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Reporting Research Results: Implications for Nursing Practice Warrant More Than One Sentence

Jacqueline Fawcett

Nursing is a professional discipline, which means that nurses have an obligation not only to develop and disseminate knowledge but also to use that knowledge in practice. Accordingly, the ultimate goal of nursing research, as well as research in any professional discipline, is the use of findings in practice. The challenge for the author of a research report "is to interpret the findings in light of their clinical or practical significance without over- or understating their importance" (Fawcett, 1998, p. 1). Little guidance beyond a requirement to include practice implications is found in the printed or online author guidelines or manuscript specifications for most nursing journals. Consequently, the so-called "Implications for Practice" section of a typical research report constitutes no more than a sentence or two. This article gives specific guidelines that should help both novice and experienced researchers to present a concise yet comprehensive discussion of content to be included in any discussion of the use of study findings in practice.

Evaluating the Utility of Research Findings for Practice

Evaluation of research findings for their utility in practice requires application of a criterion called pragmatic adequacy (Fawcett, 1999). To apply the pragmatic adequacy criterion, the author or the reader considers the extent to which the study findings can serve as the basis for such practical activities as new ways to assess or deliver care to patients. Evaluation of pragmatic adequacy encompasses six steps:

- Step 1: Identify the social meaningfulness of the study findings
- Step 2: Determine if the study findings are ready for use in practice
- Step 3: Make certain that the study findings are relevant for a specific practice situation
- Step 4: Analyze the feasibility of using the findings in a particular practice setting
- Step 5: Analyze the congruence of use of the study findings with patients' expectations
- Step 6: Determine if the practitioner has legal control of use of the study findings

Step 1: Identify the Social Meaningfulness of the Study Findings

The first step in evaluating the utility of study findings for use in practice is to identify the social meaningfulness of those findings. This step requires consideration of the social problem that is addressed by the new assessment tool or intervention and the possibility of favorable patient outcomes. One example of a social problem is physical symptoms associated with a new medical or surgical treatment for cancer or another disease experienced by a large number of people. Another example of a social problem is psychological symptoms associated with adaptation to a catastrophic event, such as a wild fire or a traumatic injury experienced by a relatively small number of people. Examples of favourable outcomes are reduced incidence of physical or psychological symptoms and

increased patient satisfaction. Quantitative analyses of outcomes should consider not only statistical significance, but also clinical or practical significance. Statistical significance is determined by the alpha or p value. However, as Slakter et al (1991) point out, "statistical significance does not guarantee clinical significance and more to the point, *the magnitude of the p value (.05, .01, .001, .00029, or whatever) is no guide to clinical significance*" (p. 249). Instead, clinical significance is determined by the magnitude of the outcome, which is calculated as an effect size that can be classified as a small, medium, or large frequency of occurrence of a phenomenon, relationship between variables, or difference between groups (Cohen, 1988). Detailed guidelines for determination of clinical significance were given in a previous article published in Nurse Author & Editor (Fawcett, 1998).

Step 2: Determine if the Study Findings are Ready for Use in Practice

Evaluation of pragmatic adequacy continues with a determination of whether the study findings are ready for use in practice. Many years ago, Hunt (1981) called attention to the need to identify what needs to be studied as well as the efficacy of what has been studied. The decision tree shown in Figure 1 may help authors and readers to reach a definitive conclusion about the utility of the findings of any study for practice. The conclusion can range from identifying a need for additional research to advocating adoption of a new practice, a trial of a new practice in a practice setting, or discontinuation of a current practice.

Step 3: Make Certain that the Study Findings are Relevant for a Specific Practice Situation

The third step involves determining whether the study findings are related to the particular area of practice for which an assessment tool or new intervention is sought. That means that the study findings are applicable to a particular practice specialty, particular problems, and/or particular ages or developmental phases of patients.

Although this aspect of pragmatic adequacy may seem self-evident, it is not unusual to find that a proposal for a new assessment tool or intervention is based on research that is unrelated to the relevant practice problem and patient population. Suppose, for example, that a nurse wants to design an intervention that will reduce postpartum depression. Suppose also that the intervention protocol is to be based on research using samples of depression experienced by older male adults. In this fictitious example, the study samples were drawn from an entirely different population—older men—than the population for which the intervention is being designed—women of childbearing age. Clearly, additional research would be needed to determine if the findings of studies of depression experienced by older men are the same as or different from findings of studies of depression experienced by women following childbirth.

