Utilizing Narrative Inquiry to Evaluate a Nursing Doctorate Program Professional Residency

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Because the University of Colorado (CU) School of Nursing Nursing Doctorate (ND) Program initiated an innovative nursing educational reform, emerging program evaluation challenges were addressed to ensure successful implementation and program quality. The study's purpose was to evaluate the effectiveness of the ND professional clinical residency (fourth and final year) from the students' perspectives. Therefore, this evaluation was exploratory and inductive to focus on the primary questions: "How does one become an ND nurse during the residency?" (process) and "What is an ND nurse?" (outcome). Additionally, an explanation of how interactive processes affected residency experiences was addressed. The narrative inquiry framework made available a special access to the human experiences of time, order, and change during the residency process. Ten students in the first CU ND Program residency participated. Narrative data for qualitative analysis were obtained from students' monthly written vignettes and verbal sharing of their clinical experiences during conferences. Vignette formats directed students to describe significant residency experiences and share reflections on the events. One finding suggested that students' formative progression through the residency occurred in four phases similar to cognitive development theories. Additional findings confirmed students' growth toward and summative attainment of ND outcome behaviors, including holistic clinical proficiency, client advocacy, and promotion of professional growth for colleagues. (Index words: Doctor of nursing; Narrative inquiry; Nursing education; Professional residency; Program evaluation) J Prof Nurs 13:110-123, 1997. Copyright © 1997 by W.B. Saunders Company

The University of Colorado (CU) School of Nursing (SON) Nursing Doctorate (ND) Program is a four-year, postbaccalaureate curriculum with three years of academic course work followed by a fourth-year clinical professional residency. The ND Program, envisioned and initiated under the leadership of Jean Watson, PhD, RN, FAAN, then dean of the CU SON, and administered by Sally Phillips, PhD, RN, FAAN, admitted the first class of students in fall 1990. The professional residency, 1 calendar year (June through May) of full-time practice at corporate-sponsored health care sites, provides students with opportunities to pilot advanced practice roles as professional nurse generalists and explore new caring and healing practice models of health care delivery (Watson & Phillips, 1992).

Purpose and Evaluation Questions

Because the CU ND Program represents the initiation of innovative nursing educational reform, emerging program evaluation challenges must be addressed to ensure successful implementation and program quality. Therefore, the purpose of this study, one phase of the larger comprehensive CU ND Program evaluation, was to evaluate the effectiveness of the professional residency from the students' perspectives. The evaluation focused on the primary questions: "How does one become an ND nurse during the residency?" (formative or process evaluation), and "What is an ND nurse?" (summative or outcome evaluation). Specific questions developed during the evaluation process were (1) Are there distinguishable phases in the process of becoming ND nurses? (2) How do interactive processes facilitate or hinder successful progression through the residency? and (3) What aspects of the ND Program goals of developing advanced clinicians and clinical scholars were achieved?

Background and Significance

The ND model answers nursing's call for educational reform to prepare 21st-century clinical leaders (Carter, 1988; Fitzpatrick, 1988; Starck, Duffy, &
Vogler, 1993; Watson, 1988; Watson & Phillips, 1992); yet, few ND programs exist. The CU Program was designed as a national model for postbaccalaureate nursing education (Watson & Phillips, 1992). Because of its experimental nature, this program has been comprehensively evaluated with entry, process, and outcome evaluation methods, both qualitative and quantitative. Although other major health disciplines, such as medicine, dentistry, and pharmacy, include professional residencies, published evaluations were not found. Only one ND program evaluation, preliminary findings from a 1-year postgraduation survey conducted at Case Western Reserve University, was located in the literature (Fitzpatrick, Boyle, & Anderson, 1986). Therefore, the authors developed a unique CU ND professional residency evaluation plan.

Formative evaluation is most needed in the initial implementation phases of a recently developed program (Green & Lewis, 1986). The authors anticipated that individual ND residency variability would be affected by interactive processes among the students, faculty and clinical preceptors, and clinical agency contexts. Congruent with Green and Lewis' view of formative evaluation, key aspects of this study were identifying and understanding the systematic and predictable variations within the individual residencies while monitoring the integrity of ND Program implementation.

