

The
JOURNAL
of the New York State Nurses Association

Fall/Winter 2002, Volume 33, Number 2

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The Journal of the New York State Nurses Association is peer reviewed and published biannually by the New York State Nurses Association. ISSN# 0028-7644. Editorial and general offices located at 11 Cornell Road, Latham, NY 12110. Telephone: 518-782-9400. Fax: 518-782-9533. E-mail: info@nysna.org. Annual subscription: no cost for NYSNA members; non-members: \$30.00.

The Journal of the New York State Nurses Association is indexed in the Cumulative Index to Nursing, Allied Health Literature, and the International Nursing Index. It is searchable in CD-ROM and online versions of these databases available from a variety of vendors including SilverPlatter, BRS Information Services, DIALOG Services, and The National Library of Medicine's MEDLINE system. It is available in microform from ProQuest Information and Learning, Ann Arbor, Michigan. Acceptance of advertising does not mean endorsement by The New York State Nurses Association of the product advertised, the advertisers, or the claims made. Similarly, rejection does not necessarily imply that a product offered for advertising is without merit, or that the manufacturer lacks integrity.

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Editorial

How do we know what we know? Many years ago Charles Pierce, a philosopher, described four ways of knowing. The method of tenacity is the most primitive; like a “sacred cow” in nursing, we know it to be true because it has always been true. The second way of knowing is the method of authority. If the Bible, or a physician, or a journal says it is true, it must be so. Third, there is the a priori method, which is knowledge based on reason or intuition; it is true because it is self evident. The fourth way of knowing is the method of science, which uses an approach that appeals to evidence, based on systematic, controlled, critical investigation (Kerlinger, 1973).

The scientific method provides a guide for all good research, be it qualitative or quantitative. We first identify a clear and feasible question or problem to be studied. We may or may not have a theory-based hypothesis or a hunch about the answer to our question. In some qualitative studies we may even want to put aside our hunches so that we can more clearly hear the answers given by the people we are questioning. We then define specifically the terms we are using, specify exactly who our respondents or subjects will be, and decide upon the instruments we will use to gather our data, whether they are, for example, ourselves as interviewers, questionnaires, or blood pressure cuffs. We need to make sure these data-gathering instruments do indeed collect or measure what we want them to collect or measure, and do this in a reliable manner. Finally, we have to analyze the data in a systematic way in order to come to solid, evidence-based conclusions.

This issue of the *Journal* is devoted to several nursing research endeavors. The lead article by Levin, Perry and Gurney, “Designing a Statewide Agenda for Nursing Research,” presents the background, development, and current status of a major collaborative project between the NYSNA Council on Nursing Research and the Foundation of NYSNA. The purpose of this project has been, and continues to be, facilitation of all aspects of nursing research, its conduct, dissemination, and application to practice in New York.

Some of the goals and initiatives proposed in the NYS Nursing Research Agenda are addressed in the second article by Ervin as needed activities for promoting evidence-based practice in nursing. For example, both recommend teaching strategies to help students integrate research or the best available evidence into their clinical learning and practice.

The third article, by Nokes and Bakken, demonstrates the connection between research and practice by showing how the concept of instrument validity has direct application to the patient assessment tools we use in the clinical area. The authors compare two tools used to assess symptoms in people with HIV. The question is: which tool is more valid to measure these symptoms?

The article by Truglio-Londrigan is an example of philosophical research and takes us through an exploration of how patients experience wisdom in the nurse-patient relationship. It is clear that the way a nurse behaves can have meaning and lasting effects on a patient’s life.

Finally, “Perceptions Regarding the Non-Nurse College Graduate Practitioner” by Rich and Rodriguez is another qualitative study, which examines the perceptions of healthcare providers regarding nurse practitioners who entered accelerated BS to graduate NP programs with non-nursing undergraduate degrees. It is a good example of how a qualitative study can form the basis for instrument development for a later quantitative study.

We have enjoyed putting together this special research issue. We still believe, after many years of involvement in research, that it is exciting, provocative, intellectually stimulating, and useful. We hope that you enjoy it.

May we also remind you that your reactions to this issue and submissions of your own work to the *Journal* are always welcome.

Rona F. Levin, PhD, RN
Gail B. Malloy, PhD, RN
Guest Editors

Kerlinger, F. (1973). *Foundations of Behavioral Research*. Second Edition. Holt-Rinehard, NY

Designing a Statewide Agenda for Nursing Research

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ABSTRACT

This article describes the background, development, and beginning implementation of a nursing research action plan for New York state. Working together over the past two years and building on past collaborative efforts, the New York State Nurses Association (NYSNA) and the Foundation of the NYSNA created an agenda for nursing research in New York state. The agenda contains five major goals, subgoals, an action plan for achieving these goals, and desired outcomes. Several implementation activities, including initiation of Web-based activities, strategies to bring research to the clinical nurse, and the development of a proposal to create evidence-based practice teams, are under way. The process of agenda development may serve as a model for other associations or organizations.

There is an old Charlie Brown comic strip in which Snoopy is sitting on a tree branch with his head buried in a book. Woodstock flies onto the branch and asks Snoopy what he is doing. "I am studying why some dogs walk at an angle," Snoopy replies. Woodstock queries, "Why are you studying that?" With absolute resolve, Snoopy quips, "Well, somebody has to." This dialogue between a dog and a bird may help explain why the New York State Nurses Association (NYSNA) Council on Nursing Research (the council) and the Foundation of NYSNA (the foundation) undertook the collaborative project of designing a statewide agenda for nursing research. Like Snoopy's study, there are a lot of tough jobs that do not have many volunteers clamoring to get their paws dirty. The council and the foundation undertook this job because they believed the need was so great. Thus the purpose of this collaborative project was to de-

velop a comprehensive statewide plan to facilitate the conduct, dissemination, and utilization of nursing research in New York. The plan needed to be action-oriented, outcome-focused, and feasible. The following article tells our story – the history of what led to the agenda, and how we developed its foundation, built on it, and began implementing it.

Historical Roots of the Agenda

For over a decade New York state nurses participated in a variety of activities that focused on the advancement of nursing research. Beginning in 1987, the council on Nursing Research, the Foundation of the NYSNA, and the Delta Pi Chapter of Sigma Theta Tau co-sponsored a process to forge a nursing research agenda in New York state. This cooperative effort was based on their common beliefs that:

- 1) "the quality of nursing research is a major determinant of the quality of care the profession renders,
- 2) the strength of nursing's science governs the strength and maturity of the discipline,
- 3) a coordinated nursing research agenda in the state would foster research in needed areas and encourage innovative investigation in previously uncharted areas,
- 4) individual researchers as well as organizations and agencies responsible for nursing research can and will collaborate to strengthen nursing research, and
- 5) the shape and scope of nursing research in New York state can and should be a driving force in the evolution of nursing and health care everywhere" (Welch, Shortridge, & Tucker, 1991, p.4).

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The activities began with a conference convened by the three aforementioned organizations in the spring of 1988 to identify: 1) the nature and scope of nursing research in progress in New York, 2) nursing research priorities, and, 3) strategies and resources for strengthening nursing research. Further, the conference was to formulate recommendations for an ongoing coordinated process for planning and evaluating nursing research. Attendees recommended that the council continue to assume responsibility for identifying nursing research priorities, and that the foundation develop a “data bank and clearinghouse to promote access to research findings, enhance communication among researchers, and enhance dissemination of research findings” (Welch et al., p. 5).

In an effort to identify nursing research priorities following this first conference, the council conducted a Delphi survey in 1988 to determine the top 10 nursing research priorities in New York state (Shortridge, Doswell, Evans, Levin, Millor, & Carter, 1989). The Delphi technique is one way to elicit judgments from a large number of experts on a specific topic in order to forecast and plan for the future. The council invited all members of NYSNA who held at least a master’s degree or higher to participate in this project. After three rounds of the survey, nursing research priorities were identified and categorized into three themes: nurses/context, nursing process, and clients/outcomes (Shortridge et al.)

Research Priorities

Nurses/Context

- Retention of nurses
- Job satisfaction
- Nursing shortage
- Recruitment of nurses
- Perception of the role of the nurse

Nursing/Process

- Ensuring high standards of nursing care
- Quality nursing care
- Clients/Outcomes

Effectiveness of nursing care

- Patient outcomes related to nursing care
- Cost effectiveness of nursing care

In July 1989 a subsequent conference was convened to review and assess the nursing research priorities, and progress continued based on the momentum that emerged from the 1988 conference. Specifically, papers that synthesized the existing literature and suggested future research for several of the research priority areas were developed. In November 1989 participants met to identify further actions for carrying out the needed research, which was specified in the papers. A key outcome of this meeting was the recommendation that the foundation establish a statewide Center for Nursing Research “to facilitate ongoing coordinated identification of research priorities, assessment of existing work, dissemination of findings, and solicitation and dissemination of funding for research” (Welch et al., p. 24). The 1988 and 1989 efforts of the council and the foundation resulted in substantial progress toward moving the nursing research agenda forward. The Center for

Nursing Research was established within the foundation in 1989, nursing research priorities were identified, and initial review of literature and recommendations for future efforts were disseminated to nurses with the publication of *Nursing Research: Forging an Agenda for New York State* (Welch et al., 1991).

After this initial momentum, however, five years passed before another conference was convened to discuss how to close the gap among nursing research, education, and practice. In 1994 a conference was convened to identify nursing research needs, explain models for collaborative nursing research practice at the facility level, and develop strategies for NYSNA to support nursing research activities in New York. Participants broke into small groups and identified the nursing research priority needs and suggested ways in which NYSNA could promote nursing research efforts. Although a list of suggestions was created, there was no organized follow-up to act on the group’s suggestions.

Four years later, in 1998, another summit brought together nurse researchers and others interested in nursing research to discuss the factors that were facilitating or impeding the conduct of nursing research in New York. Further, the attendees were charged with establishing benchmark criteria for a realistic nursing research agenda. Unfortunately, the conference highlighted that little progress in advancing nursing research had been achieved in the previous decade. The issues hampering nursing research that were identified at the 1988 conference remained (e.g., the lack of resources, both human and financial; and the lack of an infrastructure within the state to advance a research agenda).

Summary: Previous Statewide Nursing Research Initiatives

1988 (Spring) Conference:

Directions for Nursing Research in New York State

1989 (July) Conference:

Nursing Research Priorities: Assessments and Future Directions

1989 (Nov.) Invitational Conference:

Addressing Nursing Research Priorities

1991 Publication:

Nursing Research: Forging an Agenda for New York State

1994 Invitational Conference:

Nursing Research in New York State

1998

New York State Nursing Research Leadership Summit

After the 1998 initiative, the foundation and the council agreed that although the previous activities were successful in describing nursing research priorities and the barriers to conducting and using nursing research, they fell short in advancing nursing research because no plan was developed to overcome the barriers. Furthermore, the healthcare system itself had experienced tremendous changes in the prior decade (e.g., the advance of managed care and the evolving nursing shortage) such that the previous activities were not as relevant to the current context as when they were developed. Therefore,

Subgoals	Activities	Timeline/Responsibility	Progress	Outcome
Goal 1. Expand the human, technological and financial infrastructure that is currently available to support the nursing research endeavor.				
1a. Develop a statewide clearinghouse to link experts in clinical research, education, and administration, with practicing nurses and each other to facilitate research and research utilization.	Initiate contact with ENRS and Sigma Theta Tau chapters to ascertain their interest in operationalizing this resource. A task force of the council/foundation team will convene to pursue the development of an interactive tool for collecting and presenting researcher data and for coordination with NYSNA IS department to help develop Web capabilities for this.	Fall 2001 (Initiation) Fall 2002 CG, PP, TP, CW <i>(Initials identify individuals responsible. See key below)</i>	Plan adopted Sept. 2001. Organizational policy issues discussed with recommendations from the Council adopted. The database is 98% complete. It was launched publicly Sept. 2002.	An average of 3 requests/month will be received during the first year of operation.
1b. Seek funding to help move the research agenda.	Develop proposal for small grants to support efforts to build infrastructure for pushing state nursing research agenda.	Winter 2003 Proposal (RL, PP, MBH, PW) template Fall 2003 funding	Task Force members are currently writing proposal.	NYSNA/Foundation will receive funding for at least one grant proposal by Fall 2003.
1c. Organize and distribute a list of funding and other resources that can be used to support nursing research.	Update nursing research Web links on Foundation and NYSNA Web pages.	Fall 2001 NYSNA staff and council	Web page launched. Still being refined. <i>Ongoing</i> — R & P Web links updated.	Development of Web resource page.
Goal 2. Facilitate collaboration among stakeholders in nursing research endeavor to promote sharing of expertise, mentoring of novices, and coordination of resources to improve patient care.				
2a. Bring together nursing clinicians, administrators, educators, and researchers to identify strategies for working together.	Organize and convene regularly scheduled statewide meetings among the stakeholders to develop and maintain a nursing research implementation plan (perhaps through local districts). Hold "kickoff" meeting. Pursue funding via NYSNA and Foundation budget process. Write business plan.	Late Sept. 2003 if funded internally. (CC, RL, PP, CG) Late Sept. 2004 if grant funded. CG — Jan. 2003 CC — business plan	Multidisciplinary group contributed to designing the agenda plan. Seeking grant to fund a conference. Small budget for development requested. See 1b.	Development of a local goal statement and implementation plan for collaboration among stakeholders.
	Include nurse clinicians, nursing administrators, educators and researchers in the local workgroup.	Summer 2001 CG — Fall 2001 <i>Ongoing</i>		All stakeholders will be represented in local workgroups as evidenced by attendance/membership lists.
	Advertise the existence of the NYSNA research Web site in <i>Report</i> and other publications. Emphasize in annual article that highlights the work of the council.	Fall 2001 Winter 2002	<i>Ongoing</i> — Marketing of Web site. Most recent update to Web site, Sept. 2002.	Inclusion of statement in <i>Report</i> and Foundation publications.
	Summarize statewide nursing research collaborative efforts in <i>Report</i> and on Web site. Resurrect Council's collection of NY nursing research abstracts, advertise their existence, and disseminate to interested parties upon request. Review content and application of the Compendium of Nursing Research (addresses goals 2, 3, & 4).	Winter 2003 and annually <i>Develop</i> — Fall 2002 <i>Distribute</i> — Winter 2003	Interactive directory will help address this. Disseminate compendium. Set goal to include compendium on Web site as a .pdf file. Placed on agenda for winter meeting.	Inclusion of statement in <i>Report</i> and Foundation publications. Web site as they arrive. Compendium is available online and updated biennially. Publish listing annually in the <i>Journal</i> .
2b. Promote mentoring of nurses who are novices in nursing research.	Develop and distribute a list of nurse researchers in NYS who are willing to serve as mentors outside their local institutions. Promote Nursing Research Fellowship program.	Fall 2002	Responded to several e-mail requests; interactive directory launched, option included to indicated if willing to mentor.	Creation of a mentor list (may be electronic with easy capacity to edit by listed mentor).
2c. Communicate collaborative research agenda plan to colleagues in NYS, regionally, nationally, and internationally if possible to facilitate participation in plan's activities and generate additional ideas to enhance plan.	Submit a proposal to present at ENRS. Pursue proposal for state of the Science conference. Prepare manuscript describing plan and progress for <i>Journal</i> .	March 2002 RL-Summer 2003 RL, PP, CG	Pace, Feb. 2002; ENRS 21 March 2002; CG participated in SNA RIG at ENRS WENR, Sept. 2002. District 16, Nov. 2002 Negotiation underway for presentation to American Holistic Nurses Association. Convention handout Sept. 2002. Manuscript accepted; final draft submitted Oct. 2002.	Presentation at regional and national conferences. Manuscript published Winter 2003.

