

1-1-2003

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Accepted version. *Journal of Professional Nursing*, Vol. 19, No. 1 (January-February 2003): 17-21.

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To see Table 1, locate the original published version: Fawcett, J. (2000). *Analysis and evaluation of contemporary nursing knowledge: Nursing models and theories*. Philadelphia: F.A. Davis, p. 696.

Teaching, Practice, and Research: An Integrative Approach Benefiting Students and Faculty

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Abstract: *A project showing the integration of teaching, practice, and research is described. The project involved using information gathered as part of baccalaureate nursing students' assessments of women's perceptions of and responses to cesarean birth to extend a program of nursing research. Benefits to student learning and faculty research programs are identified. The project serves as a prototype for the teaching, practice, and research activities of all students and faculty in nursing and other professional disciplines.*

Nursing faculty seemingly have overwhelming areas of responsibility, including teaching, practice, and research. The integration of those areas of responsibility is a highly complex activity that has, to date, eluded most nursing faculty, as well as faculty who teach in other professional practice programs. This article describes a demonstration project undertaken at 2 colleges of nursing to determine the feasibility of integrating teaching, practice, and research in undergraduate maternity nursing courses. The project, which extends an idea that was first advanced more than 20 years ago (Fawcett, 1979) and refined recently (Fawcett, 2000), was a collaborative effort of the three authors.

The project was based on 2 premises. One premise was that clinicians also can be researchers (Rolfe, 1993). The clinicians for this project were undergraduate maternity nursing students. The second premise was that the steps of the nursing practice process and the steps of the nursing research process are analogous (Table 1). As Wood (1978), who was referring to social work research and casework processes, explained, "The processes of [practice] ... are exactly the same processes as those of research" (p. 454). As can be seen in Table 1, the results of nursing assessment comprise baseline research data. The labels used to summarize the patient's health status represent the statement of the problem to be studied. Goal setting represents the hypothesis that specifies the desired nurse-sensitive outcome and the means to achieve that outcome. The desired outcome is the dependent variable, and the means to achieve that outcome is the independent variable. Implementation refers to the intervention, which is the independent or experimental treatment variable. Evaluation refers to judgments

about the achievement of the nurse-sensitive outcome, that is, the dependent variable. Written or computerized documentation of each step of the nursing practice process provides the actual data from which a conclusion regarding the hypothesis may be drawn. The demonstration project emphasized the assessment phase of the nursing practice process and use of the clinical information gathered during assessment for research purposes.

The Demonstration Project

The specific clinical practice and research topic selected for the demonstration project was women's perceptions of and responses to cesarean birth. Junior-year nursing students enrolled in the maternity nursing courses at 2 colleges of nursing gathered the clinical information as part of the assessment of women after the cesarean birth of their infants. At both colleges, junior-year students are in the early stage of clinical learning, and clinical practice activities emphasize development of assessment skills. Participation in the project was a clinical practice requirement for the course at each college.

The students used 3 existing research instruments as clinical assessment tools. Each tool offered students a different approach to assessment. The Perception of Birth Experience Scale (POBES) was used to assess women's perceptions of cesarean birth. The POBES, which is a summated rating scale, was developed by Samko and Schoenfeld (1975) and adapted by Marut and Mercer (1979) on the basis of findings from Marut's (1978) pilot study of women's perceptions of unplanned cesarean birth and a review of the literature. The POBES was modified by Cranley, Hedahl, and Pegg (1983) for women having planned cesarean deliveries. The unplanned cesarean birth version of the POBES contains 29 items about labor, delivery, and initial contact with the infant, rated on a scale of 1 to 5, ranging from "not at all" to "extremely." The planned cesarean birth version of the POBES contains 28 similar items, also rated on a scale of 1 to 5, ranging from "not at all" to "extremely." This tool helped students learn how to conduct an assessment using fixed-choice questions. The Cesarean Birth Experience Questionnaire (CBEQ) was used to assess women's responses to cesarean birth. The CBEQ, which was developed by Fawcett (1981), consists of 5 open-ended questions asking the woman how she felt physically and emotionally when she found out she was to have a cesarean birth, during the delivery, and after the baby was born, her greatest needs during the cesarean birth experience, and what could have been done and by whom to improve the experience. This tool helped students learn how to conduct an assessment using open-ended questions and enhanced their ability to record patients' verbatim responses. A Background Data Sheet (BDS) was used to record demographic and perinatal information. This tool helped students learn how

to gather specific information from a patient and from the medical record. The authors selected the POBES, CBEQ, and BDS for use as clinical assessment tools on the basis of their appropriateness for assessment of clinical phenomena and their ease of administration in the clinical practice setting.