This study was intended to be consistent with the essence of Guba and Lincoln's (1989) fourth-generation evaluation that endeavors to be responsive and constructivist. The evaluation findings represent meaningful constructions that the students formed to "make sense" of their residency experiences. The findings were also created through an interactive process that included the authors. Congruent with fourth-generation evaluation and feminist research perspectives (eg, Duffy, 1985; MacPherson, 1983; Westkott, 1990), the evaluation was shaped to enfranchise the student group.

### Design and Methodology

To document the themes and capture critical aspects of the residency experience, this study was exploratory and qualitative and used an inductive design. To generate a more comprehensive theoretical viewpoint of professional development from the students' perspectives, a narrative inquiry framework made available a special access to the human experience of time, order, and change (Connelly & Clandinin, 1990; Sandelowski, 1991). Across disciplines, such as nursing and education, narrative knowing is receiving new attention. Qualitative data is crucial to capturing and conveying the participants' systems of meaning in their own words (Green & Lewis, 1986).

Miles (1987) described the vignette method as an evaluation strategy in education to "engage the professional directly in reflecting on a recent episode of practice—first describing it, then producing thoughtful explanations" (p. 2). In an analysis of health diary characteristics, Verbrugge (1980) noted that compared with retrospective interview data, the diaries generated data that were more likely to be valid because of lower recall error. Howell (1991) used a reflective health diary in nursing research to obtain a fuller picture of symptoms, responses, and health actions of women with chronic pain.

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#### SAMPLE

In fall 1990, the CU SON admitted 12 ND students. Two students withdrew during the second year. Thus, the resultant enrollment in CU's first ND residency was 10 women. Based on program entry data, the students' mean age at the beginning of their residency was 31 years (standard deviation [SD] = 3.76). Ethnic designations represented were white (80 percent) and Hispanic (20 percent). Previous baccalaureate degrees, life experiences, and work histories varied. Near the beginning of the residency, the students took the National Licensure Examination; all received licensure as registered nurses.

#### DATA GENERATION

To develop a narrative method for this study, the authors used the vignette technique, as described by Miles (1987) and used for evaluation by Jochums and Pershey (1993), and Howell's (1991) diary procedure, which also encouraged the participants to share insights and literary or artistic expressions. Thus, the students generated qualitative data based on their own unique residency experiences and their reflections on those experiences. The written narrative data were supplemented with students' verbal sharing of experi-
ences at designated clinical conference meetings and selected follow-up interviews.

Guide for Vignette Writing

The vignette format directed students to describe a self-selected significant (positive or negative) residency experience and to share any understanding or insights attained concerning the residency and becoming an ND nurse. The format was guided by general, open-ended items intended only to help students focus their thoughts. The authors used the following questions as a guide for writing:

1. Describe a significant event, with your thoughts and feelings, related to your residency and becoming an ND nurse. Some questions you may consider as you write are as follows:
   a. How did the event unfold?
   b. What was your role in the experience?
   c. What happened as a result?
   d. What was the impact?
2. Why did you choose to write about this incident?
3. Please share any understanding or insights you may have attained from this experience concerning your residency and becoming an ND nurse.
4. Please share any artistic or literary expression you may have developed as a result of your experience or include or describe an aesthetic experience from another source (artist, nature, etc) that particularly touched you this month (optional).
5. Other comments about writing critical incident reports? (optional)

Procedure

The vignette form was first distributed to the students at their August 1993 clinical conference. The authors asked students to bring their completed forms to the next monthly meeting. The original procedure was to give students a new form at each monthly meeting and ask them to bring their completed vignettes to the next meeting. Consistent with Jo-chums and Pershey's (1993) suggestion, support for writing the vignettes came from the authors who had been relating to these ND students since the program's inception but who were not the students' faculty or clinical supervisors. A mutual rapport of trust and confidentiality had evolved.