Goal 3. Create learning opportunities for nursing students and professional nurses to enhance their understanding of nursing research and their ability to apply research findings to practice.						
3a. Stimulate interest of nursing students and professional nurses in nursing research.	Hold a workshop at foundation or NYSNA HQ for nurse educators on how to stimulate interest in nursing research among student and graduate nurses. Hold forums across state on innovative strategies to enhance teaching nursing research led by council members and Center for Nursing Research Planning Committee members who have expertise and experience.	Fall 2004 Fall 2004	Introduction to the NYS nursing research agenda program updated Sept. 2002. Program on teaching EBP to the clinical nurse presented Sept. 2002 convention.	Participants will develop and implement at least one strategy. They will share strategy and outcome of implementation with NYSNA Council on Nursing Research by Spring 2005.	Fall 2004 Fall 2004	Every other issue of <i>Report</i> will contain half-page summary of a research study targeted toward direct care providers. UNDERWAY ! !
3b. Provide learning opportunities for student and professional nurses to enhance their understanding of nursing research and research utilization.	Develop proposal to create and publish regular column in <i>Report</i> summarizing a nursing research study and emphasizing implications of research study for practice. Emphasis on being understandable to the clinical nurse. Develop table to track topics and authors. Develop criteria for such an article.	Spring 2001 <i>Done</i> — Fall 2001 <i>Done</i> — Fall 2001	First research summary published in Jan. 2002 issue of <i>Report</i> . Four research summaries submitted to date. <i>Done</i> — Database created to track topics and authors done. <i>Done</i> — Columns archived on NYSNA Web site.	Every other issue of <i>Report</i> will contain half-page summary of a research study targeted toward direct care providers. UNDERWAY ! !	Spring 2001 <i>Done</i> — Fall 2001 <i>Done</i> — Fall 2001	Program participants will rate achievement of program objectives as excellent.
4a. Translate studies into language that is understandable by non-researchers.	Council on Nursing Research provides input to "Ask the Experts" column in <i>Report</i> . Provide consultation on nursing research projects of students and NYSNA members at convention exhibit booth. Advertise availability of such consultation in <i>Report</i> .	Fall 2002 <i>Begin</i> — Fall 2002	Program for clinical nurses on using EBP presented Sept. 2002 convention. <i>Ongoing</i> — Columns are archived on Web site.	Publish 2 to 3 columns per year.	Fall 2002 <i>Begin</i> — Fall 2002	Publish 2 to 3 columns per year.
4b. Publish summaries of nursing research.	4a. Prospective data related to coverage of nursing research will be obtained from representative sample of different media sources over several months. After baseline data obtained, research council members/fellows to review specific journals and notify NYSNA when a NY nurse has published pertinent nursing studies. NYSNA to send congratulatory letter and offer support for press release. (to be discussed) See earlier reference to research column in <i>Report</i> (2a) Include in grant proposal. 4b. See 5a. 2a.	Fall 2001 Spring and Summer 2001 issues	Four members signed up for consultation (Nov. 2001). <i>Done/ongoing</i>	Users of this service will provide positive evaluation of experience and specify how it helped them with their research project. At least 10 people will sign up for this service.	Fall 2001 Spring and Summer 2001 issues	Users of this service will provide positive evaluation of experience and specify how it helped them with their research project. At least 10 people will sign up for this service.
5a. Develop strategies to promote utilization of nursing research to improve patient care at the local and state level.	Summarize nursing research reports for non-research fluent nursing audience — distribute summary in <i>Report</i> and invite feedback on nursing research Web site. Contribute to "Ask the Experts" column on evidence-based practice. Solicit input from nursing administrators regarding clinical issues and work problems they are facing. Provide pertinent research findings as appropriate. Include in grant proposal. Provide summaries of nursing research findings to foundation and NYSNA representatives and members to use when lobbying for improved health care. Monitor the use of these summaries. Include in grant proposal when summarizing nursing research. (See also 3a, Activities.)	Winter 2002 April 2002 Winter 2003 As needed	<i>Underway</i> — first published Jan 2002. <i>Underway</i> — Two scheduled per year.	Inclusion of research summary in <i>Report</i> .	See 5a.	See 5a.
5b. Develop strategies to include and promote nursing research findings to influence healthcare policy.	Summarize nursing research reports for non-research fluent nursing audience — distribute summary in <i>Report</i> and invite feedback on nursing research Web site. Contribute to "Ask the Experts" column on evidence-based practice. Solicit input from nursing administrators regarding clinical issues and work problems they are facing. Provide pertinent research findings as appropriate. Include in grant proposal. Provide summaries of nursing research findings to foundation and NYSNA representatives and members to use when lobbying for improved health care. Monitor the use of these summaries. Include in grant proposal when summarizing nursing research. (See also 3a, Activities.)	Winter 2002 April 2002 Winter 2003 As needed	<i>Underway</i> — first published Jan 2002. <i>Underway</i> — Two scheduled per year.	Inclusion of research summary in <i>Report</i> .	See 5a.	Summaries provided to NYSNA legislative liaisons and foundation representatives for use in advocating. Feedback will indicate summaries are helpful in supporting desired legislation/policy. Published summaries will include an "Implication for Policy" section.

the council and the foundation decided to return to the nursing community to re-assess the status of nursing research and develop a plan to redirect the nursing research agenda to make it realistic and relevant for the current research, practice and educational environment.

Developing a Foundation for the Agenda: Gathering the Bricks

The Questions

The past work of our colleagues, described above, identified what we needed to do to move nursing research to a more visible and usable place in the state. It also provided beginning direction for how to do this. What we now wanted to do was create an action plan that was comprehensive, feasible, and met the needs of all nursing constituencies in the New York state nursing research enterprise. We therefore sought input from all categories of nurses who were members of NYSNA, those nurses working in direct patient care as well as educators, administrators, and researchers. We asked participants one overarching question: How can we collaborate to promote and implement research and research utilization statewide? Two sub-questions provided participants with more specific guidance for their responses:

1. What are your ideas about what we want to achieve?
2. How do you think we can achieve these?

The Methods

We used two main approaches to elicit feedback from NYSNA members, which provided the building blocks for developing the agenda: a mailed survey and focus groups conducted during the NYSNA 2000 convention. After data were collected, we used a Q-sort to structure the feedback and provide an organizational scheme for the agenda.

Mailed Survey

A response form that contained the statement, "This is how I think we can collaborate to promote and implement research and research utilization statewide," was mailed with a cover letter to 499 individuals who were on the Council on Nursing Research's mailing list during the summer of 2000. This list consists of deans of schools of nursing, directors of academic and service research centers, chief nurse executives at hospitals in New York state and the leadership of NYSNA, including chairpersons for each of the collective bargaining units. The letter invited these individuals to the planned continuing education (CE) session at the 2000 convention to be held in the fall where council and foundation representatives would be gathering information for "...shaping a statewide collaborative effort to promote nursing research." It also urged recipients to share their comments with us, using the response form, if they were unable to attend the convention session. Although very few individuals responded to this invitation, the responses we did receive contained important ideas, which were reiterated by other participants at the CE session.

Focus Groups

The purpose of the CE session, held during NYSNA's 2000 convention, was to learn what NYSNA members thought they needed to help promote and use nursing research and how the council in collaboration with the foundation could help achieve these goals on a statewide level. We used focus groups to accomplish our purpose. Focus groups use interview skills for listening to and

learning from people (Morgan, 1998). This method helps "...gain powerful insights into the feelings of the people who will be most affected by..." the changes that result from a project, program, or product (Morgan, p. 5).

Approximately 130 nurses attended this session. All walks of nursing were represented, including clinicians, managers, administrators, educators, and researchers. In addition, these nurses represented all levels of nursing education from diploma to doctoral degree. The session began with a brief introduction about what we hoped to accomplish, and an overview of prior efforts to assess the status of nursing research in New York state. Participants then formed groups of between 20 to 25 individuals each. Council members and foundation representatives served as group facilitators (interviewers). Facilitators began the session by asking two major questions, which were also contained in a handout shown in Figure 1.

A large room with round tables and chairs provided a setting conducive to discussion. Space between each group was sufficient to avoid hearing each other's conversations. A recorder (or the facilitator in some cases) wrote each individual response to each of the two sub-questions on a flip chart. After the session, NYSNA staff collected the flip chart sheets and typed the results verbatim using a word processor. The comments were then organized into statements that provided the data for a Q-sort.

Q-Sort

A Q-sort is a procedure that entails sorting a deck of cards into categories, specified by the researcher (Polit & Hungler, 1999). In this case, each card in each deck contained a single statement or phrase from the lists of focus group responses. Members of the subcommittee who carried out the Q-sort were the chair of the council, the foundation's chair of the Center for Nursing Research, and one of the two NYSNA Research Fellows. They met at NYSNA headquarters following the convention for a four-hour block of time to complete the sort. Each subcommittee member was given a stack of cards with the same set of responses with instructions to sort into piles of similar categories. No name was given to these categories at this time. Following individual efforts to sort, the group discussed their respective collection of responses. If one or more subcommittee members put a response into different category piles, they discussed the reasons for the difference in perspectives until the group reached consensus on the most appropriate category into which the response could be placed. Five separate piles (or major goal categories) evolved from this procedure and were named as follows:

- Involvement/Collaboration/Mentoring
- Infrastructure
- Education
- Dissemination
- Research Utilization (at micro & macro levels)

The following are sample focus group responses (or the phrases contained on cards) for the infrastructure category:

- Create a link to research experts to facilitate research/utilization.
- Link researchers with similar interests.
- Develop a research infrastructure/support system.
- Provide networking methods for researchers.

Building the Agenda: Laying the Bricks

Developing Goal Statements

After naming each of the five piles identified above, the Q-sort subcommittee wrote goal statements, which reflected the meaning of the concept labels. In developing these goal statements the subcommittee also considered the outcomes of the work to strengthen nursing research in New York state, which took place during the previous decade. The subcommittee then presented these goal statements to all members of the council and foundation representatives and the statements were accepted unanimously. (See the Nursing Research Agenda in this article.)

Establishing an Action Plan

Each member of the Q-sort subcommittee volunteered to take one or two of the accepted goal statements and develop more specific sub-goals, activities, and outcomes for each one. Initial timelines were also included for each activity.

Refining the Agenda

The agenda underwent multiple revisions prior to being approved for dissemination. Most of the initial comments and revisions on the first draft of the document were accomplished via e-mail. By the time the council and foundation representatives met, the document was a working plan. Most subsequent revisions had to do with editing and adjusting timelines to be more realistic. Another refinement was adding a column to the agenda that would indicate the progress we were making in achieving desired outcomes. The group also deemed it important to assign responsibility for the specific implementation activities contained in the agenda. In this way individuals would be accountable for making this paper plan come alive. And indeed it has!

Implementing the Agenda: Making it Happen

Implementing the agenda has been and will continue to be a daunting task requiring the collective effort of academic, service, and professional organizations statewide. It will be successful if there is a great deal of voluntary effort and the implementation strategies are kept realistic, low cost, and are perceived to benefit all. The plan's goals were ordered by priority, and building the infrastructure to support nursing research took center stage.

Web-Based Initiatives

Many of the preliminary strategies involve Web-based activities, including building a database of nurse researchers, and facilitating communication among researchers and between researchers and nurses in service and education. It is important that this database communicate with other professional databases in order to streamline data entry. Our goal is that this database be searchable by key word, name, and city/state to enable persons performing research and those using research to find individuals with expertise in their area of interest who are located in their geographic area. Researchers will also have the opportunity to publish their most recent abstracts of work completed or in progress. They can list their current research projects and their most recent publications. All this has the goal of offering researchers the information they need to determine which individuals have that special expertise they need to help them. Participation is voluntary but it is hoped that

Current Implementation Activities

- Database of nurse researchers
- Newsletter Column, "Research News You Can Use"
- Ask the Experts Column
- Continuing education programs:
 - Teach nurses about EBP
 - Train educators to teach EBP
- Grant proposal for "train the team" in EBP

researchers will recognize the value of this public channel of communication among professional nurses.

Other Web-based activities include enhancements to the Research and Planning Web Page on the New York State Nurses Association Web site and publication of the agenda on the Web site to give it enhanced visibility and to keep it open to feedback from all stakeholders.

Initiatives to bring research to the clinical nurse

At the start of 2002, the council began a bimonthly column in the Association's monthly newsletter, targeted to the clinical staff nurse. Under the goal, "to create learning opportunities for nurses and students," and "to enhance their understanding of research," these articles summarize a current published research report and its findings in a manner to make it readable and understandable by any registered nurse. In addition, twice a year, the council will publish an "Ask the Experts" question and response. This initiative is also related to research and evidence-based practice. The overarching goal of these efforts is to bring quality research to the consumer (in this case clinical nurses) in a manner they can understand and use.

Development of Evidence-Based Practice Teams

Since the overriding goals of the agenda are to promote research and its use in practice, the infrastructure to support that includes not only tools for communication but human resources with the skills to use and apply research information. Evidence-based practice offers an excellent framework for supporting these goals. The planning team (a subcommittee of council members and foundation representatives) conceived developing a network of multidisciplinary teams throughout the state with the capability to identify clinical problems in their agency and use principles of evidence-based practice to evaluate existing research and design and test strategies to put research into practice. Planners hope to submit a grant proposal to conduct a "train the team" program to prepare these evidence-based practice teams. A call will be issued to identify teams, elicit the support of their service settings, and develop partnerships with researchers, research centers, and local experts to support these teams as they embark on a multi-year effort to solve problems in their home institution. During the first year, the teams will attend two days of training, and following that will have ongoing contact with a "mentor" as they identify a problem for study, and gather the research and practice evidence. In their second year, the teams will design and implement an evidence-based practice project with the cooperation of their institution and under the guidance of their mentor. Based on established outcome measures, in the third year, with the ongoing support of their mentor and their institution they will develop the guidelines and policies to put their clinical "solution" into practice and evaluate their outcomes.

This is an ambitious effort that will require significant involvement and support from institutions, researchers, and practice teams alike. Some institutions and research centers have already expressed interest and we hope this will lead to ongoing collaborative relationships among nursing service administrators, educators, and researchers.

Summary, Conclusion, and Implications

In this article we have described the roots, conception, development, and implementation to date of a major, statewide project that is under way to facilitate the conduct, dissemination, and use of nursing research. We believe we have made great strides in highlighting the relationship of research to practice and bringing research to the clinician in usable terms. We also believe we have developed a model for agenda development that requires stakeholder input using volunteer effort. It has been our privilege to present the development of our research agenda at meetings of the Eastern Nursing Research Society (ENRS) in Pennsylvania and the Workgroup of European Nurse Researchers in Geneva, Switzerland. Attendees at these conferences believe our model has relevance for other states and nations.

Its continued success will depend largely on the motivation, involvement, and determination of the stakeholders in the New York

state nursing research enterprise. Like the starship by that name, it can move beyond the speed of light to galaxies never before explored or it can get lost in the delta quadrant. It is really up to all of you!

For further information on how you can become involved in moving the New York State Nursing Research Agenda forward contact the Council on Nursing Research, www.nysna.org.

Authors' Note

The authors wish to acknowledge the tremendous support given to the project described in this article by the New York State Nurses Association and the Foundation of the NYSNA. We particularly want to thank Dr. Cathryne Welch for her constant optimism, belief in our mission, and eternal good will. We are also indebted to the following members of the NYSNA Council on Nursing Research for their input in developing and implementing the agenda:

- 1999-2000: Catherine Kelleher (chair), Toni Cesta, Rosemary Donahue, Judith Baggs, Kate Shedlock (Fellow)
- 2000-2001: Judith Baggs, Teresa Panniers, Rosemary Donahue, Kate Shedlock (Fellow), Susan Chu Lai (Fellow)
- 2001-2002: Teresa Panniers, Virginia O'Halloran, Priscilla Worrall, Mary Beth Holz (Fellow)

Figure 1. Handout Used at Focus Group CE Session

The New York State Nurses Association
2000 Convention
New Vision, Clear Purpose

The Council on Nursing Research of
the New York State Nurses Association and
The Center for Nursing Research of the Foundation
of the New York State Nurses Association

Present

**The New York State Research Agenda:
Where do we go from here?**

*How can we collaborate to promote and implement research
and research utilization statewide? **

<p>What are your ideas about what we want to achieve?</p>	<p>How do you think we can achieve these?</p>
---	---

* *If you have comments you'd like to share with us, please turn this in to one of the Council members at the end of this session.*

We've compiled a list of resources for New York nurse researchers. What resources do you know of that we could add to this? *

* *Please turn this in to one of the Council members at the end of this session.*

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Evidence-Based Nursing Practice: Are We There Yet?

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ABSTRACT

The volume of evidence for nursing practice has increased as a result of research and scientific discoveries. Yet we are still struggling with the dilemma of how to get evidence into nursing practice. Estimates are that it takes 20 years before innovations are fully put into use. Research is one type of knowledge to be used in practice. Nursing and patient care would benefit from moving more toward knowledge based on research and evidence. This article reviews barriers to and facilitators of using evidence in nursing practice and discusses a model for promoting the systematic use of evidence in practice. The author also offers suggestions for increasing the evidence base of nursing practice. Using evidence in nursing practice is important for all nurses, but requires more than the attention of the individual nurse.