Students at each college routinely use the nursing process during their clinical experiences in labor and delivery and the postpartum care units to assess clients, set goals, implement nursing interventions, evaluate the outcomes of intervention, and document their nursing activities in the patient's medical record. However the students rarely viewed the nursing process and research as complementary nursing activities. Rather they typically regarded research as the domain of nurse researchers, and the nursing process as the domain of nurse clinicians.

The three authors implemented the demonstration project as one approach to changing students' views of research and the nursing process. Two of the authors (C.A., M.W.) taught the students how to gather the clinical information with the POBES, CBEQ, and BDS, and how to record the information as a part of the students' regular clinical course work. After a 1 semester trial of the project, clinical instructors at 1 of the colleges assumed the role of instructing students about the project. The faculty member continued to provide clinical instruction about the project at the other college.

Initial discussion of the project with the student focused on reasons why nurses who provide direct clinical care frequently do not regard research as a part of their clinical nursing role. Students were reminded that a goal of the nursing research course, which they typically take during the same academic year as the maternity nursing course, is to encourage them to view research as part of the nurse's clinical role. One way to facilitate attainment of that goal is to directly involve students in the research process as undergraduates, that is, to experience research first hand. The demonstration project allowed the students to participate directly in research within the context of their clinical nursing practice.

During a class or clinical conference session, the faculty member briefly explained the research process and the importance to research of the clinical information gathered during the assessment phase of the nursing process. The faculty member then explained the background and rationale for the demonstration project and how the project would promote and facilitate the integration of teaching, clinical practice, and research. The students were told that involving undergraduates directly in research is an innovative strategy, and that they were part of a multisite research project (data also were being collected in Virginia and Finland). The students also were told that when seeking their first nursing position, they would have a distinct

advantage over new graduates who did not have an opportunity to become involved in a research project as part of their undergraduate nursing program.

The faculty member explained that during the postpartum rotation, each student would be assigned to a woman who had experienced a cesarean birth. The students were told that they were expected to use the nursing process, and to use the POBES, CBEQ, and BDS as part of their assessment of the woman's cesarean birth experience. The students then were trained in the processes of interviewing and data collection. Strategies for successful interviewing were reviewed, including timing of the interview, opening dialogue, creating a comfortable environment for hearing the patient, listening and probing for in-depth responses, asking the questions in a consistent manner without necessarily reading the questions, and terminating the interview. Students also were trained in the specific data collection procedures associated with the demonstration project and were taught how to use the POBES, CBEQ, and BDS as assessment tools. The faculty emphasized that the students were collecting information about the women that would be useful in the nursing care of those women, and at the same time also were collecting research data and must, therefore, comply with regulations regarding the protection of human subjects. Accordingly, the students were trained in the processes of describing the demonstration project, requesting voluntary participation, and obtaining written informed consent.

During clinical conferences, the students and faculty discussed the significance of the clinical information each student had gathered and what the experience meant to each of them. The students also discussed how use of the POBES and CBEQ altered their perceptions of the needs of women who had a cesarean birth. They typically expressed surprise about how much newly delivered women had to say when asked about their birth experiences, and how much more focused the assessment was with the POBES and the CBEQ than it might have been without specific assessment tools. Many students indicated that they would not have thought to ask some of the questions included in the POBES and CBEQ because they were concerned that the women might regard such questions as too personal and/or intrusive. Others professed ignorance of what questions to ask about a cesarean birth experience and regarded the assessment tools as a guide or outline that facilitated a more comprehensive assessment of the woman's cesarean birth experience. Students also reported that they became aware of the differences in the responses of women who had planned cesarean births versus those who had unplanned cesarean births, and they indicated that they were more sensitive to the women's needs after completing the assignment.

Some students were intimidated initially by the notion of participating in a research project but became more comfortable as they experienced the duality of practice as research and research as practice. Clinical instructors reported that, in general, students liked the assignment. They indicated that the project facilitated the students' acquisition of interviewing skills and sensitized them, especially to women's emotional responses to birth. The clinical instructors used the information gathered with the assessment tools when discussing the patient-centered nursing process during clinical conferences. At 1 college, most of the clinical instructors used end-of-semester clinical conferences to help the students to synthesize the clinical experience. The data collected by the students at that college were coded, analyzed, and summarized by a master's program nursing student at the other college for her capstone project (Silva, 2001). The data from the other college were coded and analyzed by the first author (J.F.), who prepared a written report of the results of the project each semester. The report then was distributed to the students who gathered the data.

Alternatives to gathering the clinical information during the woman's hospital stay are a postdischarge telephone call or a home visit. By using the POBES, CBEQ, and BDS, the clinical assessment can be performed in the same manner as when conducted at the woman's hospital bedside. Assessment via telephone call can be advantageous especially because this alternative helps students to understand how postdischarge follow-up nursing care can be accomplished easily and inexpensively. Assessment via home visit can be advantageous because that alternative adds a home health care experience to the students' hospital-based maternity experience and extends their opportunities for community- and home-based clinical experiences.