Because the monthly vignette-writing procedure was new to both the students and authors, several modifications needed to be made after a 4-month trial period. Some students frequently forgot to write and/or bring their vignettes each month; thus, the authors would either lose data continuity or spend time individually retrieving students' vignettes. Other students provided multiple vignettes and/or exceptional thoroughness in their write-ups. The following student comment illustrates: “I'm tired of writing. I hope the examples I've given are specific enough to illustrate the points of concern I have with working with the (program managers). It's hard to include the exact context, nuances, etc. They (the write-ups) take me a really long time—3+ hours!” The students wrote vignettes that were more copious than the authors intended. The authors sought a more realistic balance between generating sufficient and timely evaluation data and maintaining a reasonable student time investment.

During the January 1994 residency meeting the students agreed to audiotape-record their verbal clinical experience sharing. The authors used the transcription to fill in some missing data and corroborate initial findings. During this meeting, a revised, more focused, somewhat abbreviated vignette-writing guide form was presented to students. Additionally, students were instructed to write their vignettes within a 1-hour time period provided during the monthly residency seminars. An author immediately collected the forms after completion. Although this revised procedure (subsequently used for the February through April meetings) was more manageable and supplied timely data, some students expressed concerns that they could not adequately produce their vignettes in a time-limited situation.

DATA ANALYSIS

Narrative can be both descriptive and explanatory (Sandelowski, 1991). The individual vignettes were aggregated and inductively analyzed for chronology and themes. Across the vignettes, a conception of the formative process emerged from the data. The formative evaluation focused on the ND students' professional development and illuminated the conditions and experiences (both anticipated and unexpected) that affected their professional growth. Analyzing processes and comparing individual cases helped to
explain the “how’s” and “why’s” of variations (Green & Lewis, 1986). In follow-up interviews with three students, an author and respondents clarified and elaborated on the residency experiences’ chronology and themes. These students were selected because their perceptions represented a range of interactive processes that either facilitated or hindered successful progression through the residency. These perceptions extended from “I don’t think there’s ever been another time in my life that things have gone so well” to “My residency was painful.” The summative evaluation focused on data that reflected attaining the program goals.

**Trustworthiness Criteria and Ethical Commitments**

Guba and Lincoln (1989) contend that the possibility of transferring the findings from qualitative studies is always tentative both for the contexts in which the findings were first uncovered and for other situations. However, following four trustworthiness criteria for qualitative evaluation studies (credibility, dependability, confirmability, and transferability) can produce a social context analysis that has both accuracy and applicability (Guba & Lincoln, 1989). Additionally, evaluators who obtain and analyze narrative data of a personal nature must assume the responsibility for special ethical commitments to their participants while maintaining the trustworthiness of the study.

**CREDIBILITY**

Credibility means that the evaluators have adequately represented the realities of the participants and have accurately interpreted those realities so that they appear to the participants, and others familiar with similar realities, as “truth” (Guba & Lincoln, 1989). Persistent observation and prolonged engagement were used to identify and assess salient residency characteristics. Over time the authors built trust with the students and learned the contexts of their residency experiences. Credibility was therefore addressed by the program evaluators developing a relationship of mutual respect with the students over 4 years, including extending the residency study over 9 months, and maintaining contact with most students over the entire course of the study and even after graduation. Students were genuinely motivated to have others understand the new program and the processes leading to the ND role. To strengthen credibility, information from multiple sources (written vignettes, verbal clinical experience sharing, follow-up interviews) were compared and integrated into a whole understanding of the residency experience.

According to Guba and Lincoln (1989), providing participants with a full knowledge of the evaluation purposes not only guarantees their rights but also better elicits “truth” from those who understand what the evaluators wish to know. The evaluators stated that the study’s purpose was to prepare a report on the ND role development during the residency that would include both incidences in which the students felt the essence of being an ND nurse and those in which they experienced barriers to implementing their role. In addition to the standard practices of informed consent, the authors gave the following written statement to each student along with the instructions for writing the vignettes:

"While we will not use names in the evaluation report and the evaluators will be coding the incidents for themes, there are so few ND IV students with particular placements, that identification might be deduced. For this reason, we want to remind you to write about incidents that you are not concerned about sharing."