Florence Nightingale in her writings provided the first examples of evidence-based nursing practice. She observed what was going on, developed hypotheses, collected data, analyzed the data, and then reached conclusions (Nightingale, 1969). She essentially used the research process to decrease the loss of lives from disease. Nursing has a long history of evidence-based practice, but we have not labeled it by that term.

So why the current interest in evidence-based practice? One reason is the cost of health care. Usually the focus is on the cost of medical treatment or the cost of care for Medicare and Medicaid recipients (Shi & Singh, 2001). More recently the media have

highlighted the cost of drugs as an issue for legislative attention. Nursing has also been scrutinized for cost cutting because it is one of the largest cost centers in a healthcare operation (Simms & Ervin, 2000). The premise is that if more evidence is used in nursing practice, nurses will be able to link good quality care to improved patient outcomes and potentially to decreased cost. The use of evidence in the practice setting facilitates sound clinical decision-making, which in turn improves patient care (Taylor-Piliae, 1999).

This article presents an overview of the barriers to and facilitators of using evidence, along with a suggested model and strategies for increasing the use of evidence in nursing

practice. Each individual nurse and each nursing service organization should contribute to improving patient care through the use of the best available evidence.

Definition of Evidence-Based Practice

Definitions of evidence-based practice are often based on the most widely referenced definition of evidence-based medicine: using current best evidence in making decisions about the care of the individual patient (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). This definition is not entirely compatible with nursing practice because of the differences between organized

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“We are still struggling with how to get the results of the discoveries and research into practice.”

medicine and organized nursing. A major difference is that much of nursing care is provided in settings in which a group of nurses provides care to a group of patients. Thus, nurses may not always be free to make independent decisions about care of the individual patient. Indeed, some studies have demonstrated that one barrier to using research in practice is the lack of flexibility in the practice setting (Funk, Champagne, Wiese, & Tournquist, 1991).

A modification to the definition of evidence-based practice is proposed. Evidence-based nursing practice is practice in which nurses make clinical decisions using the best available research and other evidence that is reflected in approved policies, procedures, and clinical guidelines in a particular healthcare agency. Necessary modifications to approved guidelines are based on the nurse's assessment of each patient's status and situation. All nurses must use clinical judgment when implementing care to individual patients.

In advanced practice, clinical nurse specialists, nurse practitioners, nurse midwives, and nurse anesthetists usually provide care to individuals rather than care being provided by a group of nurses to a group of patients. If modifications are made to guidelines and protocols, all modifications should be based on a clear rationale and factual information — for example, a recent update in a medication dosage. In addition, initial research findings indicate that patients may have better outcomes if they are involved in making decisions about their care (Arora & McHorney, 2000; Degner et al., 1997). This means that guidelines may need to be modified based on patient preferences.

Significance of Evidence for Practice and Patient Care

Has Nursing Achieved Evidence-Based Nursing Practice?

As with most things, there is good news and bad news. Nursing research has made much progress in the last few decades. Nu-

merous examples are found in the literature, such as the research related to pressure ulcers (Buss, Halfens, Abu-Saad, & Kok, 1999). In addition, advances in the health sciences have resulted in a volume of knowledge only dreamed about decades ago. Yet we are still struggling with how to get the results of the discoveries and research into practice. If it is any comfort, we are not alone. Estimates are that it takes 10 to 20 years before innovations are fully put into use (Brooten et al., 1999).

This is a broad generalization, but let us look at one innovation. Probably one of the most prominent innovations in the last two centuries is the computer. The modern computer has been around for over 35 years with forerunners invented in 1620 (Goetz, 1990). How many nurses still do not use a computer? Realizing that use of the computer is limited by availability, let us examine the example of taking temperatures. Based on research, the best time to take a temperature is between 5 and 7 p.m. when fevers should be at their highest peak. “Thirty years of research supports a circadian rhythm in daily temperatures with a low point at 3 a.m. and a peak rise between 5 and 7 p.m. (average 6 p.m.)” (Beaudry, VandenBosch, & Anderson, 1996, p. 23).

So, if this innovation were fully implemented would there be any benefits for nursing and patients? As a very rough estimate, if temperatures were taken on afebrile patients once between 5 and 7 p.m. instead of three times a day, about \$3,600 annually in staff cost for every 12 patients could be saved. If these savings were multiplied by the number of afebrile patient days in the country in one year, the savings would be sizable, just in personnel time.

Nursing has depended upon medicine for many practice changes — for example, the length of time new mothers must remain in bed after delivery. These types of patient-care parameters have changed a great deal in the last 30 years. Nursing care changes, often in response to medical orders based on medical research. Nurses do not conduct all the research related to these changes in practice, but often contribute to the research. Since nursing practice is often governed by medi-

cal orders, nursing can also be caught in a net of outdated knowledge held by physicians. For nurses to use current knowledge to provide patient care, physicians may need to be involved in the model of evidence-based nursing practice.

Knowledge for Practice

Knowledge for practice is based on experience, tradition, intuition, common sense, untested theory and research (Burrows & McLeish, 1995). The most prevalent component of evidence-based nursing practice is the use of research. Much of the literature includes the admonishment that nurses must use their own experiences and clinical judgment in determining to use research. In a meta-analysis of research-based nursing interventions and patient outcomes, Heater, Becker and Olson (1988) found that 72% of patients who received research-based nursing care had 28% better outcomes compared with patients receiving routine nursing care.

Research is used in two general ways: instrumental utilization and conceptual utilization (Caplan & Rich, 1975). Most nurses are familiar with instrumental utilization, the specific way in which knowledge is used for decision making. Conceptual utilization refers to the influence of one or more research studies on a decision-maker's thinking about an issue without putting the information to any specific, documentable use (Tanner, 1987). For example, when confronted with an unfamiliar clinical problem, a nurse may make use of knowledge about a similar problem or a general area of research in order to decide how to deal with the current situation. Theoretically, the more education a nurse has, the more knowledge to draw upon in unfamiliar clinical situations (Ervin, 2002).

If conceptual utilization is considered part of evidence-based practice, there may be agreement that much of nursing is evidence-based. One difficulty is that the basis of the conceptual utilization may be outdated or inappropriate. Also if nurses do not read professional literature, they may not be aware of the source of their knowledge.

Barriers to Implementing Evidence in Practice

Since numerous examples of research point to changes needed in practice, why is evidence not implemented in practice? The biggest barrier to using research, according to several studies, is the lack of time to read and implement the research (Funk, Champagne, Wiese, & Tournquist, 1991; Funk, Tornquist, & Champagne, 1995). Some position descriptions include statements about using or conducting research, but rarely does the nurse in charge assign a staff nurse to implement research. How often would this be possible in the current healthcare environment where staffing is often inadequate to meet the day-to-day demands? Because most nursing services are reimbursement driven, time for non-patient-care activities is often frowned upon or very limited.

A second barrier to using research is lack of knowledge about how to read and translate research into practice. It is usually beyond the scope of practice for one nurse to read a study and implement the findings. Often it would be premature or even dangerous to do so. In addition, a great deal of nursing practice is based on protocols, procedures, policies, practice guidelines and the like. A departure from the agency or institution standard may even be considered reason for disciplinary action. This hardly encourages implementing research findings or other evidence in practice.

Other barriers to using research in practice include lack of access to relevant literature. This may be more evident in community settings without an institutional library or an Internet connection. Unawareness of research and lack of knowledge to evaluate the quality of the research are also barriers. Agencies and nurses may view research as too costly to implement. Resistance to change in the work setting may be observed when research implementation is attempted. Lack of agreement on research findings, lack of administrative support to use research, and findings irrelevant to practice are identified in studies about barriers to using research (Carroll et al., 1997; Miller et al., 1994). Nurses have expressed that research has little, if any, relevance for practice (Funk, Tornquist, & Champagne, 1995).

Facilitators of Implementing Evidence in Practice

Literature reports of facilitators include creating unit-based committees, increasing awareness through in-house publications such as newsletters, disseminating relevant publications, including research as part of the nursing philosophy, and holding research events (Olson, 1993; Riesch & Mitchell, 1989).

Some creative facilitators of research utilization have been put into place in practice settings. For example, one hospital had a publication devoted to research studies that had been critiqued and interpreted by the clinical nurse researcher. Discussions based on the studies resulted in changes in practice. Another technique for informing staff about studies was to circulate a copy of the table of contents of each journal received by the hospital library (Riesch & Mitchell, 1989).

The most successful examples of research utilization have used a systematic approach at the organizational level (Horsley, Crane, Crabtree, & Wood, 1983; Riesch & Mitchell, 1989; Stetler, 1994). Although for many years experts have written about the need for staff nurses to be involved in research, the reality is that research is usually conducted for reasons other than to improve care in one particular practice setting. Nursing research is "a scientific process that validates and refines existing knowledge and generates new knowledge that directly and indirectly influences nursing practice" (Burns & Grove,

1997, p. 4). Thus, research seeks answers to questions from a systematic and diligent approach in order to accumulate enough evidence to allow the generalization of findings to various clinical settings. The need now is to recognize that the usual patient care environment is not well suited to conducting research of any great magnitude, but the utilization of research can and should be used in every setting regardless of how large or small.

Model of Evidence Utilization

Models are needed to overcome the barriers and facilitate the use of evidence in nursing practice. Such models provide the structure for resources, time, and expertise to translate research and other evidence into practice protocols that can be pilot-tested, adjusted, adopted, or rejected by the nursing service as legitimate interventions to be used with patients.

One of the earliest models for use of evidence came out of the project titled Conduct and Utilization of Research in Nursing (CURN). This project was funded by the Division of Nursing of the U. S. Department of Health, Education and Welfare and conducted under the auspices of the Michigan Nurses Association in the late 1970s and early 1980s. The scientific work was conducted at the University of Michigan School of Nursing and Institute for Social Research and at Michigan State University College of Nursing (Horsley et al., 1983).

The CURN project used a planned change process, a model for problem solving, and a research utilization process to work with 34 hospitals in Michigan. There were three parts of the project: the research utilization program: intervention or experimental sites; the research utilization program: comparison sites; and the collaborative research program sites. Results from the CURN project include 10 books on research-based interventions that are structured preoperative teaching, reducing diarrhea in tube-fed patients, preoperative sensory preparation to promote recovery, preventing decubitus ulcers, intravenous cannula change, closed urinary drainage systems, distress reduction through sensory preparation, mutual goal setting in patient care, clean intermittent catheterization, and pain: deliberative nursing interventions.

These protocols were developed for use in the 17 hospitals that were the experimental sites for the utilization of research. The research utilization process includes seven steps:

1. Systematically identifying patient care problems.
2. Identifying and assessing research-based knowledge to solve identified patient care problems.
3. Adapting and designing the nursing practice innovation.
4. Conducting a clinical trial and evaluation of the innovation.
5. Deciding whether to adopt, alter or reject the innovation.
6. Developing the means to extend (or diffuse) the new practice beyond the trial unit.
7. Developing mechanisms to maintain the innovation (Horsley et al., 1983, pp. 7-10).

In the years since the CURN project, many practice guidelines have been developed to direct evidence-based practice. Practice guidelines may be found on Web sites, such as the Agency on Healthcare Research and Quality (AHRQ), and through professional specialty nursing organizations such as the Home Healthcare Nurses Association. The use of practice guidelines provides a more efficient process for an organizational model of evidence-based practice. The expertise involved in developing the guidelines is usually not found in any one agency, so staff has the best available current evidence in using pub-

“What is so striking about nursing interventions is that many are low-tech and low-cost.”

lished guidelines. Each guideline must, of course, be evaluated and adapted, if necessary, to a specific practice setting.

Guidelines for Research Utilization

Many examples may be found in the literature of successful utilization of research in patient care, e.g., treatment of pressure ulcers (Specht, Bergquist, & Frantz, 1995) and arthritis self-care (Goepfinger, Macnee, Anderson, Boutaugh, & Stewart, 1995). Several of the undertakings have used the CURN project to guide the process from problem identification to adoption and dissemination of the innovation. The basic criteria for using research are:

1. Review the scientific merit of the studies. Summarize the findings of all studies. The use of a grid is suggested.
2. Use studies that have been replicated. Look for studies that have been repeated with the same or similar findings. Always use more than one study to make a change in practice.
3. Identify the degree of potential patient risk associated with the potential application of the findings. Identify risks of maintaining current practice as well as the risks of changing practice.
4. Determine the feasibility of implementing the change including the resources needed. Assess the clinical merit, clinical significance, and amount of control and influence nursing has over the practice to be changed.
5. Complete a cost/benefit analysis (Beaudry et al., 1996).

One example of the use of evidence in practice is the once-a-day fever screening based on circadian rhythm mentioned previously. Another example is managing constipation using a research-based protocol. In this example, an interdisciplinary protocol was developed to prevent constipation in hospitalized immobile vascular surgery patients. Using a combination of dietary fiber, increased fluid, and hygiene measures with the patient population over a three-year period, the incidence of constipation was reduced from 59% to 9%. Impactions were eliminated and re-

quests for laxatives and enemas were reduced from 59% to about 8% (Hall et al., 1995).

A third example of a research-based protocol for practice is that of central venous catheter (CVC) flushing. In one hospital a change was made from daily flushing with 3 to 5 milliliters of heparinized normal saline. Based on two studies of CVC flushing with cancer patients, flushing was changed to weekly with 3 milliliters of heparinized normal saline. After using the new protocol for one year, a chart review of 39 patients who had 43 CVC lines found one case of septicemia and one line was occluded, about 2%. The nursing staff had estimated that about 10% of the lines were occluded under the daily flushing protocol (Olson, 1993). What is so striking about nursing interventions is that many are low-tech and low-cost.

Another example is a social support intervention to prevent low birth weight infants among African American women. The intervention was developed based on a focus group type study and tested in a randomized clinical trial. The intervention was designed for nurses to provide the support usually provided by the pregnant women's mothers or male partners. It consisted of four standardized face-to-face sessions at two-week intervals and telephone contact from the same nurse in the intervening weeks. Of the 114 low-support women identified from 319 pregnant women, 56 were randomly assigned to the intervention and 58 to the control group. The low birth weight proportion was 9.1% in the intervention group compared to 22.4% in the control group (Norbeck, DeJoseph, & Smith, 1996). Considering the latest statistics that have shown an increase in low birth weight infants for the country, this intervention could save millions of dollars in intensive care costs alone. If this intervention were used with other populations, the guidelines for research utilization listed previously should be used to test the intervention. Of course, more detail about the intervention would be needed in order to replicate the original study.

Numerous studies have demonstrated the effectiveness of social support in improving

patient outcomes. A type of social support provided by nurses is in home visiting. David Olds and his colleagues (1997) have conducted several studies to examine the effects of home visiting to improve outcomes for women and infants. Their studies have demonstrated improvement in birth weight, length of gestation, parents' interactions with their children, reduction in child abuse and neglect, decreases in emergency department visits and hospitalizations, and an increase in mothers' participation in the work force. The most effective programs used nurses who started home visits during the women's pregnancy and visited frequently and long enough to establish a therapeutic alliance with families (Olds & Kitzman, 1990).

When the children were 15 years of age, Olds and his colleagues conducted a study to examine the long-term effects of the original nurse home visitation program (Olds, Henderson Chamberlin, & Tatelbaum, 1986; Olds, Henderson, Tatelbaum, & Chamberlin, 1986). A total of 315 adolescents participated in the follow-up study; 280 or 89% were born to white mothers, 195 (62%) to unmarried mothers, 151 (48%) to mothers younger than 19 years, and 186 (59%) to mothers from low socioeconomic status at the time of pregnancy. The control groups of families received standard prenatal and well-child care in a clinic (Olds et al., 1997).

Adolescents born to women who received nurse home visits during pregnancy and postnatally and who were unmarried and of low socioeconomic status, compared with those in the control groups, reported fewer instances of running away, fewer arrests, fewer convictions and violations of probation, fewer lifetime sex partners, fewer cigarettes smoked per day, and fewer days having consumed alcohol in the last 6 months. Parents of nurse-visited children reported that their children had fewer behavioral problems related to use of alcohol and other drugs. All these differences between the home visited and usual care groups were statistically significant (Olds et al., 1997).

For the mothers in the original Olds' study, 324 participated in the follow-up study when

their children were 15 years old. The women who were home visited were identified fewer times as perpetrators of child abuse and neglect, had fewer subsequent births, and had more months between first and second births. These mothers received Aid to Families with Dependent Children for less time, had less behavioral impairment due to use of alcohol and other drugs, and had fewer arrests (Olds et al., 1997).

