Measuring the Nursing, Teaching, and Interpersonal Effectiveness of Clinical Instructors

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The purpose of this study was to develop and validate a clinical teaching evaluation (CTE) instrument that addressed the nursing expertise, teaching competence, and interpersonal relationship skills of a clinical instructor. The objective was to assess the content validity, construct validity, internal consistency reliability, and test-retest reliability of the CTE instrument.

Undergraduate nursing students (384) evaluated 27 clinical instructors with the CTE. Data analysis documented instrument reliability and validity. The CTE had high internal consistency (coefficient alpha = .965) and reliability (test-retest r = .86). This 25-item instrument can promote a student-instructor partnership in the endeavor to improve the quality of nursing education and ultimately patient care.

Introduction

Teaching evaluations provide an instructor and the organization with feedback on performance. Evaluations help instructors to delineate effective versus ineffective teaching techniques. Effective teaching is critical in the clinical setting. Margaret Jacobson (1966) was one of the first nursing educators to describe the crucial nature of clinical teaching "...it is unique, it often can't be controlled and missed learning situations cannot be repeated." The most effective instructors must be placed in the clinical setting to produce excellent professional nurses.

Evaluations can take various forms; administrative review, peer evaluation, client satisfaction surveys, self-appraisal, or a combination of these methods. Since the early 1960s, administrators have used student evaluations as a means of assessing faculty performance. Though controversy exists over the quality of the evaluation instruments as well as how students' evaluations should be used, the literature in this field documents a long-standing agreement between administrators, nursing instructors, and students that students should evaluate their instructors (Coleman & Thompson, 1987).

Some evaluation instruments have been published; however, a majority of these instruments were designed to assess classroom didactic abilities, not clinical teaching. Applied sciences that incorporate clinical teaching components found that these "classroom" instruments have limited applicability and provided an incomplete picture of the nursing instructor (Zimmerman & Waltman, 1986). It was the need for a comprehensive clinical evaluation instrument that led to the development of the Clinical Teaching Evaluation (CTE) instrument.

Review of the Literature

The focus of nursing researchers has been on designing studies to identify the behaviors that students felt were important for clinical instructors to possess (Erickson, 1991; Knox & Mogan, 1985; Mogan & Knox, 1987). These studies have used various approaches to identify or classify clinical teaching behaviors. With the exception of the behavior that the researchers have identified fall into five categories: teaching ability, nursing competence, ability to evaluate, interpersonal relationship, and personality.

These descriptive studies are useful in stimulating further research, but a majority fail to provide educators with a specific instrument to evaluate their clinical performance. Zimmerman and Westfall (1988) went beyond a description of critical behaviors and used factor analysis to develop a tool that measures effective clinical teaching. This tool is the Effective Teaching Clinical Behaviors (ETCB) scale. Zimmerman and Westfall used a convenience sample of 281 students to evaluate 29 clinical faculty members at three schools of nursing. The original 43-item scale was divided into two smaller 22-item scales. The ETCB scales "Form A" and "Form B" were both found to be reliable and valid.

Up to this point, there have been very few instruments that included an evaluation of a clinical instructor's ability to relate theoretical concepts to clinical practice. Clinical instructors must be able to demonstrate the application of nursing theory in clinical decision-making.

The purpose of this study was to develop and validate a clinical teaching evaluation instrument that addressed nursing competence, including the use of theory in clinical decision-making as well as the teaching and interpersonal expertise of the clinical instructor. The objectives were to assess...
the content validity, construct validity, internal consistency reliability, and test-retest reliability of the CTE instrument.

Methodology

Tool development
The CTE was developed to provide a tool for clinical instructors to receive objective student feedback on their teaching performance. Thirty items, measured on a five-point Likert-type scale ranging from "outstanding" to "poor," were developed based on the following: (1) a review of the literature on effective clinical teaching behaviors (Zimmerman & Waltman, 1986), (2) a review of previously published teacher evaluation instruments (Brown, 1981; Butler & Geitgey, 1970), and (3) consultation with expert faculty members. In a pretest of the CTE instrument, students were encouraged to add any omitted clinical teacher behaviors and to give any suggestions for improvement of the tool.

Subjects
The respondents were 384 undergraduate nursing students who evaluated 27 clinical instructors at a private university located in a western metropolitan area of the United States. The instructors were either full- or part-time faculty members teaching in a clinical course required in the nursing curriculum.

Procedure
The CTE was administered to generic undergraduate nursing students by the clinical instructors during clinical conference time in the last week of the semester. Instructors were asked to leave the room for approximately 10 minutes while students completed the CTE. Participation by faculty and students was voluntary and anonymous. To ensure anonymity and confidentiality, no student or faculty names were requested on the rating sheets. Code numbers were used to offer feedback to the instructors.

Students were asked to rate the 30 items on a five-point Likert scale from 1 (poor, one of the least effective teachers I know) to 5 (excellent, one of the most effective teachers I know). A nonapplicable (N/A) answer was also possible. Space for additional comments about the faculty person or the improvement of the tool was included at the end of the CTE. The evaluations were placed in a sealed envelope by
the student group and returned to the researchers.