**Taking time to respectfully discuss interpretations with participants must be an ethical commitment...**

Even though this statement was given to the students, the authors maintained ethical responsibility for determining what personal data would have been too intrusive to have included in a written report open for public scrutiny. Additionally, Guba and Lincoln (1989) remind us that persons who have remained in a particular setting over a period of time “come to know each other’s positions on various issues and concerns rather well. This may be unavoidable, even though the evaluator or inquirer makes every effort to protect identities” (p. 133). Reflecting on their experiences was not a new experience for these students during their residencies because they had been encouraged to be reflective practitioners throughout their entire program. Without compromising the intent of any quotation, the authors and students altered the wording slightly in some quotations to better prevent ready identification by other students in the group.
**DEPENDABILITY AND CONFIRMABILITY**

Dependability means that other evaluators could reach similar conclusions from reading the analysis. Confirmability means the degree to which the findings were determined by the informants and the study context and not by the evaluators’ biases (Guba & Lincoln, 1989). Member checks to address confirmability were achieved by asking selected students to verify the content, interpretations of, and completeness of their residency vignettes. The authors addressed dependability and confirmability by clearly documenting the findings with qualitative data indicators so that others could reach comparable conclusions.

Ethical commitments are involved in discerning and interpreting what is intended in the narrative of any person. Bergum (1991) emphasizes that when study participants read the interpretative aspect of their narratives within a study, they are not anonymous to themselves. When performing member checks, students focused on their own experiences by comparing their comments and experiences with those of the others and by reflecting on the authors’ interpretations. Although participants may agree with an authors’ interpretation, they are often upset when findings show them in “less than positive light.” Because participants retain the right to withdraw themselves, and their data, from a study at any time, the evaluator or researcher may wonder if sharing interpretations will cause participants to delete anything “negative.” One of the authors had previous experience when establishing confirmability with some women participants whose narratives regarding their lives with chronic pain had been interpreted as despairing (Howell, 1991). Taking time to respectfully discuss interpretations with participants must be an ethical commitment when evaluators or researchers obtain and analyze personal data about life experiences. When this technique was used, none of the women in the chronic pain study nor any of the ND students in this study chose to withdraw their narrative interpreted exemplars. Additionally, this paper was presented orally at a national ND conference. The many students who attended were pleased and endorsed the presentation.

**TRANSFERABILITY**

Transferability refers to the extent to which the findings have applicability in other contexts or with other informants. Although a qualitative study can be said to be valid only for the participants, an accurate description of the findings can predict processes and outcomes in similar situations (Guba & Lincoln, 1989). Although this study's transferability is predictably limited to CU's ND professional residency, the authors attempted to describe a wide range and variety of residency experiences and interpretations that may have more far reaching usefulness.

**Findings**

The emergent findings illuminated phases in the residency process of becoming ND nurses. A working hypothesis, grounded in the data, was inductively developed to explain how interactive processes facilitated or hindered successful progression through the residency. Data substantiated the development of advanced nursing clinicians and clinical scholars. The quotations used to illustrate the findings were taken from the students’ written vignettes, verbal clinical experience sharing, and follow-up interviews. Quotations that might have specifically identified a student and made her uncomfortable have been slightly altered (not in substance) and used with her approval.

**THE DEVELOPMENTAL PROCESS**

One unexpected finding that emerged from inductive analysis suggested that the students progressed through their residencies in four developmental phases, beginning in spring 1993, from negotiating entry into the profession by creating residency proposals for innovative ND nursing practice roles through establishing themselves as professional nurses in advanced practice roles by April 1994. Although the four emergent phases were distinguishable, they lacked sharp demarcation because they were part of a dynamic process and evolved somewhat differently because of the individual student's personality and residency context. Examples of indicators for each phase follow.

**Phase 1**

Phase 1, anxiety, was identified by students' anticipation of the new, stressful experiences presented by the residency. The experience began with planning the residency, showing a high need for structure, and predicting possible responses within an unknown future. The following quote illustrates students' initial anxiety:

There's that really scary part right at the beginning—So you start out and you start making some
inching steps forward—but when I was going through my anxiety attacks in spring (planning the residency), it was, “Oh, my God! I’m not sure that I can do this at all. I think that I might have bitten off more than I can chew—the thought of putting this together—me, this lowly little—I wasn’t even a nurse, an RN—this lowly little student saying, “I’m going to do this great project so just let me at it.” It was just really overwhelming.