Suggestions to Increase Evidence-Based Nursing Practice

Suggestions for increasing evidence-based nursing practice fall into two broad categories: education and practice. Setting the tone for evidence-based nursing practice must begin in nursing education programs. Nursing curricula that use the latest research findings are, of course, mandatory for producing graduates with the latest knowledge. However, we all know how quickly knowledge becomes outdated. Therefore, the strategies for teaching and learning need to be examined for enhancement.

Strategies for Education

One strategy that may improve the likelihood of increasing evidence-based practice is inquiry learning that emphasizes approaches in which students formulate and test their own hypotheses. These approaches focus on the process of learning, foster student motivation, develop cognitive skills, and can deal with complex information (Dignan & Carr, 1992).

One such approach is problem-based learning, which was used as the method to teach an interdisciplinary course for students in nursing, medicine, dentistry, pharmacy, public health and the associated health professions such as physical therapy and nutrition. Problem-based learning requires that during a class session students develop their own hypotheses and generate the questions that need to be answered by them before the next class period. They divide up the work and come back together in two or three days to address the questions. Faculty facilitators act as consultants and occasionally as monitors to move along the process. The students very much liked the course and found that they were able to learn as much, or more, as in the usual lecture classes. The course was much more time-consuming than usual classroom courses (Cooksey et al., 1995). Other approaches to increase inquiry learning are available and need to be explored.

A second approach to increasing evidence-based nursing practice is to increase the amount of time in the curriculum spent on research utilization. At this point in the development of the profession, undergraduate nursing programs should include a course devoted totally to research utilization. In addition research utilization strategies should be incorporated into almost every course. This is not to say that graduates will go out and use research in every position. On the contrary, they may not be able to implement findings in most situations, but will be encouraging the use of research by serving on committees and becoming involved in activities to evaluate and improve nursing practice. Other purposes of research utilization courses are to inculcate students with the need for continued learning throughout their careers and to assist in the development of leadership skills to implement evidence-based practice elements. In order to continue to progress toward our goal of professional status, nurses must display the characteristic of continuous learners.

In relation to the need for continuous learners, the issue of mandatory continuing education for re-licensure needs to be revisited. Although mandatory continuing education will not solve the issue of putting evidence into practice, the contact that nurses have with knowl-

edge should assist with the conceptual utilization of research and other evidence. Nursing needs to carefully consider how mandatory continuing education can assist nurses to remain competent in this day of rapid knowledge generation.

Strategies for Practice

The only model for evidence-based practice that appears viable for now is an organizational model. The idea that the individual nurse is able to read, translate, and implement research findings is not feasible. An organizational model that supports evidence-based nursing practice appears to be the preferred, if not the only, approach that has a chance of succeeding.

In order for evidence-based practice to be institutionalized, the organizational environment must first support a professional practice model (Ervin, 2002; Ervin & Jones, 2000). A professional practice model should contain the four components of professional nursing: clinical practice, administration, education, and research. Each institution or agency needs to determine what model best fits the organization because of the multitude of differences among institutions. For example, the hierarchical structure of academic health centers will require a different configuration of the professional practice model than a community hospital.

Contained in organizations for nursing practice must be an institutional commitment to incorporating research results and best evidence into policies, procedures, and protocols. Some models employ a clinical nurse researcher or a doctoral prepared nurse to assist the staff with location, critique, and translation of research into meaningful practice ideas or to locate practice guidelines based on research or best evidence. Expert review of research articles is also important, because all published research studies are not of good quality or are not generalizable. One criterion for using research is to be certain that the study was carried out with a sample similar to the patient population with whom it will be applied. If no such studies can be located, then a trial of the intervention should always be used.

Whatever model for evidence-based practice is used, the need is for a position to be the intermediary between the end users (staff and administrators) and researchers. Researchers are not necessarily trained to implement research findings. Often it is years before research is ready to be implemented in practice settings. The intermediary position could have a title such as quality improvement specialist, because the purpose of evidence-based practice is to improve practice thus improving patient outcomes.

A second major component of an organizational model is the location and maintenance of change agents within the nursing service. Resistance to change does not disappear when research results are incorporated into documents. The expectation that new knowledge will be used is important, but expectation alone will not result in use of knowledge (Pearson, 1988). Change agents may be advanced practice nurses, staff nurses, and non-nursing staff. The change agents may differ with various innovations. Setting an organizational tone for change may be a helpful part of evidence utilization. If staff members are excited about what they see as a result of implementing evidence in nursing practice, they will generate more interest and, perhaps, good will toward continued change.

Access to new knowledge is a key component of an evidence-based practice model. The use of the Internet will continue to be a great assist to access new information. Some sites already exist with summaries of research reports. For example, Canada has a project to make available on the Internet summaries of studies related to public

health nursing. Of course, the Library of Medicine provides a wealth of information about health care and research. The Cochrane Library, which is a component of the Cochrane Collaboration, provides a database of systematic reviews of many topics of interest to nurses. Information about the Cochrane Collaboration is available on the Internet. Several publications are available for those interested in research summaries and application to practice.

Summary

The organizational model of evidence utilization is preferred at this point in our professional evolution if we are to achieve evidence-based practice. To successfully implement an organizational model of evidence-based practice, a nursing service organization must first have an established professional practice model. Then the development and support of a quality improvement specialist in evidence-based

nursing practice and change agents along with the assistance of a doctoral-prepared nurse with strong research preparation are needed to maintain an evidence-based nursing practice model.

As Florence Nightingale stated: "I believe... that the very elements of nursing are all but unknown... The very elements of what constitutes good nursing are as little understood for the well as for the sick. The same laws of health or of nursing, for they are in reality the same, obtain among the well as among the sick" (Nightingale, 1969, p. xii). We are still addressing Nightingale's concerns, but research has contributed to defining the elements of nursing. Research and evidence-based nursing practice are also helping us to understand what constitutes good nursing. There are still great challenges in bringing about better care for patients and clients through effective, evidence-based nursing practice.

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Issues Associated With Measuring Symptom Status: HIV/AIDS Case Illustration

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ABSTRACT

The purpose of this article is to illustrate issues associated with measuring one aspect of health, symptom status, through a comparison of two specific symptom scales developed for use with persons with HIV/AIDS. A number of decisions are necessary to evaluate the appropriateness of different health measurement instruments. These include: whether the purpose is to evaluate a program of care or to study individual patients; characteristics that are being assessed; the time frame being assessed; how broad-ranging an assessment is desired; and the scope of detail that is desired.

This descriptive survey with a HIV+ sample (N=100) found that there were 8 items that assessed identical symptoms on the Sign and Symptom Checklist-HIV and the HIV Assessment Tool. There were no significant correlations between similar items on the two instruments. There were significant differences between the mean scores only for headaches ($t = -3.4$, $p = .001$). Issues related to symptom appraisal, the time frame, and the nature of symptom-related variables need to be carefully considered before choosing a measurement instrument.

Measurement of health-related concepts such as functional status and symptom status is important for both clinical practice and clinical research. Tools that measure health-related concepts can be characterized either as generic or specific instruments. Generic instruments, such as the SF-36 Health Survey (Ware, Kosinski, & Keller, 1994), are broad spectrum and developed for descriptive, epidemiological, or social science research applications since they permit comparisons across disease categories and are used in evaluating types of care or patient manage-

ment. On the other hand, disease-specific instruments are generally designed for clinical application and need to be sensitive to changes following treatment (McDowell & Newell, 1996). Identification of the importance of the distinction between generic and specific instruments determines which instrument will most accurately describe the phenomena of interest for a particular purpose.

A disease-specific measure needs to be sensitive to the clinical stage of the disease and the range and type of symptoms and treatment toxicities as they affect quality of life

(Bowling, 2001). Once potential instruments are located, they must be carefully evaluated in light of the purpose for which they are to be used (Waltz, Strickland, & Lenz, 1991). A number of decisions are necessary in order to evaluate the appropriateness of different health measurement instruments. These decisions include: a) whether the purpose is to evaluate a program of care or to study changes in individual patients; b) the characteristics of the persons being assessed, such as diagnosis, age group, level of disability; c) the time frame that is being assessed such as

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“today” versus “in the last four weeks”; d) how broad-ranging an assessment is desired; and e) the scope of detail that is necessary (McDowell & Newell, 1996).

The purpose of this article is to illustrate issues associated with measuring one aspect of health, symptom status, through a comparison of two specific symptom scales that were developed for use with persons with HIV/AIDS. Exploration of these issues in HIV/AIDS is particularly relevant for several reasons. First, the importance of symptom assessment and symptom management in HIV/AIDS is well documented. Second, a number of tools have been either adapted or developed for use in HIV/AIDS (for example, the HIV Overview of Problems-Evaluation System, Medical Outcomes Study-HIV, and the Health Assessment Questionnaire-HIV) (Wu, Revicki, Jacobson, & Malitz, 1997; De Boer, Sprangers, Aaronson, Lange, & van Dam, 1996; Lubeck & Fries, 1997). Consequently, the clinician or the investigator must weigh the strengths and weaknesses of the various instruments before selecting one for a particular purpose.

As background to discussion of the measurement issues, two HIV symptom assessment scales are described. This is followed by a description of the study procedures and the sample in which the scales were administered. Next, measurement issues are illustrated by data analysis findings.

Measurement Instruments

The Sign and Symptom Checklist-HIV

The Sign and Symptom Checklist for persons with HIV disease (SSC-HIV) was originally developed as a 41-item instrument to measure symptom intensity on a 4 point Likert-type scale (absent, mild, moderate, or severe). Subjects are asked to indicate if they have a specific sign or symptom on that day and to rate it as mild, moderate, or severe. Evidence for the construct validity of the SSC-HIV was established using a principal components factor analysis in a sample of 247 persons living with AIDS. The factor solution retained 26 items and explained 67.7% of the variance with a 8-factor solution. The resulting symptom clusters (factors) were: fever, fatigue, confusion, nausea/vomiting, psychological distress, shortness of breath, gastrointestinal discomfort, and diarrhea. Further research was conducted with persons living with HIV/AIDS (N=686) after highly active antiretroviral therapy (HAART) became widely available (Holzemer et al., 1999). A second confirmatory factor analysis resulted in a more parsimonious factor solution for the 26 items and adequate inter-rater reliabilities: malaise/weakness/fatigue (6 items, $\alpha=0.90$), confusion/distress (6 items, $\alpha=0.88$), fever/chills (4 items, $\alpha=0.85$), gastrointestinal discomfort (4 items, $\alpha=0.81$), shortness of breath (3 items, $\alpha=0.79$), and nausea/vomiting (3 items, $\alpha=0.77$). More recently, items have been developed to capture gynecological symptoms and those related to HAART such as lipodystrophy. Support for the reliability and validity of the revised SSC-HIV (SSC-HIVrev) was documented in a sample of 372 HIV-positive persons (Holzemer, Hudson, Kirksey, Hamilton, & Bakken, 2001). The 41-item version of the SSC-HIV was used in the comparative analyses described in this article.

The HIV Assessment Tool

The HIV Assessment Tool (HAT) (Nokes, Wheeler, & Kendrew, 1994) assesses two content domains: symptom severity (23 items) and general well-being (11 items). Only the symptom severity items are addressed in this paper. Subjects use a 100 mm visual analog scale to

rate symptom severity during the prior week. In order to avoid response bias, some anchors were counterbalanced or reversed (Polit & Hungler, 1987). Sample items include: “have you lost any weight in the past three months,” which is anchored with “No” (scored as 0) or “20 pounds or more,” which is scored as 100 and “do you have headaches,” which is anchored with “constantly,” which is scored as 0 or “No,” which is scored as 100. Items for the instrument were identified through the clinical work of two authors, review of the literature, and creation of an Index of Content Validity, which was completed by HIV infected clients and four expert nurses. Instrument reliability was computed as .96 for test-retest reliability and Cronbach alpha for the total instrument was .92. In the initial factor solution, two symptom subscales were identified; further use of the instrument resulted in the decision to combine all of the symptom-related items into one scale. Despite changes in HIV treatment, no additional items have been added to the HAT since its creation in 1990.

Methodology

Procedure

A convenience sample of community living HIV infected clients (N=100) served by a community based organization located in New York City participated in a national study of predictors of adherence (Holzemer et al, 1999). After written informed consent was obtained, subjects completed a number of different instruments that had been bound into an instrument booklet. The Sign and Symptom Check-list was completed first and then the HIV Assessment Tool. The same research assistant collected all New York City data in the same environment over a two-month period in early 1997. All instruments were scored and entered into the computer by one other research assistant.

Data analysis

SPSS (version 11) was used to analyze the data. There was overlap on the two instruments for 8 symptoms: headache, cough, diarrhea, sleeping problem, dizziness, fever, skin rash, and night sweats. In order to compare results on the two instruments, some of the items on the HAT needed to be recoded. Four items on the HAT (coughing, headaches, night sweats, fever) were negatively anchored in that “0” equaled the most severe score. To illustrate, subjects marked a vertical line close to the left anchor of 0 if they had constant headaches. These four items were recoded so that higher numbers were consistent with greater severity.

The HAT is scored on a 0 to 100 scale; the SSC-HIV is scored on a 0 to 3 scale. In order to compare scores on these instruments, the SSC-HIV scores were multiplied by 33 to convert them to a 0 – 100 scale: 0 = 0; 1 = 33; 2 = 66; and 3 = 100. Higher scores are consistent with greater symptom severity or intensity.

Pearson product moment correlations were used to examine the relationships between symptom scores on the SSC-HIV and HAT. Mean scores on the 8 symptoms were compared using paired t-tests. The alpha for statistical significance was set at .006 to control for multiple comparisons.

Sample

Table 1 describes the sample. The average person was 42 years old, male, black/African American, not working, diagnosed with AIDS, and infected with HIV through injecting drug-use.

Table 1. The Sample

Sample characteristics (N=100)* Age: Mean 42 (7.79) range - 24-59		
Gender		
Male	78	(78%)
Female	21	(21%)
Race		
Black	69	(69%)
Latino	17	(17%)
White	9	(9%)
Other	5	(5%)
HIV-related risk behavior		
Male/male sex	25	(25%)
Injection drug use	45	(45%)
Male/female+IDU	14	(14%)
Other	16	(16%)
Year diagnosed with HIV infection		
	Mean - 1990	Range: 1983-1996 (data collected early 1997)
AIDS diagnosis	Yes - 66 (66%)	No - 33 (33%)
Working	Yes - 10 (10%)	No - 90 (90%)
Income adequate to meet expenses		
Enough	16	16%
Barely possible	58	58%
Totally inadequate	26	26%

*Due to missing data, numbers may not add up to 100.

Measurement Issues

Are the symptoms that you wish to appraise being measured by the scale?

How individuals interpret and evaluate symptoms is important to measure since these appraisals guide coping, responses including whether to see a health care provider, do nothing, or engage in some form of self-care or self-medication (Siegel, Dean, & Schrimshaw, 1999). An important issue is whether the specific scale being considered will influence which symptoms are identified as problematic by the client. There are 8 items that assessed the same symptom on the SSC-HIV and HAT (Table 2). There were no significant correlations. Scale items are a means to the end of construct assessment (DeVellis, 1991). Although the symptom construct may appear identical, the lack of correlations on matched symptom items indicates that clients in this sample did not rate them in the same manner. As discussed in the next section, one possible explanation is the time frame of the scales.

What is the time frame is being assessed by the scale?

All standardized health measurement instruments have an inherent time orientation. While some take only the present into account, others require recall of past events or projections into the future. A time frame needs to be specified for most questions, especially those asking about intensity or frequency of various states. The time frame needs to be short enough to allow accurate memory for the event being asked about,

Table 2. Identical Items on the SSC-HIV and the HAT

N	SSC-HIV	HAT	Correlations
96	Coughing	Do you have a cough?	r = -.12 (p = .26)
96	Diarrhea	Do you have diarrhea?	r = -.10 (p = .15)
96	Insomnia/ can't sleep	Do you have difficulty sleeping?	r = .14 (p = .17)
96	Dizziness	Are you dizzy?	r = -.08 (p = .44)
97	Headaches	Do you have headaches?	r = -.14 (p = .18)
92	Night sweats	Do you sweat at night?	r = .01 (p = .93)
95	Fever	Do you have fevers?	r = -.04 (p = .72)
96	Rash	Do you have a skin rash?	r = .06 (p = .56)

yet long enough to represent the general time within which the event is likely to occur and to allow for variation across respondents (Stewart & Ware, 1992). In nursing it is important to ascertain the extent to which a given instrument may be oriented toward short versus long-term conditions or situations (Waltz, et.al., 1991).