Discussion

Integrating teaching, practice, and research benefits both students and faculty. The demonstration project enhanced students' knowledge of and clinical skills required for the assessment step of the nursing process. The project also facilitated the students' understanding of the similarities between the nursing process and nursing research.

The project also has enhanced the authors' research activities. The results of the students' assessments currently are being used to extend a Roy Adaptation Model (Roy & Andrews, 1999) – based program of research addressing women's perceptions of and responses to cesarean birth (Fawcett, 1981; Fawcett & Burritt, 1985; Fawcett, Pollio, & Tully, 1992; Fawcett & Weiss, 1993; Reichert, Baron, & Fawcett, 1993). The results of the students' assessments are facilitating comparisons with data from women who experienced cesarean

deliveries from 1973 to 1980 (Fawcett, 1981), 1981 to 1982 (Fawcett & Burritt, 1985), 1988 to 1990 (Fawcett et al., 1992; Reichert et al., 1993), and 1990 to 1991 (Fawcett & Weiss, 1993). These comparisons will permit exploration of potential linkages between fluctuations in the cesarean birth rate (Martin, Hamilton, & Ventura, 2001) and women's perceptions of and responses to cesarean birth.

Direct involvement of students in faculty members' research as an integral part of their clinical course experiences fosters integration of research with teaching and also with practice. The knowledge generated by the research is accessible immediately to the students, and critical thinking about practice phenomena is promoted. Student learning becomes an exploration through active investigation, and knowledge uncovered in research activities is relevant and applicable to clinical practice immediately. Moreover, students with inquisitive minds are likely to conduct in-depth clinical assessments and uncover questions that prompt further investigation. The overlap of assessment skills and research skills, such as interviewing and recording of data, is obvious immediately to students.

Integrating teaching, practice, and research within the faculty role promotes knowledge development, dissemination, and application. Immersion in each area, however, often is difficult logistically. Sometimes faculty are no longer engaged in direct clinical activities; their research activities may be disconnected from teaching responsibilities and clinical content areas, and, therefore, invisible to students. A faculty member in that situation may collaborate with colleagues who teach clinical courses. That approach was evident in the demonstration project, in that 1 of the authors (J.F.) has not taught clinical nursing courses for several years. Thus, the project provided a unique opportunity to collaborate with faculty colleagues (C.A., M.W.) who were teaching clinical courses.

The demonstration project reflected an approach to the integration of teaching, practice, and research that aligns faculty members' research agenda with the clinical courses they teach. When the research focuses on topics that are relevant to the content of those courses, the faculty members can incorporate evidence from their own and their colleagues' research into the course content. As a result, the faculty roles of teacher and researcher are blended with economy of time and effort.

It is important to point out that whenever clinical information is used for research purposes, human subject protection must be observed. Accordingly, the demonstration project was reviewed by the institutional review boards at 2 universities and several hospitals. Each institutional review board appropriately required assurances that the women would be informed fully of the scope of the project and be given the opportunity to deny permission to use the

results of clinical assessment for research purposes. In addition, federal regulations regarding human subject protection training now require that the students be trained fully in human subject research (for on-line training, see <http://ohsr.od.nih.gov>). This training can be included as part of the nursing research course and reinforced when the integration project is presented in the clinical nursing course, or can be included as an integral part of the clinical nursing course.

Conclusion

Integrating all activities can be accomplished if faculty members structure their classroom and clinical teaching activities within the context of research questions, teach what they have learned from practice and research, and use their teaching and practice activities as the basis for their own and their undergraduate and graduate students' research projects. The project reported in this article serves as a prototype that can guide the teaching, practice, and research activities of nursing faculties and students worldwide, as well as faculties and students from other disciplines having a practice component (e.g., psychology, education, engineering, social work). The project also serves as a prototype for the development of evidence-based practice. In particular, analysis of the clinical information gathered by means of the POBES, CBEQ, and BDS can be used to develop and refine nursing interventions that will facilitate women's adaptation to cesarean birth. This and similar projects certainly should close the longstanding gap between research and practice.

Acknowledgments

- The authors gratefully acknowledge the contributions of the undergraduate maternity nursing students who conducted the clinical assessments for this project. The authors also acknowledge the assistance of Amy L. Berkovitz, MS, RN; Renee Gosselin, MSN, RN; Mary Ellen Jagelski, MS, RN; Judy Kowatsch, MSN, RN; Heidi Paquette, MSN, RN; Lori Williamson, MSN, RN; Sandra Wolf, MSN, RNC.

Note

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- Supported in part by the University of Massachusetts Boston, Research Trust Fund Number 1-04460.
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Appendix

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