This phase also included formulating coping strategies. Another student described plans for calling on her spiritual strengths:

“...it’s scary at first, but just part of the process. I came across the following poem, [entitled “Faith”; source unknown] which reminds me of the ND program. It reminded me of the hope and faith I have as an ND: When we walk to the edge of all the light we have, and take that step into the darkness of the unknown, we must believe that one of two things will happen. There will be something solid for us to stand on, or we will be taught how to fly.

**Phase 2**

In Phase 2, disillusionment, the students’ reflections generally showed failing to accept diversity and viewing events in polar terms, such as “we (NDs)—right—good” versus “other—wrong—bad.” An external authority (ND program) was sought for the “right” answer for a problem. As the following three quotations elucidate, a clash with the “real-world” health care system produced discouragement and confusion:

I became discouraged over time as I saw the extraordinary, futile attempts we made to keep infants alive. This means creating suffering. It was obvious to me that the best thing for (this little baby) would be to take her home and love her until she died. But, to my surprise, (the parents) had decided to do “whatever it takes” to keep her alive. How can I as a nurse support them when I am opposed to their decision?

It all seems to come down to the “body physical” in the operating room. Nothing else matters. It seemed so callous to me. Being an ND keeps me so that I don’t become automatically indoctrinated by the health care culture that does see the (body as only a machine).

I’m so disappointed with many of the nurses... We’ve had wonderful nursing role models in the ND program... I have a real love-hate relationship with nursing. I don’t like big corporate bureaucracies... Why can’t they see that I have good intent and abilities to help get them where they want to go? I know I don’t fit, and I won’t go in the box!

In general, disillusionment exemplified students’ recognizing diversity while presuming that their positions were the correct ones.

**Phase 3**

In Phase 3, acceptance of diversity, the students’ reflections generally revealed accepting diversity as legitimate, such as “others have a right to their opinion.” However, diversity was often perceived as temporarily legitimate until the “right” answers were found. The following student's reflection illustrates:

The residency is a continual learning experience where I must try to juggle what I learned in school... versus what's really out there. I wonder if I'm living with my head in the clouds sometimes—trying to work towards something I can't obtain just yet—it's definitely a process of becoming—becoming the nurse I want to be, not what the system wants me to be, is a very delicate balance.

**Phase 4**

In Phase 4, integration, represents the students’ restructuring world views and reordering aspirations and professional life-styles for more consistency with relativistic views. In general, students demonstrated abstract analysis capability (abstract referring to greater cognitive complexity and integration) and more internal locus of control operation. As one student said, “One cannot superimpose a certain way of caring onto clients.” Students exhibited abilities to give supportive care—care that did not mean doing something to a client or making sure clients did the “right” thing. The following student’s reflection provided clarification:

I feel that it is important to form a relationship with the client, regardless of one’s personal feelings. When one gets to know the client, one can better understand that person’s world view. In the future, I will act upon my instincts (professional values) and talk to the client as an advocate, even if I am nervous about how they will respond. When this client’s labor started, she made the decisions that were right for her for pain management. I didn't have to tell her what she should do, but I would educate her and she would tell me what she needed.
Students also developed an appreciation for diversity both within the nursing profession and with other health care disciplines, especially medicine. Many also provided examples of promoting reciprocity in growth for themselves and colleagues. The next two instances illustrate:

(This home health care nurse) has so many good ideas. We discussed how she might go about... doing some research in the community. She told me that I had inspired her to do some of the things that she has been thinking about for years. Nurses must pull together more and try to inspire creativity and excitement about the profession... this nurse and I helped each other grow both professionally and personally.

This incident further confirmed my belief that a physician and a nurse are very complementary, and as colleagues, can offer well-balanced care.