Items in structured verbal scales typically consist of a stimulus part (the item stem) and a response part (the response choices) (Dawis, 1999). The time frame is usually set in the stimulus part of the instrument. The HAT asks respondents about symptoms that they have experienced during the past week while the SSC-HIV asks about symptoms experienced that day. If the time interval influenced how respondents reported the presence of the same symptoms, differences between the two scores on the 8 similar items on the HAT and the SSC-HIV would be expected. There were significant differences (Table 3) on only one symptom, headaches ($t = -3.4, p = .001$).

Table 3. Comparison of Means on Identical Items on Two HIV Disease-specific Instruments

Symptom (N)	SSC-HIV Mean (SD)	HAT Mean (SD)	T-test (p)
Coughing (n=96)	26.9 (30.1)	28.2 (32.2)	-0.3 (.755)
Diarrhea (n=96)	28.27 (33.6)	28.29 (32)	-.004 (.997)
Sleep disturbance (n=96)	43.5 (38.7)	45.5 (36.7)	-.4 (.702)
Dizziness (n=96)	22.4 (29.4)	15.1 (22.0)	1.9 (.065)
Headaches (n=97)	24.9 (28.3)	42.4 (38.0)	-3.4 (.001)
Night sweats (n=92)	34.5 (33.7)	28.9 (31.8)	-3.9 (.242)
Fever (n=95)	20.5 (25.6)	18.9 (29.2)	0.4 (.692)
Rash (n=96)	19.3 (29.9)	16.8 (24.9)	.6 (.518)

Symptom severity is often associated with significant underlying pathology requiring clinical intervention. In choosing a symptom assessment instrument, the clinician or researcher needs to consider whether the symptoms may change rapidly such as in hospitalized clients in intensive care units or remain relatively stable such as in community living clients who have been diagnosed with a chronic illness like HIV/AIDS. The time frame used in the instrument needs to be carefully examined.

What symptom-related dimensions are assessed by the scale?

Different scales purport to measure the intensity, severity, quality, location, distress, and disability/impact of symptoms. Severity can be assessed in terms of intensity or frequency of occurrence, which have been shown to be highly correlated in some studies (Stewart & Ware, 1992). The HAT measures symptom severity and the SSC-HIV measures symptom intensity and symptom impact. The lack of correlations between similar symptoms on both instruments may suggest that HIV infected clients in this sample distinguish between symptom severity and intensity.

Respondents were also asked to rate both the intensity and the impact of 41 different symptoms and signs on the SSC-HIV. Forty-one item level comparisons (Table 4) between intensity and impact were computed using paired t-tests and a controlled alpha of .008. Except for the symptom, lack of appetite, in 40 of the 41 cases, t-tests were not significantly different, which suggests that respondents did not differentiate between symptom intensity and symptom impact.

The lack of distinction by the respondents between severity and impact suggests that it may be necessary to only measure one of these dimensions. This is significant for both research and practice since in both instances the goal is to minimize respondent burden.

Discussion

Construct validity provides a vital linkage between nursing practice, research, and theory (Rew, Stuppy, & Becker, 1988) and includes both content and criterion-related evidence (Messick, 1999). A narrow assessment or failure to include important dimensions or facets of the construct, which has been described as construct underrepresentation, is a major threat to construct validity (Messick). Identical symptoms are assessed in only 20 % of the items on the 41 item SSC-HIV and

Table 4. Comparison of scores on the Intensity/Impact scales of the 41 item SSC-HIV

	Intensity Mean (SD)	Impact Mean (SD)	Paired t-test	df	(p)
Shortness of breath at rest	.62 (.83)	.67 (0.93)	-1.15	97	.253
Shortness of breath with activity	1.24 (1.04)	1.34 (1.12)	-2.41	97	.018*
Coughing	.78 (.90)	.85 (0.98)	-2.15	96	.034*
Wheezing	.60 (.82)	.61 (0.85)	-.82	93	.417
Diarrhea	.79 (.94)	.85 (1.01)	-1.62	98	.109
Loose Stools	.52 (.79)	.57 (0.89)	-1.22	91	.320
Constipation	.55 (.87)	.58 (0.91)	-1.00	91	.320
Nausea	.52 (.76)	.52 (0.75)	.45	84	.657
Vomiting	.32 (.67)	.29 (0.61)	1.42	84	.159
Gas/Bloating	.89 (1.04)	.90 (1.04)	-.33	84	.741
Abdominal pain	.68 (.93)	.67 (0.90)	.45	84	.657
Lack of appetite	.84 (.93)	.92 (1.03)	-2.94	91	.004*
Concern over weight loss	1.24 (1.15)	1.19 (1.12)	1.65	91	.103
Sore throat	.62 (.82)	.0 (0.83)	.33	91	.741
Thrush	.86 (.99)	.8 (1.00)	-.38	91	.708
Insomnia/Can't sleep	1.26 (1.18)	1.3 (1.23)	-1.92	91	.058
Anxiety	1.25 (1.10)	1.27 (1.10)	-.63	91	.530
Depression	1.54 (1.17)	1.58 (1.18)	-.73	81	.470
Fear	1.10 (1.11)	1.12 (1.04)	-.45	81	.657
Memory Loss	1.04 (.97)	1.08 (0.99)	-1.35	81	.181
Difficulty concentrating	.94 (.99)	.97 (1.03)	-1.35	81	.181
Disorientation	.71 (.93)	.74 (0.95)	-1.42	81	.159
Dizziness	.59 (.84)	.58 (0.81)	.33	81	.741
Headaches	.69 (.87)	.71 (0.90)	-1.00	81	.320
Blurred vision	.84 (.92)	.90 (0.98)	-1.92	81	.058
Numbness/tingling of arms or legs	.80 (.89)	.87 (0.96)	-2.17	81	.033*
Night sweats	1.64 (.91)	1.60 (0.91)	.57	27	.573
Day sweats	1.07 (.94)	1.07 (0.94)	.00	27	1.00
Fever	1.10 (.95)	1.14 (0.97)	-.57	27	.573
Chills	1.03 (.88)	1.00 (0.86)	.57	27	.573
Swollen glands	1.42 (.95)	1.42 (0.99)	.00	27	1.00
Fatigue	1.60 (.78)	1.67 (0.86)	-1.00	27	.326
Weakness	1.42 (.92)	1.53 (0.99)	-1.80	27	1.00
Painful joints	1.05 (.79)	1.57 (0.83)	-1.44	27	.161
Muscle aches	1.64 (.87)	1.67 (0.90)	-1.00	27	.326
Dry mouth	1.75 (.70)	1.75 (0.70)	.00	27	1.00
Thirst	1.71 (.81)	1.75 (0.84)	-1.00	27	.326
Rash	1.71 (1.12)	1.71 (1.12)	.00	27	1.00
Itchy skin	1.89 (.87)	1.89 (0.87)	.00	27	1.00
KS Lesions	.57 (.99)	.57 (0.99)	.00	27	1.00
Chest pain	.63 (.89)	.64 (.90)	-.58	95	.566

35% of the items on the 23 item subscale of the HAT. By using more than one symptom assessment instrument to assess the symptom experience of persons living with HIV/AIDS, this threat to construct validity can be decreased.

Since clients' self-reports are considered the "gold standard" in symptom assessment (University of California, San Francisco School of Nursing Symptom Management Faculty Group, 1994), it is essential that symptom labels reflect an accurate and consistent understanding. Further research, using triangulated quantitative and qualitative methods, into the impact of the instrument's time frame on the subject's response may add further clarity.

In a study of symptom reporting to physicians in an elderly sample (N=152), respondents noted a mean of 6.7 symptoms in their symptom diary but reported only 2.4 symptoms to their physicians (Stoller & Kart, 1995). There is no reason to believe that HIV infected clients report more of their symptoms to their health care providers. Through

completion of a standardized, comprehensive HIV specific symptom assessment instrument prior to the encounter with the health care provider, it is hoped that interventions could be more focused on the symptoms that the client is experiencing. Secondary prevention strategies could then be offered which might prevent hospitalizations and deterioration of health status. However, before choosing the assessment instrument, issues related to symptom appraisal, the time frame being assessed, and the scope of the symptom-related variables being assessed need to be carefully considered.

Acknowledgments

Thanks to Lauren Schwartz, MPH, Mary Henwood-Klotz, MPH, and the UCSF International HIV/AIDS Nursing Research Network. This study was supported in part by Glaxo-Wellcome Research and Development, Nursing Research Program.

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RN Staffing and Patient Mortality

Aiken, L.H., Clarke, S.P., Sloane, D.M., Sochalski, J., & Silber, J.H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *JAMA*, 288: 1987-1993.

Using data from 168 adult general hospitals in Pennsylvania, the authors investigated "whether risk-adjusted surgical mortality and ... death rates in surgical patients who develop serious complications are lower in hospitals where nurses carry smaller patient loads" (p. 1988). They also considered the relationship between nurse staffing levels and factors associated with retention (job satisfaction and degree of burnout as measured by self-reported emotional exhaustion). Patient outcomes (death within 30 days of admission) were assessed by means of discharge abstracts for surgical patients controlled for age, sex, type of surgery, and co-morbid condition.

Half the hospitals studied had a patient to nurse ratio of 5:1 or lower. The 10,184 nurses were mostly women (94%) with a mean of 14 years of practice experience. Forty percent held at least a baccalaureate degree. Burnout and job dissatisfaction averaged about 43% each in the total sample. Twenty three percent of the patients experienced a new complication and 2% died within 30 days of admission. Logistic regression controlling for hospital size, teaching and technology status, and nurses' gender, years of experience, education, and specialty revealed that higher patient to nurse staffing ratios were associated with significantly greater patient morbidity and nurse job dissatisfaction and burnout. Using odds ratios, the investigators predicted that every patient added to a nurse's workload would be at least 7% more likely to die within 30 days of admission. This study provides evidence for the lower patient to nurse ratios (5 or 6:1) mandated in California and has implications for nurse staffing across the country. An accompanying editorial¹ commends the authors for having "provided an important piece of scholarship that helps us understand more completely the contributions of more intensive nurse staffing to patient safety, outcomes, and the job satisfaction of nurses." (P.2041).

¹ O'Neil, E. & Seago, J. A. (2002). Meeting the challenge of nursing and the nation's health. *JAMA*, 288: 2040-2041.

Nursing Practice

Kontiokari, T., Sundqvist, K., Nuutinen, M., et al. (2001). Randomized trial of cranberry-lingonberry juice and Lactobacillus GG drink for the prevention of urinary tract infections in women. *British Medical Journal*, 322, 1571-3.

The clinical question that prompted this study was whether or not regular drinking of cranberry-lingonberry juice concentrate reduced urinary tract infections (UTI) in women compared to a drink containing Lactobacillus GG. The study took place in a student health service and an occupational health center for staff at Oulu University in Finland. One hundred and fifty women diagnosed with a UTI were recruited to participate in this clinical trial. In order to be included in the study, the infection had to be caused by *Escherichia coli*, established by culturing a midstream urine sample. Fifty women were randomly assigned to receive the cranberry-lingonberry juice concentrate in specified doses once a day for a 6 month period. Another 50 women were assigned to the Lactobacillus GG group in which they drank 100 milliliters, 5 days a week for 1 year. A third group of 50 women received no intervention and served as the control. Results of this study demonstrated that at 6 months the group drinking the cranberry-lingonberry juice mixture had a statistically significant lower recurrence of UTI than the control group. There was no difference between the Lactobacillus and control groups.

LeClerc, C. M., Wells, D. L., Craig, D., & Wilson, J. L. (2002). Falling short of the mark: Tales of life after hospital discharge. *Clinical Nursing Research*, 11(3), 242-263.

In this qualitative study, 14 women were interviewed in their homes 6 to 8 weeks after hospital discharge. The purpose of the study was to look at everyday issues, challenges, struggles, and needs of elderly women living in the community. Four women also used the technique of photo novella or photovoice to record their everyday lives. The photographs were used as triggers during the interviews. The overarching theme of the interviews was that formal hospital discharge plans "fall short of the mark," because they did not reflect the complexity of the post-hospitalization experience. Discharge plans focused primarily on basic physical and medically related needs, rather than on the reality of the women's recovery. The study findings highlight the need for more effective and efficient discharge planning. Findings make clear the need for hospital discharge planners and professionals to help elderly women anticipate their needs in light of extreme fatigue and decreased mobility that characterized the women in this study. Homecare services were also shown to be inadequate in intensity and duration, especially in the initial discharge period. These findings point to the need for changes in discharge planning, home healthcare services, and policy for care of the elderly in the community.

Smith, M. C., Kemp, K., Hemphill, L., & Vojir, C.P. (2002). Outcomes of therapeutic massage for hospitalized cancer patients. *Journal of Nursing Scholarship*, 34(3), 257-262.

The authors examined the use of massage in oncology patients receiving radiation or chemotherapy. They found significant improvement in pain, symptom distress, and sleep in the 20 patients receiving the massage versus the 21 control patients. The results support the use of massage as an effective nursing intervention for cancer patients.

Villarruel, A.M., Harlow, S.D., Lopez, M., & Sowers, M.F. (2002). El cambio de vida: Conceptualizations of menopause and midlife among urban Latino women. *Research and Theory for Nursing Practice: An International Journal*, 16, 91-102.

Nurses who work with middle aged Latino women may be interested in this study of their experiences of midlife and menopause. Focus group interviews were held with two groups of 8-10 urban, low-middle class, post menopausal, primarily Mexican-American and Puerto Rican women between the ages of 35-60. Topics for discussion included: the meaning of health and of the midlife transition; the meaning, myths, and expectations of menopause; social, physical, and emotional changes, treatment and self care during menopause; and issues and experiences related to sexuality. Content analysis revealed three major themes. The first, "The Primacy of Health and the Importance of Harmony and Balance," expresses the high value placed on physical, emotional, spiritual, and relational health, the need for balance and harmony among them, and the importance of family. The second theme, "El Cambio de Vida - Something You Have to Go Through," expresses the belief that menopause, like other aspects of life, is a natural part of life and to be accepted. The third theme, "This Time is For Me: Reorientation and Restructuring," describes the "new me," i.e., the changes associated with midlife and menopause in social and family relationships, personal growth, sexuality, and intimacy.

HEALTHCARE LITERATURE

Nurses and Substance Abuse

Beckstead, J. W. (2002). Modeling attitudinal antecedents of nurses' decisions to report impaired colleagues. *Western Journal of Nursing Research, 24*(5), 537-551.

The major resource for identifying impaired nurses in the workplace is non-impaired coworkers. Yet only 37% of nurses who had worked with impaired colleagues had reported them for referral to treatment and rehabilitation. The purpose of this study was to identify attitudes related to substance abuse and impairment before developing programs to improve referral rates. A cross-sectional, correlational design with structural equation modeling was used to examine relationships among permissiveness, morality, treatment efficacy regarding substance abuse, and punitive attitudes toward impaired nurses. The influences of these attitudes on perceived severity of impairment in fictitious nurses and intentions to report these coworkers to nursing supervisors were modeled in a sample of 126 nurses. The results showed that permissive attitudes toward substance use and positive attitudes toward substance abuse treatment were significantly related to intention to report. The study findings suggest that educational efforts aimed at informing nurses about the efficacy of substance abuse treatment will be more effective than focusing on the moral aspects of substance use as a means of improving referral rates.

Research Methodology

Gigliotti, E. (2002). A confirmation of the factor structure of the Norbeck Social Support Questionnaire. *Nursing Research, 51*, 276-284.

Gigliotti describes the importance of valid and reliable measures of context-specific social support in order to understand the relation of social support to health and to measure the outcomes of nursing interventions for social support. The construct validity of the Norbeck Social Support Questionnaire (NSSQ) was examined using data from two previous studies (N = 457) in order to determine if the NSSQ measures the three dimensions of social support described by Norbeck, i.e., Affect, Affirmation, and Aid. Statistical techniques from Lisrel 8.30 were used to test hypotheses that the NSSQ is a valid measure of these three characteristics. The three hypotheses were supported; data from these 457 women who completed the NSSQ strongly supported Norbeck's model of social support with the three dimensions of Affect, Affirmation and Aid. The findings provide further support for the validity and reliability of the NSSQ. This article is a must-read for investigators who wish to use the NSSQ. Recommendations are made in relation to (a) selection of total functional support or each separate type of support, (b) investigation of specific functional types of support from specific network members, and (c) adding specific network members to the sample network listing.

Musil, C. M., Warner, C. B., Yobas, P. K., & Jones, S. L. (2002). A comparison of imputation techniques for handling missing data. *Western Journal of Nursing Research, 24*(5), 815-829.