Step 4: Analyze the Feasibility of Using the Findings in a Particular Practice Setting

The next step in evaluating the utility of study findings for use in practice is to determine the feasibility of using those findings in a particular practice setting. Analysis of feasibility involves identifying the resources needed to implement a new assessment tool or intervention, as well as determining the willingness of those who control resources to use those resources. The necessary resources include the time needed to learn how to use the new assessment tool or implement the new intervention; the number, type, and expertise of personnel required for all aspects of the design and implementation of the new assessment tool or intervention; and the cost of in service education, salaries, equipment, and testing procedures.

Step 5: Analyze the Congruence of Use of the Study Findings with Patients' Expectations

The fifth step involves an analysis of the extent to which the new assessment tool or intervention is congruent with patients' expectations about practice. If the new tool or intervention is not congruent with existing expectations, it should either not be used or patients should be helped to change their expectations for practice. As Johnson (1974) pointed out more than 30 years ago, "current . . . practice is not entirely what it might become and [thus patients] might come to expect a different form of practice, given the opportunity to experience it" (p. 376).

Step 6: Determine if the Practitioner has Legal Control of Use of the Study Findings

The last step in evaluating the utility of study findings for use in practice requires determining whether the practitioner has legal control over the implementation of the new assessment tool or intervention and the measurement of its effectiveness. Control of practice may be problematic because practitioners are not always able to carry out legally sanctioned responsibilities due to the resistance of others. Sources of resistance include, for example, attempts by physicians to control nursing practice, financial barriers imposed by health care organization administrators and third-party payers, and skepticism by other healthcare professionals about the ability of nurses to carry out the proposed interventions (Funk et al, 1995). The cooperation and collaboration of others may, therefore, have to be secured. Implementation of an intervention to manage the symptoms associated with chemotherapy, for example, may be opposed by physicians who are concerned that patients might be distressed by knowledge about the symptoms or even develop certain symptoms due to their expectation that those symptoms actually will occur. Implementation of the symptom management intervention also may be opposed by healthcare system administrators who are concerned about the cost of the resources needed to implement the intervention.

Using the Pragmatic Adequacy Guidelines

The guidelines for pragmatic adequacy can be used to write the practice implications section of a "standard" research report that emphasizes the theoretical and technical details of the study (Table 1). The guidelines also can be used to write a separate manuscript that emphasizes the practical application of the findings in the real world of practice (Table 1). The guidelines can be applied in reports of descriptive and correlational studies, where practical implications might be in the form of suggestions for assessment tools. In addition, the guidelines can be applied in reports of experimental studies, where practical implications might be in the form of suggestions for innovative interventions.

Table 1

Content of the Implications for Practice Section of Research Reports

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- Explain the social meaningfulness of the study findings by clearly identifying the magnitude of the problem addressed by the study findings
 - Explain whether the study findings are ready for use in practice by citing the relevant part of the decision tree illustrated in Figure 1
 - Identify the specific practice situations for which the study findings are relevant
 - Present an analysis of the feasibility of using the findings in particular practice settings
 - Explain whether use of the study findings is likely to be congruent with patients' expectations or

how patients might be helped to change their expectations

- Identify any potential sources of resistance to implementation of legally sanctioned practice activities and strategies to overcome the resistance
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The guidelines for the "Implications for Practice" section of a research report are needed perhaps more than ever before in the modern history of nursing, given the current mandate for evidence-based practice. As LaPierre et al (2004) point out, "at the individual RN level, nurses need to prepare themselves with the skills needed to review current findings and determine if they are applicable for their setting" (p. 7). Thus, the guidelines given in this article can also be used by nurses who are reviewing research reports to determine the utility of findings for particular practice settings (Table 2).

Table 2

Evaluating the Utility of Study Findings for Use in Practice

- Analyze all sections of the research report, with special attention to any content about implications for practice
 - Determine whether the social problem addressed by the study findings is evident in the practice situation of interest
 - Determine if the study findings are ready for use in practice using the decision tree illustrated in Figure 1
 - Make certain that the study findings are relevant for the specific practice situation of interest
 - Determine the feasibility of using the study findings in a particular practice setting
 - Determine whether an assessment tool or intervention derived from the study findings would be congruent with expectations of patients in the practice situation of interest
 - Determine if the practitioner has legal control of use of the study findings in the practice situation of interest
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Jacqueline Fawcett, PhD, FAAN, is Professor, College of Nursing and Health Sciences, University of Massachusetts Boston, USA. E-mail: jacqueline.fawcett@umb.edu

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