One student's reflection, as exemplar, conveyed that professional nursing commitments and identities were now being confirmed:

In spite of my philosophical beliefs and an unending, sometimes unnerving desire to "do the right thing"—the world goes on in spite of me and the rest of us. Becoming an ND nurse has everything to do with that age-old struggle of learning to live with what is while never losing sight of what ought to be.

The subsequent quotation provides confirmatory evidence that during the course of their residencies, the ND students developed cognitive maturity and professional orientation in creating innovative advanced clinical roles:

It (my residency) has been the most valuable thing I have ever done in my whole life. I know that sounds sentimental, but it has tested me, pushed me to my limit to risk feeling like I was putting my butt right on the line when I first started doing this. And to have it be successful at the end of the year has been incredible! It really changes you from a student to a professional.

Further integration illustrations are provided in the section on outcomes.

**INTERACTIVE PROCESSES**

Students identified interactive processes with mentors as the major facilitators or hindrances in their successful progression through their residencies. One student who described her experiences with mentors during the residency as "ideal" said, "The growth and learning absolutely outweigh the frustrations!"

**Mentoring**

The more positive mentoring experiences included support from (1) academic advisors, representing both the ND Program and the clinical agency, who facilitated growth within the health care system and (2) clinical preceptors who facilitated growth as new nurses. One student explained that she and her preceptor, a clinical nurse specialist, "... were able to establish a common ground and complement each other because we honored the different educations." Another student described the support her mentor provided:

There's that really scary part right at the beginning—a developmental stage you have to go through—but if you have someone there telling you, "You're doing fine. This is where you need to go next. This is who you need to talk to," (it's) not overwhelmingly scary). Whereas, if you go in cold without someone to help you figure that out, it takes a lot longer.

Some students expressed frustrations with other professionals' lack of knowledge about the ND residency, thus feeling that they were expected to begin performing in "some way" before they were ready. However, the next quotation shows another mentor's facilitative backing: "It was reaffirming to experience an utter lack of the ND being any big deal. Sometimes with a new degree you can feel your performance is overshadowed by what you are, not who you are and what you have to contribute. It was nice to just merely be me."

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... a negative mentoring experience was a hindrance.

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Students also recognized the positive contributions (and synergistic effects) of their personal attitudes and enthusiasm to the mentoring experiences. One student commented: "I'm not as afraid of saying who I am and what I do and what's happening because I believe in it (my residency plan) and I have a passion about it. So the more I do it, the more passion I have about it."

On the other hand, a negative mentoring experience was a hindrance. This student's original preceptor left the agency near the residency's beginning. Although several other staff were "assigned" to assist, she perceived a real loss: "I'm really good at taking things on if someone points me in the right direction, but..."
that's what's missing—there isn't anyone really helping me. I feel really alone sometimes.”

Reflecting

Reflecting on their experiences, interactive processes with themselves, frequently assisted students’ formulation of positive, clear perceptions of their growth and experiential learning during their residencies. The following examples illuminate:

I’m sorry this account was not brief. I’ve never written it out before. I’m trying to get beyond it and writing most of it out did help—this has felt very therapeutic.

These reports help me identify progress that I’ve made from one month to the next.

I kept journal entries over the summer to help me make sense of the experiences and to deal with them. There were many ethical dilemmas in the ICU (intensive care unit), and writing about them helped me to sort them out.

THE OUTCOMES

Watson (1988) and Fitzpatrick (1988) emphasized that new roles and changes in the health care system call for ND graduates who can function as advanced nurse clinicians, while maintaining an appropriately balanced “high tech–high touch” practice, and as clinical scholars. The next quotations show students’ abilities to integrate traditional and nontraditional modalities:

It’s a challenge for me working in critical care to not get caught up in the technology and to form a balanced focus on the psychosocial aspects of care.

At this visit she told me she felt like (the mass) was getting larger. So we suggested another MRI (magnetic resonance imaging) to rule out progression. I got a call back that she was unable to go through the MRI due to claustrophobia and increased anxiety. We tried again with 10 mg of valium, which didn’t work. I suggested that she get a massage immediately prior to the MR[ and during, that she have her husband with her, and that we increase her meds to help her relax. We also spent 20 to 30 minutes discussing her fears . . . I felt I was able to blend both paradigms, traditional and nontraditional, and give this client the best care possible.