Since data are often missing from one or more items on instruments used in research studies, techniques for how to handle this situation are needed. In addition, data are often missing from evaluation studies, patient satisfaction surveys, quality of care studies, and other surveys conducted by healthcare institutions. This article describes techniques

that may be used in research as well as other types of studies. The five techniques compared and contrasted are listwise deletion, mean substitution, simple regression, regression with an error term, and the expectation maximization algorithm. Using a sample of 96 for the imputed data and 492 with imputed data included, the investigators found that all techniques have limitations. The data suggest that mean substitution was the least effective; the regression with an error term and the expectation maximization algorithm produced estimates closest to those of the original variables. Computer programs provide easy access to the tests for calculating missing data.

Mental Health

Cannuscio, C. C., Jones, C., Kawachi, I., Colditz, G. A., Berkman, L., & Rimm, E. (2002). Reverberations of family illness: A longitudinal assessment of informal caregiving and mental health status in the nurses' health study. *American Journal of Public Health, 92*(8), 1305-1311.

Care of disabled and ill family members is estimated to occur in more than 22 million U.S. households. Relatives and friends are the only source of assistance for 70% of Americans who require long-term care. This study examined the association between caregiving for disabled or ill family members and the change in mental health over four years among 37,742 Nurses' Health Study participants. Women who provided 36 or more weekly hours of care to a disabled spouse were almost six times more likely than non-caregivers to experience depressive or anxious symptoms. Nurses who cared for a disabled or ill parent showed less elevation in depressive or anxious symptoms. Adverse health effects associated with caregiving, e.g., increased risk of incident of ischemic heart disease, are likely to disproportionately affect women, because most women will provide informal care at some point during their lives. The authors recommend that structures be established to support caregivers.

Technology

Sandelowski, M. (2001). *Devices and Desires: Gender, Technology, and American Nursing*. Chapel Hill, NC. University of North Carolina Press.

Technology has been described as a megatrend affecting nursing, but this book explores the deeper historical connection between technology and nursing. The author shows that while medical devices, from thermometers to the fetal heart monitor, have linked nursing to the prestige of science and progress, nurses' relationship to technology has a cost.

Nurses turned to technology with a desire to improve care and their professional status, but paradoxically, technology has moved nurses further from the true art of direct, intimate, and embodied caring for patients and has not remedied nurses' traditional cultural invisibility in health care. Nurses have always worked in-between patients and physicians, disease and illness, and medical care and everyday practices. Technology has added another in-between space for nurses, between patient and machine and care and cure.

This book does not offer solutions to the challenges technology poses for nurses, but provides a fascinating look at the history of nursing from the perspective of technology and gives clarity to cultural themes, such as gender, autonomy, invisibility, professionalization, and education.

An Analysis of Wisdom: An Experience in Nursing Practice

Marie Truglio-Londrigan, PhD, RN, CS, GNP

ABSTRACT

Nurses have demonstrated an interest in the nurse-patient relationship as both as a process and as the meaning derived from this relationship. Consequently the elements of the nurse-patient relationship have been explored within a variety of contextual experiences. To date, there has been no articulation of the experience of wisdom within the context of the nurse-patient relationship. This exploratory hermeneutic study examines the lived experience of wisdom in nursing practice. Three self-identified individuals from a northeast metropolitan area, ranging in age from 40 to 50 years, participated in multiple non-structured interviews. All participants spoke and understood English. Transcripts were analyzed using Gadamerian methodology. The findings suggest two constitutive patterns in participants' experience of wisdom: "Transformation as a Moment in Time" and "Transformation as Unfolding/Evolving Moments in Time."

Being wise and participating in experiences of wisdom have been viewed both as a prized possession and a process to treasure. Both have been deemed an outcome achievable by those who hold, share, and exemplify a specialized body of knowledge and a particular set of skills. Wisdom has been a concept of interest for scholars and lay people throughout the centuries. During early times this interest was evident in the oral tradition, which abounded with stories and fairy tales portraying a key individual known as the wise one. This wise one held a particular station in life to assist others through the difficult process of finding answers whenever the human condition created seemingly impossible dilemmas.

These stories were passed down from generation to generation. Their expressed purpose was to teach those who listened a way to live their lives and an alternative way to deal with everyday human struggles. This assistance took place as the wise one applied knowledge, using compassion and understanding, while conducting his or her own life in both moral and meaningful ways. Ultimately, there would be the successful resolution of the dilemma as a result of this particular relationship (Chinen, 1989).

Contemporary scholars attempt to understand the wise person and the experience of wisdom so eloquently portrayed in these tales of old. These researchers have selected quan-

titative inquiry, which has traditionally focused on the multidimensional aspects of wisdom by isolating and describing its affective, cognitive, and conative elements (Birren & Fisher, 1990). Kramer (1990), however, presents a model that emphasizes the multidimensional elements of wisdom as being integrated, dynamic, and moving, thus breaking the traditional stagnant understanding of wisdom. Meacham (1990) suggests that wisdom exists within interpersonal relationships, providing a context for the dynamic and evolving nature of wisdom to be realized. Years of research highlight the characteristics of a wise person, yet the experience of wisdom as a relational shared experience, as suggested by

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Meacham (1990), and its essence still remains unknown. So while the research to date suggests a pattern of coming to know and understand the characteristics of a wise person and what wisdom is, the process and the meaning of the experience within the relational context remains unknown. The inquiry reported in this article explores wisdom as an experience shared within the context of the nurse-patient relationship.

Background

In time, the oral tradition, which includes fairytales and folklore, took second seat to the written tradition, which soon became the primary channel for teaching and delivering messages to the masses. Thus ideas and reflections about wisdom became rooted in historical written texts, including the Bible and other religious writings. For the purpose of this paper, however, the writer will highlight the historical written tradition and contemporary western thought.

Historical Written Tradition

In the early Greek, pre-Socratic era, writings that focus on wisdom were concerned with knowledge of how the world works (Kirk & Raven, 1964). The Greek Renaissance writings about wisdom focus on the moral and ethical nature of wisdom. Holliday and Chandler (1986) reviewed the work of Socrates and Plato and noted the portrayal of wisdom as being more than the acquisition of knowledge. Wisdom is seen as living a moral life and demonstrating the connection of rationality to correct action and ethical practices. Taylor's commentary on Aristotle (1955) notes the personal qualities of the wise person such as goodness of character and intellect.

Discourse concerning wisdom continued into the early Christian era of the 15th and 16th centuries. During this time period, people believed that it was impossible to acquire wisdom. Christians saw individuals as pursuing good and shunning evil while living in a world of sin. The sinful nature of the world caused them to make errors and prevented them from possessing truth; therefore, they were without wisdom (Hyman & Walsh, 1974; Rice, 1958; Wippel & Wolter, 1969). This view prevailed until the Renaissance when an understanding arose that wisdom was possible for human beings: Its attainment, however, could only happen through the wisdom of God and the search for truth and virtuous actions in everyday life (Holliday & Chandler, 1986; Rice, 1958).

This conception of wisdom prevailed in Europe until the 17th and 18th centuries, when the new scientific tradition recognized empirically based scientific inquiry as a method to search for truth. Under the weight of such thought, human interest in wisdom waned despite traditions dating back centuries. The dominance of empiricism and the positivistic viewpoint led to the question: "If the only reality arrives by way of the senses, then what becomes of a concept of wisdom that does not conform to this ontology?" The answer is that it disappears, as evidenced by the waning of inquiry concerning the concept of wisdom (Chandler & Holliday, 1990).

Contemporary Western Thought

In recent years researchers have demonstrated a renewed interest in wisdom, yet there is still a paucity of scientific work. In an attempt to trace the contemporary understanding of Western ideas on wisdom, an historical review utilizing research dating back to 1970 is presented. The research to date suggests a definitive pattern of coming to know and understand what wisdom is and the process of wisdom. The purpose of such an endeavor is to create a context, which will permit others to see the evolving understanding of wisdom within Western tradition.

The renewed interest has focused on the use of empirical means to understand the multidimensional nature of wisdom and its core elements. For example, *The New Shorter Oxford English Dictionary* (Lelsey, 1993) defines wisdom as being wise in relation to conduct ... the combination of experience and knowledge with the ability to apply them judiciously ... teaching and discourse (p. 3700). The first core element noted is conative, or the ability to act, conduct, and apply oneself in a particular way. This is exemplified by how individuals live their lives and relate to others. The fact that conative elements may be observed differentiates them from the cognitive and affective dimensions. The second element is knowledge. It appears that not only is book knowledge essential, but also knowledge gained through life experience. The third element is an affective one. If wisdom takes the form of discourse or teaching, then one may say that affective elements are in existence, such as caring and understanding. In this context, it may be asked: To whom is this wise discourse or teaching directed? Who is the recipient of these acts? Given that there must be a recipient of the act of teaching, then the definition of wisdom suggests a fourth element — relationship.

Contemporary research on wisdom has mirrored this definition, focusing on the aforementioned elements as characteristic traits of a wise person. Birren and Fisher (1990), for example, proposed that wisdom is a multidimensional concept blending affective, cognitive, and conative elements. The affective element of wisdom is acknowledged in the literature. The wise person is seen as being understanding, empathic, gentle, and peaceful, and as having a sense of humor (Clayton, 1977; Clayton & Birren, 1980). Field research interviews conducted by Johnson (1979) reveal additional traits, such as patience and modesty. Other characteristics include interpersonal skills and social unobtrusiveness (Holliday & Chandler, 1986). According to Sternberg (1985), the wise person possesses the unique ability to listen and deal with different kinds of personalities. Self-descriptive profiles conducted by Orwoll (1989) reveal affective characteristics of unselfishness and understanding.

Regarding its cognitive element, the literature supports a definition of wisdom as knowledge gained through experience with the aid of intelligence (Clayton, 1977; Holliday & Chandler, 1986; Johnson, 1979; Taranto, 1989). Wisdom has also been defined as a highly developed body of factual and procedural knowledge, which includes good judgment when it comes to the pragmatics of life (Smith & Baltes, 1990). Another perspective views wisdom as a form of intelligence capable of fostering action based on understanding of ill-defined problems or dilemmas (Clayton & Birren, 1980; Taranto, 1989). Kramer (2000) identified practical and social intelligence; insight; and awareness of the relativistic, uncertain, and paradoxical nature of human problems as processes inherent in wisdom; the latter two exemplifying the essence of the cognitive element of wisdom. Finally, Kramer views an awareness of self or self-knowledge and the ability to engage in self-reflection to be a necessary component of intrapersonal development and wisdom.

The recognition that wisdom involves more than cognitive and affective elements is essential. There must be a process or vehicle whereby the affective and cognitive elements are put to use, becoming action oriented, allowing for wisdom to unfold as an experience, which is shared. Wisdom in "conduct" is an idea that requires reflection. The essence of wisdom is not what is known but how that knowledge is held and used (Meacham, 1990). Wisdom is social-interactive in nature (Staudinger, 1996).

Kramer (1990) viewed integration as central to wisdom and presents a model in which the cognitive and affective elements interact to produce wisdom skills. These skills allow the individual to operationalize wisdom, e.g., advise others, assist and support others in life decisions. The model highlights the multidimensional aspects of wisdom and the integration of its dynamic and moving elements. The presentation of this model suggests that wisdom is not a fixed stagnant entity but a reciprocal action oriented process. This notion breaks traditional thought and presents a view in which wisdom is not seen as isolated traits but rather a function of human interpersonal relations (Meacham, 1990).

To date, the research concerning wisdom has focused on isolating the individual elements of wisdom and focusing solely on the characteristic traits of the wise person. Wisdom is not isolated elements but an integration of elements, a dynamic process that takes on meaning within the context of relationships.

Nursing has not discussed wisdom as experienced by the patient in nursing practice. The literature, however, abounds with information on nurse-patient relationships. If one considers the changing conceptualization of wisdom in contemporary Western thought, then the possibility exists that wisdom as an experience does exist in nursing practice. This phenomenological inquiry will reveal the existence of an experience of wisdom in nursing practice and the personal journeys of those who have lived the experience.

Methodology

The scholarly approach selected for this exploratory study was hermeneutics. This approach suggests that human beings experience the world through language. Concomitantly, that same language provides the medium that brings awareness and understanding of that experience to others (Byrne, 2001). This understanding takes place with textual interpretation or finding meaning in the written word. In fact, hermeneutics historically was the method used by religious leaders to find meaning located within religious texts so that followers would be able to live life according to the particular doctrine (Byrne, 2001).

The hermeneutical approach helps the researcher to understand, uncover, and make explicit the unfolding meaning of an experience for individuals. In this study, the researcher attempted to uncover, analyze, and explain how several patients experienced wisdom within a nurse-patient relationship. It is important to note that the *how* of the experience was explicated, rather than the *what*, thus allowing for the experience to remain in its original context and fostering an understanding of the meaning of the experience, its essence and substance, for those who were involved. When using this approach, it is not the nurse's behavior per se that calls for description, but the meaning the behavior had for the participant.

The specific methodology used in this inquiry is based on the philosophical hermeneutical approach of Gadamer (1976/1977). Gadamer found that the language of conversation provided the medium for understanding as individuals used language to express themselves and listen to subject matter (Gadamer, 1976/1977). The signifi-

cance of language goes beyond our ability to speak and includes our ability to listen to another's spoken and unspoken words (Gadamer 1993/1996), which is essential for hermeneutical understanding.

Dialogue, questioning, and conversation stand at the center of Gadamer's philosophic hermeneutics (Bernstein, 1983). This dialogue, questioning, and conversation are portrayed as an interplay that is action-oriented. Conversation creates an environment, which facilitates recognition. Recognition brings meaning and understanding to the text for the interpreter. The ultimate goal, therefore, of this dialogue, questioning, and understanding is to achieve a "fusion of horizons" between the interpreter, participants, and the developed text (Gadamer, 1976/1977).

Sample

The researcher recruited participants by word-of-mouth, a process known as snowball or chain sampling (Fain, 1999). Flyers were distributed to local colleges and universities, colleagues, family members, and friends. Three individuals responded.

During an initial phone conversation, potential participants were informed of the purpose of the inquiry and the process and means of data collection, which included multiple tape-recorded interviews. During the first meeting, the researcher presented the informed consent document to each participant and told participants that they could withdraw from the study at any time. In addition, the researcher answered all questions raised by participants. Confidentiality was guaranteed and the use of pseudonyms was maintained throughout the inquiry process. All three individuals chose to participate.

Participants, one male and two females between 40 and 50 years of age, all lived in a north-eastern metropolitan area. Their highest level of education was a bachelor's degree. Criteria for participating in this study were that participants needed to identify that they had lived the experience in question and that their primary spoken language was English. All participants identified that they had lived the experience in question and were willing to describe it (Fain,

1999). The Human Subjects and Research Review Committee of Adelphi University granted approval.

Data Collection and Analysis

Participants and the researcher, who will also be referred to as the interpreter, mutually agreed upon the date, time, and the place for the interviews. Two participants chose to be interviewed in their home settings and the third at a neutral site. The first interview lasted 1 hour to 1½ hours. A second one-hour interview was conducted with all participants to gather additional information and clarification. It was necessary to conduct a third interview with one participant due to the depth of the information gathered on previous interviews and the need for additional clarification. At the end of this series, the interpreter noted that the data were expansive both in breadth, spanning years of information pertaining to the experience, and in depth. Due to the complexity of information and the realization that this inquiry was to be exploratory, no additional interviews were sought at this time.

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“Participants noted that the experience of wisdom and their relationship with their nurse, whom they considered wise, was a turning point for them.”

Data from these three participants did reveal patterns and themes (Fain, 1999).

The initial question, “Can you tell me about a time in your life when you were involved in a relationship with a nurse, a nurse whom you considered wise, and the resulting experience of wisdom?” initiated the conversation and was the only predetermined question. The remainder of the interview(s) were unstructured and relied on the spontaneous generation of questions in an attempt to discover the participant’s perspective and full description of the meaning of the experience (Fain, 1999). Participants required no prompting, the conversation being stimulated by the memories that the participants were reliving in the telling of their stories. Each participant told of the experience of wisdom, which in some cases took place several decades earlier. Despite this, participants indicated that the experience was as fresh and vivid in their mind’s eye as if it happened yesterday. Participants frequently explained how they relive the experience time and time again, sometimes on a daily basis hearing their nurse’s voice.

