using the Cronbach’s alpha coefficients for each factor. The goodness-of-fit was confirmed by using the Root Mean Square Error of Approximation (RMSEA). Furthermore, we calculated the correlation coefficient of the total score of the ECTB of the 32-item version and the short version.

Results
Of 784 questionnaires distributed, we received 723 responses (response rate: 92.2%), of which 633 were valid. In the item analysis, each item–total correlation coefficient was between 0.55 and 0.76, and each inter-item correlation coefficient was between 0.25 and 0.75. We eliminated three items based on the item analysis. The EFA was conducted on the remaining 29 items. Based on the results of the EFA, we removed 15 items that had low factor loading score of <0.4. Finally, the short version of the ECTB was developed with two factors comprising 14 items: (i) Factor 1, promotion of learning experience; (ii) Factor 2, enhancement of motivation to learn. The seven items in Factor 1 were as follows: “supervises new experiences of students,” “provides timely feedback on clinical performance process,” “attempts to ensure the selection of appropriate experience to meet the objectives,” “demonstrates nursing care activities when appropriate,” “interacts well with patients,” “is realistic in expectations,” and “encourages students to achieve their highest level.” The seven items in Factor 2 were as follows: “tells a student when she/he has done well,” “corrects students tactfully,” “communicates knowledge to students,” “available when students are in stressful situations,” “assists students in understanding their professional responsibility,” “objective in evaluation,” and “acts as a resource person during the study.” With a score of 0.952 on the KOM measure of sampling adequacy and \( P < 0.001 \) on Bartlett’s test sphericity, the validity of applying the factor analysis was assured. The Cronbach’s alpha coefficient was 0.93 for the total score and 0.90 and 0.87 for Factors 1 and 2, respectively. The RMSEA was 0.062, and the goodness-of-fit of this model was confirmed. The two factors had a moderate correlation (\( r = 0.77; \ P < 0.01 \)), and the correlation coefficient of the total score of the ECTB of the 32-item version and short version was 0.94, which indicated construct validity.

**Conclusions and Implications for nursing education**

The short version of the ECTB was proven to be a valid and reliable scale. The findings of this study suggest that the short version of the ECTB will be useful for nursing students to assess the effective teaching behaviors of clinical instructors in nursing clinical practicum. Moreover, we believe that it is essential for clinical instructors to acquire teaching behaviors that promote students' learning experience and enhance motivation. A further direction of this study will be required to establish the process of clinical nursing education that clinical instructors learn the ECTB.

**Title:**
Developing the Short Version of a Scale Assessing Clinical Instructors' Effective Clinical Teaching Behaviors

**Keywords:**
Clinical instructors, Effective clinical teaching behaviors and Exploratory factor analysis

**References:**


**Abstract Summary:**
We developed the short version of a scale assessing the Effective Clinical Teaching Behaviors of clinical instructors in Japan. We also clarified effective teaching behaviors that clinical instructors need to acquire in nursing clinical practicum.

**Content Outline:**
I. Introduction

A. The evaluation of clinical teaching plays a vital role in the teaching–learning process for both clinical instructors and nursing students.

B. Although a scale assessing the Effective Clinical Teaching Behaviors (ECTB) by Zimmerman and Westfall (1988) is extensively used, a shorter instrument would be desirable for nursing students to evaluate clinical instructors in nursing clinical practicum conveniently.

C. This study aims to develop the short version of a scale evaluating the ECTB of clinical instructors in Japan.

II. Body

A. Main Point #1 Methods

1. In this cross-sectional questionnaire survey, we enrolled 784 nursing students who conducted nursing clinical practicum at a university hospital in Japan.

2. The ECTB translated into Japanese by Ishikawa et al. (1993), a five-point Likert-type scale comprising 32 items with four subscales, was used for assessment.

3. This study comprised the following three phases: (a) assessment of content validity by the evaluation of the scale by one teacher of nursing and three clinical instructors; (b) item analysis and selection through a survey; and (c) evaluation of the scale’s reliability and validity by the exploratory factor analysis (EFA).

B. Main Point #2 Results

1. Of 784 questionnaires distributed, we received 723 responses (response rate: 92.2%), of which 633 were valid.

2. Based on the results of the item analysis and the EFA, we removed 18 items.

3. The short version of the ECTB was developed with two factors comprising 14 items: (i) Factor 1, promotion of learning experience; (ii) Factor 2, enhancement of motivation to learn.

III. Conclusion
A. The short version of the ECTB was proven to be a valid and reliable scale.

B. The findings of this study suggest that the short version of the ECTB will be useful for nursing students to assess the effective teaching behaviors of clinical instructors in nursing clinical practicum.

C. A further direction of this study will be required to establish the process of clinical nursing education that clinical instructors learn the ECTB.

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