Students were also being recognized in their new clinical roles: “I’m viewed (by staff) as an advanced practice nurse.”

New roles as clinical scholars were frequently illuminated by vignettes and reflections on teaching, consultation, and research experiences. The following are examples:

I have been teaching undergraduate nursing students. I learned two lessons (among many) from this experience. The first was that in the hospital you are first and foremost a nurse . . . (with) a responsibility to insure that care of the sick is optimum and safe. Sometimes this requires making decisions, tough decisions, you would never envision yourself making. Secondly, I learned that when you enter a role as a teacher, it is being you in everything you do—remaining true to your beliefs of advocacy, being vulnerable to sadness and inequities, and trying to make a difference.

(At a community meeting) I was able to provide highly pertinent information . . . delivered clearly and substantiated with a research background. I was viewed as an expert and fielded a number of questions from the community group.

In addition to the findings cited in phase 4, integration, in the developmental process previously described, further discoveries confirmed the students’ growth toward and summative attainment of the ND professional residency outcome behaviors, including holistic clinical proficiency and client empowerment. ND nurses are continuous care providers, following up on individuals and groups of patients in and out of homes, clinics, institutions, and alternative care settings (Watson, 1988). The next two holistic, complex care exemplars occurred during home visits:

Lily defies my rigid definition of a frail, older adult. She basically refuses. She has a catalogue of clinical diagnoses. Acronyms for every system, CHF, COPD, NIDDM, as well as a few thrown in for good measure—gout and mild myasthenia gravis. But, though her body is fragile, her spirit is strong and is the glue that keeps her body functioning.

I visited a 70-something year old man who lives (barely) with COPD, CHF, terrible peripheral vascular disease, type I DM, (obesity), edema . . . Lives with alcoholic wife. This gentleman is GRUMPY—Meds were all messed up—he had no idea what he was taking, or when it should be taken—Was very confused regarding using the glucometer: “Sometimes I just take all the day’s insulin around noon in one shot.”—Had no idea that checking his weight or feet or legs for edema might be a good idea. Basically, I just gave this grumpy old guy some information (which = control) and acknowledged his feelings of being emotionally sick and tired of getting poked and prodded at. Well, by the time I left, he said, “I hope you can come back . . .”
Advanced physical assessment skills were demonstrated in a clinic setting: “I was at the office, practicing as a nurse clinician, and a lady called because she had a fever and was not feeling well... So she came in to see me, and within 5 to 10 minutes I diagnosed a pleural effusion and decided to admit her.” In the following example, another student designed nursing interventions appropriate for culturally diverse people in a hospital environment:

Carter (1988) added that ND nurses “must also be exceedingly knowledgeable about other health professions” (p. 49). As one student explained: “I feel this (vignette) illustrates the heightened level of awareness that NDS have by way of their education and experiences. I listened and made the appropriate referrals, talked with the other providers I needed to.”

The ND students’ numerous residency vignettes substantiated the creation of advanced clinicians and clinical scholars. Outcomes reflected evidence that these graduates have the competencies, flexibility, and professional integrity needed to provide innovative, futuristic nursing care.

Additional Evidence

The This I Believe Test (TIB) (Harvey, 1974) is a sentence completion instrument that measures four principal conceptual systems moving from concreteness to abstractness. As part of the larger CU ND Program evaluation, the authors administered the TIB to the ND students at program entry, early fall 1990, and again near completion of the residency in January 1994. TIB tests were scored by two independent trained raters, and a system score is not valid without agreement. The ND students’ test booklets were randomly mixed with those of baccalaureate and masters students to avoid scorer bias.

At program entry, 7 of 10 (70 percent) students scored as operating more from concrete, simplistic belief structures (systems 1 to 2). However, nearing completion of the residency, 8 of 10 (80 percent) students scored as performing more from abstract, complex belief structures (systems 3 to 4). Interestingly, these results support the inductively obtained findings that ND students were exemplifying more abstract thinking by the end of the their program.