All interviews were audiotaped. The interpreter transcribed the audiotapes converting the oral words to a written text. After transcription, the interpreter compared the transcribed text with audiotapes for accuracy. According to Gadamer (1960/1989), the movement of understanding is from the whole to the part and back to the whole. To support this process, a method of analysis that recognizes and reflects this movement was considered. As data analysis occurred, it utilized a process adapted from Dieckelmann (1992). To begin, the entire text was read to obtain an overall understanding. Common recurrent categories that reflect shared experiences, known as themes, were then identified. As the text was read and re-read, common themes were identified within each interview and across interviews. As themes were compared patterns that linked the themes began to emerge along with an understanding of the shared meanings of the wisdom experience. Finally, themes and patterns were presented and explained by exemplars taken from the text.

Transferability, Credibility, and Dependability

The interpreter believes that the criteria for judging qualitative research were met. Transferability was supported as the interpreter provided a thorough and complete database to facilitate “transferability judgment” (Guba & Lincoln, 1989) so that others may apply this inquiry to their own situations. Regarding credibility, the interpreter consulted constantly with participants about their spoken meaning during each interview (Guba & Lincoln, 1989). This technique took place throughout each individual interview and the culminating final interviews. Finally, the interpreter engaged in the careful transcription of the taped oral accounts to a written text, thereby ensuring the dependability criterion (Guba & Lincoln, 1989).

Findings

The interpretation of the texts was derived from discussions with the participants and their narratives. Through ongoing dialogue, questioning, and conversation with each participant, shared meanings and common themes emerged. The language of the text provided a living testimony for each of the three participants’ experience of wisdom.

The analysis revealed two main constitutive patterns, “Transformation as a Moment in Time” and “Transformation as Unfolding/Evolving Moments in Time.” These constitutive patterns expressed relationships among the themes (Dieckelmann, 1992).

Transformation as a Moment in Time

The first constitutive pattern to emerge in the analysis was transformation as a moment in time. Participants noted that the experience of wisdom and their relationship with their nurse, whom they considered wise, was a turning point for them; a transformation of some magnitude occurred within each participant as the healthcare encounter unfolded. In essence, the nurse patient relationship is the connection (nexus) between the participants’ worlds as they knew them before and the new worlds that they came to know. Themes that emerged within the first pattern included: a

place in the world; disconnected; loss of control; compassionate connection; something in the way she moved; and another place in the world.

A Place in the World

Each of the three participants described that prior to their healthcare encounter they held a particular place in their world and lived a particular way of life.

S.D.S.: (A 50 year old black, female professional nurse) *I grew up in the South during the 1960’s. We didn’t go to white doctors. But, there was a time when I was sick and my grandmother had to take me to this doctor who happened to be white. I remember being in his office and this white nurse was giving out lollipops. My cousin and I ran up to her. The nurse said that the lollipops were not for us and she slammed the drawer. My grandmother told us we should not ask for anything and we should stay in our seats.*

Clair: (A 42 year old librarian and mother of two) *I liked to be able to call the shots and be in control. I liked to be in a situation where I made a decision and I always tried to find situations where there was another door to open. I think part of this was related to the time when I grew up in the seventies and late sixties. Part of me wanted to be a “good girl” and do what they told me to do but the other part of me was saying, wait a minute, they’re not always right and they don’t always do it right. I always wanted to be able to question, but question in a safe way, in a way that wouldn’t make me a bad person.*

Elliot: (A 44 year old who owns his own business) *I suppose I was following the traditional path. I went to high school then to college. To me life always had logic to it. You were born, you had a childhood, and you got older. Life was a process that went in a logical fashion.*

Disconnected

All participants described similar circumstances where they lived their life and saw themselves in a particular way. Yet, because

of a healthcare encounter they found themselves in unfamiliar situations and as a result became disconnected from their particular way of life. This disconnection is revealed in the following words:

S.D.S.: *I was admitted to the hospital for a tonsillectomy. When I woke up from the operation I was sitting in the lap of a woman wearing a white uniform. I jumped out of her lap when I woke up because all I saw was this uniform. I am thinking that she is going to be mean to me just like the nurse in the doctor's office and to make matters worse she is holding me.*

This participant's life prior to the healthcare encounter was to stay clear of conflict derived from prejudice; however, the healthcare encounter placed her in an alien situation. Instead of staying in a safe place she actually found herself in the very lap of her worst fears. Another participant said:

Clair: *I was always a person who liked to call the shots and be in control. Yet when I went into the hospital to deliver my first child this was not the case. I ended up with complications. My husband was telling me that he was going to make all of the decisions. I felt like everything was in someone else's hands and what I had to say didn't count. This was totally different from what I was used to.*

Clair's worst fears became a reality as complications manifested themselves, threatening to deprive her of calling the shots and being in control of the situation. This healthcare encounter threw her into a different kind of situation, one in which her traditional place, how she participated and related to the world, was no longer effective. She could not control the situation, and being a "good girl," she was unable to assert herself and voice her opinion. Clair was fearful of being in "somebody else's hands," yet she was.

Elliot: *I believe that my initial alienation came with what was going in the United States. It was when Nixon sent troops into Cambodia. . . . I really felt that at that point in our country's history there was obvious treachery and a lack of integrity. I began to question everything because I felt that my traditional values and beliefs were not in the mainstream of this country. . . . I decided to travel so I went to Central America. It was there I contracted a parasite infection and I had to return home to live with my parents. I guess when I ended up in the hospital my feelings of alienation were compounded with my illness, separation from education, and from the American system as a whole.*

Elliot's world was a traditional one, a world that he could predict and a world that he trusted. He lived according to a set of traditional American values that he perceived to be true. When the United States entered Cambodia, Elliot perceived a change in the cultural values that had always guided his life. Thus he felt alienated and disconnected. His illness and resulting hospitalization furthered his disconnection from his way of life.

Loss of Control

Each of the participants described the feeling of loss of control physically and emotionally. One participant stated:

S.D.S.: *When I saw whose lap I was in I started to swing so I could get away.*

Clair: *My body was doing weird things. I was in a diabetic reac-*

tion and my blood pressure was going up. It felt like everything was betraying me. My body was not doing what I wanted it to do.

Elliot: *My illness became worse. It was the catalyst of what was yet to come. It was a metaphor for my life. I got everything all at the same time. I felt like I was totally out of control and that what was happening to me was accelerating and it wasn't going to end in a good way.*

Compassionate Connection

As the healthcare encounter unfolded each individual found a way out of his or her situation with a nurse's help. Each of the participants portrayed the nurse as the wise one and the experience shared as one of wisdom. These individuals described the nurse in detail, noting the nurse's persistence in their memory despite the fact that the initial experiences transpired years earlier. The participants noted that the nurse's voice and the message conveyed is clearly heard sometimes on a daily basis, lending a forever presence: "I'll never forget her," or "I always think about her." According to the three participants, the nurse forged a compassionate connection, demonstrating to them that they really mattered (Beradelli, 1994).

S.D.S.: *When I jumped out of her lap I looked at her. She put her hands out and she kept coaching me to come to her. I remembered getting back in her lap.*

Clair: *You know I was grasping for something for a little handle. I held onto her. But she really said it's okay, you've got a handle on it.*

Elliot: *She was like a rock. It was like somebody was swimming and all of a sudden there was somewhere you can swim and hold on because you were at a point where you are so tired that you can't swim to any more.*

Something in the Way She Moved

Two components became evident in this particular theme. First, participants gave descriptions of their respective nurses as having great warmth and compassion, as well as knowledge. What was very evident by these stories was that the affective, cognitive, and conative elements were integrated. One did not exist without the other. What was also evident was the importance of the conative element, which made the exper-

ience come alive for each individual. How each individual nurse engaged in her practice, how the nurse demonstrated her compassion, and how the nurse shared her knowledge was key.

SDS: *She explained to me what had happened and why my throat was sore. She gave me some broth... It wasn't too hot and it wasn't too cold. It just soothed me. She gave me ice cream and Jell-O.*

Elliot: *Other nurses may have had the compassion but they did not have her level and depth of understanding. It is more than being confident technically it's a difference between being a technical musician and being an artist... She was very good at knowing where she needed to be... when it was time for her to be with me and when it wasn't time for her to be there... Well, what I think I was doing in those times that I was alone was I would think about what she was trying to show me.*

Second, how each of the nurses conducted themselves outside the context of their immediate nurse-patient relationship influenced participant's lives. Participants noted that they would watch their nurse and observe how she acted with and towards others. Each of the participants also noted that they would engage in self-reflection about

“Participants described their respective nurses as having great warmth and compassion, as well as knowledge.”

their own life, and eventually came to a realization that they did not have to live their life as they had been, that there were alternative ways to live in their world. Thus, as their horizon broadened they each began to engage in a transformation of self.

S.D.S.: *You know in those days it was difficult to become a nurse if you were black. After a short time I realized that this nurse was black like me! I would always watch her. She was a nurse. I was going to be a nurse.*

Clair: *I always felt I had to call the shots. But, I would do it in a safe way by controlling everything and heading off problems. I never wanted to challenge anyone. Good girls don't do this. My nurse showed differently. She was nurturing. However, she was very clear about what she wanted and needed. She taught me that it was all right to challenge people and still be a good girl.*

Another Place in the World

All participants described a dramatic change that they went through in terms of how they thought, how they actually chose to live their lives, and how they related to the world around them. Each of the individuals experienced a transformation and became reconnected to the world in another way.

S.D.S.: *I didn't think black individuals could be nurses. But that changed when I met her. It is because of her that I became a nurse. It wasn't easy, but I did it.*

Clair: *I always think of her. She was a pivotal person in terms of my ability to question, challenge and taking on a stronger role in my own life.*

Elliot: *I was searching for something when I first met her. I didn't know where I was going in life. I was so sick and lost. I guess I was searching for a way to reconnect. I would watch her. She was always so sure and she was where she wanted to be. I needed to find where I wanted to be.*

Transformation as Unfolding/Evolving Moments in Time

The second main constitutive pattern to emerge from the analysis was transformation as unfolding/evolving moments in time. The initial experience of wisdom continues to influence each participant as he or she encounters life's challenges. Time and time again participants respond to life situations that evoke their pre-wisdom worlds, only to be pulled back to their transformed worlds by images of their respective nurses and memories of their words and actions. The participants relive and reminisce about their initial wisdom experiences re-

peatedly. Each time this happens the initial experience of wisdom continues to unfold and evolve, becoming more integrated into their lives. Themes, which emerged within the second pattern, included: a reaffirmation of one's place in the world and passing it on.

A Reaffirmation of One's Place in the World

Each of the participants identified that the experience of wisdom created a base of understanding from which they were able to draw in new situations when their transformational place was challenged.

S.D.S.: *I tried so hard to become a nurse but it wasn't easy. Every road I turned down seemed to have a stumbling block. It was so difficult. Then I would think of my nurse and I knew I could accomplish my dreams because my nurse did it.*

Clair: *I frequently think about her particularly in situations where I have to assert myself. She helps me get through those particular situations. It is almost as if her message is relived time and time again. Every time this happens she becomes more integrated in my life as well as the message she tried to convey.*

Passing It On

Finally, this experience appears to be passed on and shared with others.

S.D.S.: *When I see someone trying to accomplish something like trying to be a nurse I always encourage him or her. And, I guess my whole situation motivates me to try to help others by telling them that they can do it and go for it.*

Clair: *I had a friend who was dying. Everyone was taking control and no one was listening to her. I thought of my nurse and my own experience. I tried to help my friend take control of her life and her death in much the same way my nurse assisted me.*

Elliot: *I think about her when I am making a connection. Let me give you an example. We did a project for this organization. I was the house captain, which means you get your own project. I was working with this woman who was a nurse with cancer, which was spreading to her brain. She was really destitute. She needed a new roof, new door, plumbing, and a lot of stuff for her home. So basically we went in there and fixed up everything. She was very grateful and she came up to me and said, "You know, I wanted to die in my house and you made it possible for me to do that."*

For Elliot, his working on this project helped him secure this woman's home, a place for her to die, just as his nurse helped him find his place in his world.

Discussion/A New Understanding

Gadamer (1976/1977) noted that the history of the interpreter and her preconceived notions and prejudgments may be viewed as positive features when approaching the text. Thus, the interpreter's preconceptions serve as an enabling factor and a point of reference, fostering connections necessary for the hermeneutical process and understanding. This interpreter had a certain notion of the meaning of wisdom based on her own personal and professional experiences. One was that you could develop a sense of who you are and who you can be by observing a person who has a tremendous meaning in your life. Another preconceived notion was that observations of nonverbal behavior might be a more significant influence on a person's life than verbal expressions.

Thus, a fusion of the horizons of the participants' understanding and this interpreter's own understanding fosters another way of knowing beyond that which each singular individual initially understood.

The experience of wisdom, in the nurse-patient relationship, is transformational and has a direct and continual effect on the individual's life. These stories demonstrate that the experience of wisdom has the potential for far reaching effects, not only for the individual who lived the experience but for others as well.

The literature illustrates the integration of the cognitive, affective, and conative elements of wisdom. These elements are depicted within the experiences portrayed in this inquiry. The key, however, in the experience of wisdom is the conduct of the nurse or the conative aspect. The skillful acts of performing nursing activities are essential for the "doing" of nursing (Johnson, 1994). The conduct within nursing practice documented in the experiences in this inquiry took on meaning of another dimension, a dimension of greater breadth and depth. The conduct spoke to how the nurse acts and behaves, including how the nurse relates to his or her own professional world and provides a visual image that each patient is able to view and reflect upon. The nurses presented a living model for each of the patients, creating a story of how they could live in their own world in another way.

How does an individual change or transform from one way of being into another? The answer may lie in the very experience of wisdom and the living model the nurse exemplified. Cochran and Laub (1994) note that individuals make transformative changes in their lives and become self-determining agents when they are

separated from what is familiar to them. Applying this to the experiences at hand, one may say that the three participants experienced healthcare encounters that separated them from their usual contextual environment. They were thrust into an intensified experience that challenged them in every aspect of their being. Thus the healthcare situation was a primer for the experience of wisdom to unfold and for transformation to occur. The separation from their traditional way of being in the world is not enough. For the transformation to take place and for the individual to reconnect to the world, the individual must have a model of what one may become (Cochran & Laub, 1994). "The model is inspirational because it portrays a way, a path from confines of what is to the possibilities of what might be" (Cochran & Laub, 1994, p. 32). The model in each of the experiences illustrated above was the nurse. The experience of wisdom is one in which transformation takes on meaning of its own, whereby individuals live life in a different way, sees themselves in a different way, and relate to others in a different way.

Summary and Implications for Nursing

The experience of wisdom unfolds within the context of a nurse-patient relationship in which the integration of affective, cognitive, and conative elements are exemplified. The conative element, or how the nurse conducts his or herself, presents a living model for the individual to observe. The outcome of such encounters is enlightening as the individuals involved seek, find, and reaffirm their own "true being," resulting in transformational change as a moment in time and as moments yet to come.

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A Qualitative Study of Perceptions Regarding the Non-Nurse College Graduate Nurse Practitioner

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ABSTRACT

Nurse practitioners (NPs) have become integral players in the current healthcare system. Some schools admit students with bachelor's degrees in other fields without prior nursing experience into accelerated BS-to-graduate NP programs. The purpose of this study is to examine healthcare providers' perceptions regarding these non-nurse college graduates (NNCGs) functioning as nurse practitioners. The literature review revealed no prior qualitative investigation examining healthcare providers' perceptions of NNCGs. This study elicited a textual response to an open-ended question. Criteria for inclusion included ages 21 and older and licensure in nursing (RN) or medicine (MD or DO). Fourteen textual responses were analyzed. An adaptation of Colaizzi's method of data analysis was used to extract and describe themes. The four thematic categories that emerged from the data included: "Role Complexity," "Experience as Teacher" "System Savvy," and "On the Plus Side." The results of this study will be used in the development of an instrument to be used in a quantitative investigation.

Nurse practitioners (NPs) have become important players in the current healthcare system. In the 1960s, there was a lack of primary care providers for patients in underserved areas (Munro & Krauss, 1985). In order to fill the vacancy, nurses crafted advanced training programs and created the new role of NP. Traditionally, to enter an advanced practice nursing role, experienced nurses pursue graduate education; in this case, a nurse practitioner program. Some schools admit students without prior nursing experience into graduate nurse practitioner

programs (Smith & Shoffner, 1991). These individuals have a bachelor's degree in a field other than nursing and enter an accelerated program that incorporates a BS in nursing with the possibility of immediate continuation into a master's level NP program (Smith & Shoffner). Students entering these graduate programs without prior experience as a registered nurse will be referred to as non-nurse college graduates (NNCGs) or non-traditional NP students.