Data Analyses

Content validity was analyzed by circulating the CTE among 14 expert full-time nursing faculty members for determination of the appropriateness of each item in a clinical teacher evaluation tool. Students completing the CTE also analyzed the tool and made suggestions for improvement.

The 30 items were factor analyzed using a principle component method with prior estimates of communality of 1.0. Three factors with eigenvalues exceeding 1.0 were subjected to a varimax rotation.

Internal reliability of the CTE was analyzed by Cronbach’s alpha coefficient of reliability. Test-retest reliability coefficient was done with an additional 106 nursing students the following semester using the same research methodology.

Results

Content validity and construct validity

Fourteen expert faculty members determined that the 30-item CTE included behaviors of an effective clinical instructor. Analysis of the data yielded three factors (with eigenvalues greater than one) that accounted for 64% of the total variance: 53%, 5.6%, and 4.1%, respectively, for factors 1 to 3. The items that loaded above .5 on the three factors are listed in the Table. The bold-face numerals reflect the factor that had greater than .5 for an item. Five items were deleted because they did not load above .5 on any factor. When an item loaded above .5 in two factors, the researchers placed the item into the factor that was most interpretable in terms of a common theme.

Factor 1, Nursing Competence, with an eigenvalue of 13.26, consisted of nine items. A content analysis of the items suggested that professional nursing expertise, that is, one’s interest in patients, one’s technical nursing skills, and one’s awareness of professional responsibilities, was meaningful in defining nursing competence.

Factor 2, Consideration for Students, with an eigenvalue of 1.41, grouped nine items also. Teacher recognition of the student as an individual who deserves confidentiality, respect, and confidence was the prominent theme in this factor. Factor 3, Teaching Competence, with an eigenvalue of 1.02, loaded seven items which were concerned with the process of transmitting nursing knowledge, skills, and attitudes.

Internal consistency reliability

A Cronbach’s coefficient alpha of .965 showed overall high internal consistency for the total scale. A split-half reliability of similar teaching behaviors within the instrument was not done.

Test-retest reliability

Test-retest reliability of the instrument was evaluated by administering the 25-item instrument to an additional 106 nursing students the following semester. The original instructors, teaching the same clinical courses, participated in the retest. A Pearson correlation coefficient of .85 indicated a high correlation between test and retest, with significance at the p<.001 level.

Discussion

An analysis of the data collected from the CTE instrument indicated that the 25-item instrument was both reliable and valid. Content and construct validity were documented. Items were added, deleted, or modified based on factor analysis and the recommendation of expert faculty members. Factor analysis showed that the instrument measured three major factors: nursing expertise, consideration for students, and teaching competency. Similarities existed between two out of three factors identified by Butler and Geitgey (1970), i.e., interpersonal and professional competence. The cognitive teaching factor of the Butler and Geitgey study differed from the teaching competence factor in this study. The previous study focused mainly on classroom teaching behaviors such as “stresses important material, uses class time efficiently, and asks thought-provoking questions.”

Zimmerman and Westfall (1988) found one major factor—effective clinical teaching—in their 43-item ECTB instrument. In contrast, this study identified three major factors in the CTE. The difference may be explained by the objective of this study to evaluate teaching behaviors that showed application of theoretical concepts in a clinical nursing setting.

High internal consistency (coefficient alpha = .965) and reliability (test-retest r = .85) of the instrument were adequately documented in this study. Students and faculty members also commented on the ease of completing the CTE, specifically the relatively few number of items (25) and the short period of time (10 minutes) necessary to complete the tool. All of these factors probably influenced the reliability, validity, and effectiveness of the tool for evaluating clinical nursing instructors.

Faculty members gave positive comments on the ease of interpreting the results of the CTE instrument. The factor scores were helpful to instructors in comparing the instructor’s own clinical teaching performance with that of other instructors in the school of nursing. The instructors also commented on the importance of receiving feedback on their ability to demonstrate the application of nursing theory in clinical situations. This additional feedback was not available to them from earlier standardized evaluation tools.

There were limitations to this study of the CTE instrument. The instrument was tested in only one private university setting. The addition of public universities and community colleges would increase the validity and generalizability of the tool. Concurrent validity was not addressed in this study. Gathering data from peer reviews of the instructors in conjunction with student evaluations would strengthen the concurrent validity of this instrument. Concurrent validity was not done in this study due to time and cost limitations. In the future, the instrument can serve at least three functions: (1) evaluate the nursing, teaching, and interpersonal behaviors of clinical instructors; (2) introduce order among different concepts that may explain effective teaching behaviors; and (3) empirically test hypotheses. This instrument is consistent with knowledge to date, yet remains flexible and subject to change as new knowledge is generated.

In conclusion, this instrument can be of great value in improving clinical teaching practices. Usually students are in the best position to judge the effectiveness of their clinical instructor. By gathering student feedback, instructors demonstrate a respect for students’ opinions and their learning needs. Thus, instructors can promote a partnership with students in the endeavor to improve the quality of nursing education and, ultimately, the quality of patient care delivered.

References


RESEARCH BRIEFS