Anecdotally, strong biases against NNCGs exist. It is not uncommon for nurse practitioner

or physicians to refuse to precept NNCG NP students. Experienced RNs in classes with the non-traditional NP students often express concerns that NNCGs lack sufficient nursing experience to function as NPs. Some employers have been unwilling to hire recently graduated NNCG NPs. The literature revealed no qualitative or quantitative investigations that examine healthcare providers' perceptions of non-nurse college graduate nurse practitioners. The purpose of this study was to identify the nature of healthcare providers' experiences, thoughts, and feelings about

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non-nurse college graduate nurse practitioners. The results from this research will contribute to a larger project which will compare experienced registered nurses with NNCGs with regard to nurse practitioner skills in post-graduate practice. Uncovering a full range of perceptions about NNCGs would help assure that the instrument to be developed for the quantitative study is comprehensive regarding the parameters to be assessed. The research question is, "What are healthcare providers' experiences, thoughts, and feelings regarding non-nurse college graduate nurse practitioners?"

Review of the Literature

Academic Performance of Non-Nurse College Graduates

Some researchers have contrasted the non-nurse college graduate with the traditionally prepared RN in graduate family nurse practitioner (FNP) programs. Smith and Shoffner (1991) examined whether nurse practitioner students from traditional nursing and non-traditional backgrounds differed in academic performance. The non-traditional students had no previous nursing experience, while the traditional students had an average of 8½ years experience as registered nurses. Master's degree (NP) program grade point averages for 91 students were reviewed, and no significant differences were found between the traditional and non-traditional NP students.

A similar study (Munro & Krauss, 1985) was performed at the Yale University School of Nursing. In this program, during the first year the NNCGs received undergraduate (BS) nursing education; the second and third years were spent with the traditional master's students in advanced practice NP specialty courses. Grade point averages for 98 NNCGs, 272 students with a BSN and prior nursing experience, and 65 RNs who had associate degrees or a diploma in nursing were assessed using analysis of variance. It was determined that all three groups had similar grade point averages with no significant differences between these groups.

Sime, Corcoran, and Libera (1983) also compared NNCGs and traditionally-prepared NP students in regards to academic performance during graduate study. Grade point averages of these two groups were compared yielding no significant difference between NNCGs and traditionally-prepared NP students ($p=0.56$). This study was limited, as the authors did not quantify the number of years of RN experience for each group and the number of subjects in the NNCG group was small (7 out of 37).

These three studies revealed consistent findings, showing no significant difference between NNCGs and traditionally prepared RN/NPs in grade point average for master's NP programs. These studies are limited to the academic setting, and do not consider how these two groups score on national certification examinations or function in the clinical setting after graduation.

Nursing Experience and Nurse Practitioner Skills

One study (Hawkins & Thibodeau, 1994) examined nurse practitioners' self assessment of confidence in NP skills, using years of experience as a registered nurse as an independent variable. Four hundred and eighty two practicing NPs from various educational and profes-

sional backgrounds were surveyed. Subjects had an average of 18 years experience as RNs and 9 years experience as NPs. One half of the participants were master's prepared, 45% had received certificates, and the rest were trained on the job or had come from other backgrounds. The results of the research indicated that there was no relationship between confidence in NP skills and "educational preparation as a nurse, years of nursing experience, type of NP preparation, and years as a nurse practitioner" (p.529).

Attitudes Regarding Non-Nurse College Graduate Nurse Practitioners

A clinical placement coordinator for NPs at a northeastern university has reported that it is a challenge to locate clinical sites for NNCGs due to clinicians' biases (J. Dolan, personal communication, June, 2000). Some clinicians refuse to precept NNCG NP students because of their limited experience as registered nurses. Although strong biases regarding NNCGs have been expressed anecdotally, the literature review did not reveal articles specifically dealing with biases regarding NNCGs. There were a few articles about attitudes toward NPs in general. Aquilino, Damiano, Willard, Momany and Levy (1999) found that

physicians who had previous experience working with nurse practitioners had more favorable attitudes towards nurse practitioners. Johnson and Freeborn (1986) found that physicians had more favorable attitudes toward physician assistants than they had toward nurse practitioners. The literature review revealed no exploration of health care providers' perceptions of NNCG NPs.

Qualitative Research

Qualitative research focuses on human experience within its full context rather than attempting to isolate a small portion of it through research design or statistical control (Polit & Hungler, 1995). Qualitative research is guided by the interpretivist paradigm, which holds that "reality is socially constructed, complex, and ever-changing" (Glesne & Peshkin, 1992, p.6). Field and Morse (1985) recommended the use of qualitative methodology when little is known about the phenomenon under study. Healthcare providers' perceptions about NNCG NPs in the clinical arena are complex, socially constructed, and have never been studied; therefore, the use of qualitative methodology is appropriate. The researchers used a descriptive approach to the research question.

The researchers used a descriptive approach to the research question.

Methodology

The project was approved by the Institutional Review Board of the researcher's university. Criteria for inclusion were age 21 and older and possessing licensure in nursing (RN) or medicine (MD or DO). The purposefully selected sample consisted of healthcare professionals within the New York City Metropolitan area. As the nature of negative perceptions was being explored, those with biases against NNCGs functioning as advanced practice nurses were sought when possible. Biases are not necessarily based on reality or experience. For that reason, and in order to explore a full range of opinions, there was no requirement for participants to have worked directly with NNCGs or NPs. All were familiar with the NP role.

"One placement coordinator has reported that it is a challenge to locate clinical sites for NNCGs due to clinicians' biases."

“Those taking the time to complete and return the questionnaire clearly had opinions about non-nurse college graduates.”

Participants were recruited from various sources. Clinicians (identified by the clinical coordinator for the NP program) who refused to precept NNCG NP students were invited to participate in the research project. Other sources were healthcare providers who had expressed biases against NNCGs. These were referred by students and faculty members. One of the authors taught a Capstone seminar for NP students (both experienced RNs and NNCGs) for several years. Preparation and functioning of NNCGs as compared to experienced RNs were debated each semester. Some non-NNCG NP students had strong feelings about their classmates' abilities to function in the advanced practice role. For this reason, some NP students were invited to participate. Those taking the time to complete and return the open-ended questionnaire clearly had opinions about NNCGs.

Research participants were given or mailed a cover letter, a demographic data questionnaire, and an open-ended questionnaire. The demographic data collected were: gender, age, practice area, highest level of education within the health discipline, years in practice, and type of license/certification. The open-ended tool contained a single question, which asked participants to share experiences, thoughts, and feelings about NNCG NPs, including any exposure they may have had to this group.

Communication with research participants was done by the research assistant, a graduate student who is a registered nurse. Consistent with qualitative methodology, sample size was not predetermined, and subjects were recruited until there was a saturation of thematic data. The cover letter delineated that consent was implied when the participant completed and returned the open-ended questionnaire. The research assistant contacted participants via phone if additional clarification or information was needed. Confidentiality was maintained by the use of code numbers. A separate list of participants and assigned code numbers were kept until data collection was complete. The list was then shredded to maintain confidentiality.

The principal investigator and research assistant analyzed textual responses. The ini-

tial five steps of Colaizzi's method of data analysis were used to extract and describe themes (Colaizzi, 1978). All participants' responses were read repeatedly to acquire a feeling for the data and for global themes. Significant statements that pertained to the research question were extracted from the textual responses. Meanings were formulated for each significant statement. The formulated meanings were organized into clustered themes pertinent to the investigated phenomenon. The clustered themes were written into an exhaustive description of healthcare providers' perceptions regarding NNCG NPs.

Results

Forty-two questionnaires were mailed to healthcare providers. Textual responses were reviewed in sequence; saturation was reached after the first 14 were analyzed. All participants were female nurses. Three were between the ages of 31 and 40, nine between 41 and 50, one between 51 and 60, none between 61 and 70, and one over age 71. Nine practiced in the acute care setting, two in ambulatory care, and three in nursing education. Two respondents were doctorally prepared, 10 had master's degrees, and the remaining two had bachelor's degrees. Six of the 14 participants were nurse practitioners. In terms of years of experience in nursing, half the participants had practiced for over 25 years, two between 21 and 25 years, two between 16 and 20 years, and one each for the following categories: 11–15 years, 6–10 years, and 0–5 years. Ten of the fourteen participants stated that they had worked with NNCGs. There was one NNCG in the sample.

Four themes emerged from the data. They are: “Role Complexity,” “Experience as Teacher,” “System Savvy,” and “On the Plus Side.”

Role Complexity

A common theme for participants was the notion of the complexity of the advanced nurse practitioner role. The NP role was viewed by most as highly challenging and likely too difficult for novice registered nurses. One nurse noted, “My feeling is that being

an advanced practice nurse is too complex a job to enter without some previous nursing experience.” The advanced practice nurse (APN) was viewed as a specialist, and participants implied that individuals need experience as a generalist first. One subject stated, “I question whether or not someone who has not had at least two years of clinical practice as a generalist could function in the role of a specialist or advanced practice nurse.”

However, participants disagreed about the amount of nursing experience needed before embarking on an advanced practice trajectory, with responses including one year, two-three years, five years, and ten years. One participant stated, “Those with less than five years experience as RNs were woefully under-prepared mentally for the challenge of the role they were about to assume.” Another summarized by stating:

I think it must be an extraordinary challenge to adequately prepare a non-(experienced) RN to be an NP, and although there are exceptions, generally, these recent RN/NPs must have to make up the clinical experience after graduation and cannot be initially compared to practiced RNs who earn a NP degree.

Experience as Teacher

Respondents highlighted the schism between what can be taught in an academic program and what is learned through practice. There is a differentiation between the acquisition of clinical skills and their application in diverse situations. Although one participant found the NNCG “with no nursing experience to have excellent clinical skills, like ordering labs, x-rays and clinical assessment,” it was felt that more complicated tasks were improved with experience. Another participant stated, “An NP that has been through an accelerated track has the skill that she was taught. Anyone can be taught skills, but experience is still the best teacher.” One respondent attempted to describe what about basic nursing experience was helpful for her NP practice. “I find that being a nurse prior to the NP experience is helpful due to familiarity with patient interactions, symptoms, treatment, and care plans.”

Two areas that respondents identified as experience-dependent for high functioning were making rapid assessments and decisions. One NP respondent stated, "As an FNP, when I need to make split second decisions, nothing prepared me better than my nursing experience." Another noted, "Experience as a staff nurse in an acute care setting is invaluable for developing communication skills and managing crisis situations." However, there are types of RN experience which may not contribute as much to the NP's functioning (i.e. administration, staff education, psychiatric nursing for a non-psychiatric NP).

Another area that participants felt was intertwined with experience was "nursing intuition." Intuition is defined by Merriam Webster (2001) as "quick and ready insight" and by Belenky, Clinchy, Goldberger, and Tarule (1986) as "subjective knowledge, a perspective from which truth and knowledge are conceived of as personal, private and subjectively known" (p.15). Although this is a rather intangible and personal concept, participants clearly felt that experience was primarily responsible for bringing nursing intuition to the advanced practice arena. One participant stated, "My concern still lies not with application, but rather with assessment or inferential and gut feelings. One needs experience and exposure in order to draw inferences or make intuitive plans."

Another respondent noted (in regard to the inexperienced NNCG NP), "Expecting someone to have good 'nursing sense or intuition' in an advanced practice role is setting that professional up for failure."

Another aspect of clinical experience is the assimilation of the role of the nurse, or "socialization" into the nursing profession. One participant who was a NNCG NP stated that this may be lacking for those entering advanced NP practice without prior nursing experience. "Having been a non-nurse college graduate student with no prior nursing experience, I have found that my fellow students in the same situation have a more medical model approach rather than a nursing approach."

System Savvy

Participants said that NNCGs without prior nursing experience lack mastery of the professional and institutional milieu. One stated, "I think you need to understand healthcare systems, management skills, interdisciplinary relationships and basic approaches to patients in practice before entering an advanced practice role." Another referenced familiarity of the hospital as a system as critical for NP practice:

Working in a hospital entails a certain amount of politics that must be learned. I watched one NP who had gone through an accelerated track put her foot in her mouth repeatedly because she didn't understand the politics of a hospital.

Respondents failed to consider that the NNCGs have bachelor's degrees in other disciplines, and may have prior non-nursing work experience that may enhance the NP role in unexpected ways. A few examples from the author's past NNCG students include those with experience in marketing, research, human resources, and management.

On the Plus Side

Participants did identify strengths that the NNCG may possess that might be advantageous, and conversely, weaknesses that experience could produce. Students able to handle accelerated programs for NNCGs are frequently academically masterful and highly motivated. In the NP programs, NNCGs are continuing along a learning curve rather than returning to school after a long hiatus, which is often the case for the experienced RN. Following are some comments regarding the strengths of NNCG NPs:

"I am struck by the self-confidence that these new (NNCG) APNs exhibit."

"My observation of these (NNCG) students was that they were highly motivated, driven to finish, older than the usual students, with more life experience."

"I find advanced NPs with no nursing experience to work autonomously and appear very confident. I find NPs with nursing experience to be less confident with their assessment skills and will not challenge themselves to meet their potential."

Participants generally agreed that NNCG NPs eventually "catch up" with NPs who had previous RN experience, although a time frame was not mentioned. One respondent noted the potential down side of experience, stating that it may be outdated and ritual, rather than research-based. "History has supported that a quick, intelligent, motivated RN (NNCG) catches up and quickly learns the skills of the profession, and some experience (outdated) might actually hinder the advanced practitioner."

Discussion

This qualitative investigation was designed to describe health care providers' perceptions regarding non-nurse college graduate registered nurses who become nurse practitioners without prior out-of-school nursing experience. Clearly, respondents valued what is to be gained from having the basic nursing practice background that NNCGs lack. Consistent with the literature review, there was not agreement on the temporal aspect of what constitutes "nursing experience." Previous studies assessed academic indicators for NNCGs and experienced RNs and found no significant difference. Participants agreed that the NNCG NPs mastered concrete skills learned in school, but lacked more subtle abilities such as intuition and the ability to act rapidly when confronted with complex problems. This speaks to the need to compare these groups after graduation as they transition into practice, the aim of the larger project.

Perceived advantages of prior nursing experience included the ability to progress to a more complex role, socialization into the nursing profession, development of nursing intuition, familiarity with disease signs and symptoms, and mastery of the healthcare system milieu. Some participants identified strengths possessed by NNCG NPs, including excellent skills, confidence, and the ability to learn quickly. The perceived potential negative aspects of basic nursing experience were reliance on ritual-based practice and reluctance to act as autonomously as NNCGs in the new NP role.

This study had several limitations. All participants were registered nurses; thus, there were no data from physicians. Respondents were drawn from a geographically limited area. An interview format may have yielded richer data than a textual response. Almost two thirds of the participants practiced in an acute care setting, and less than half were NPs themselves. It is unclear how knowledgeable these nurses are about NP skills, as the majority of NPs practice in primary care areas. Although participants were asked to describe the nature of their experience with NNCGs, few did. Future investigation could more deeply explore not only perceptions about NNCGs, but could link background information about the perceivers with the perceptions.

Sixty four percent of the respondents have been practicing nursing for at least 20 years. The views this generation of nurses holds regarding NNCGs might be more negative than more recently graduated RNs. However, as the full range of negative perceptions was sought, this is not truly a study limitation. It would be of interest to follow perceptions of NNCGs over the years to look for trends.

This investigation was conducted to guide data collection in a quantitative study comparing NNCGs and traditionally-prepared RNs in regard to post-graduate NP practice skills. Based on the results of

this project, data collected will include years of experience as a registered nurse, as well as the specific type of experience. The relationships between duration and type of pre-NP RN experience and assessment of NP practice skills may help clarify what constitutes relevant basic nursing experience and whether it is associated with superior NP skill levels. Practicing NPs and their collaborating physicians will also be asked to complete a tool rating 25 nurse practitioner practice skills, and NNCG NPs will be compared with traditionally prepared NPs. Study results supported inclusion of questionnaire items relating to more complex tasks such as formulating differential diagnoses, responding

to non-verbal cues, knowing when to seek consultation, and selecting what to focus on for a problem-based visit. Based on responses related to system savvy, an item addressing the ability to function as part of an interdisciplinary team was also included.

Perceptions regarding non-nurse college graduate NPs, whether based on reason or emotion, are strong and rarely neutral. This qualitative study has provided the basis for a quantitative study which will address the reality of NNCGs' ability to successfully function as practicing nurse practitioners as compared to their traditionally-prepared colleagues.

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INFORMATION FOR AUTHORS

Journal of the New York State Nurses Association

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Managing Editor: Anne Schott

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