Discussion and Interpretation

Cognitive Development Theories

Cognitive development, defined as “a process of successive qualitative changes in a person’s thinking and reasoning (world view), is a more than legitimate concern for nurse educators” (Valiga, 1983, p. 116). Cognitive development in adults generally represents a progression from more concrete, simplistic belief structures to more abstract, complex belief structures. Concreteness–abstractness refers to a common, and presumably more or less standardized, way individuals articulate and organize relevant aspects in their environments (Harvey, 1966; Harvey, Hunt, & Schroder, 1961).

Although a thorough discussion of adult cognitive development theories is far beyond the scope of this article, the authors provide an overview of three theories relevant to this study: Harvey, Hunt, and Schroder’s (1961) theory of four conceptual systems moving from concrete to abstract; Perry’s (1970) nine-stage theory of intellectual and ethical development; and King and Kitchener’s (1981, 1994) seven-stage model of reflective judgment. The following section includes brief explanations of the theories, their utilization in nursing education studies, and anticipated effects of abstract orientation on professional development.

Conceptual Systems Theory

Coates and Leong (1988) summarized the descriptive and validity information for conceptual systems theory. The theory, first delineated in Harvey, Hunt, and Schroder (1961), has since been tested in hundreds of studies. Conceptual systems are characterized as organized around four themes of central belief content but also are characterized as being ordered (systems 1 through 4) from more concrete, simplistic belief structures to more abstract, complex belief structures. According to Ware and Harvey (1967, p. 39),

... if left free to seek as much information as they wish before forming an impression of another person at some criterion level of generalization and certainty, more concrete individuals will seek less information than the more abstract person.

In brief, system 1 individuals are characterized as exhibiting more black-and-white thinking, a need for
cognitive consistency, and a lesser ability to generate alternatives under stress. System 1 individuals show prosociety and proauthority points of view. System 2 individuals are also characterized as exhibiting black-and-white thinking and a need for cognitive consistency, but the thematic content of their beliefs is more anti-authority and cynical. System 3 and 4 individuals demonstrate more differentiated beliefs and the ability to generate alternatives under stress. The thematic content of system 3 individuals favors a stance of being very pro-people and placing a high priority on interpersonal relationships, whereas system 4 individuals present more themes of independence and flexibility.

Watson (1978, 1981) used the Conceptual Systems Test (CST), an objective measure of conceptual systems developed by O. J. Harvey, in two studies to compare characteristics of concreteness-abstractness among CU baccalaureate nursing students, college students at large, and practicing nurses. In the first study (Watson, 1978), the findings showed that nursing students' (N = 130) scores were significantly higher in abstractness than practicing nurses' (N = 43) scores, whereas nursing students' scores and other college students' (N = 110) scores were not significantly different.

In Watson's (1981) second study, a longitudinal sample of the same CU baccalaureate students (n = 68), the investigator found no significant difference in the students' level of abstractness—concreteness from the beginning to the end of the nursing program, however, baccalaureate students scored higher in abstractness than practicing nurses' (N = 84). Subjects with abstract scores on the CST were higher (on another instrument) on professional characteristics, such as autonomy, advocacy of patient rights, and rejection of traditional role limits. Some additional evidence suggested that the nursing profession might be losing some of its more abstractly oriented nurses; more concretely oriented nurses said they would tend to enter the profession again, whereas more abstractly oriented nurses indicated they would not.

Intellectual and Ethical Development Theory

The nine positions (stages) identified in Perry's (1970) intellectual and ethical development theory exemplify a progressive continuum of increasing cognitive skills or the way people reason about issues, consider diverse points of view, and assume responsibility for their own beliefs and actions. Perry has been credited as the first to observe that underlying knowledge and learning assumptions make a difference in college students' reasoning (King & Kitchener, 1994).

Briefly, four sequential developmental categories encompass Perry's (1970) nine positions: (1) dualism (positions 1 and 2), (2) multiplicity (positions 3 and 4), (3) relativism (positions 5 and 6), and (4) commitment in relativism (positions 7 through 9). Dualism is the use of discrete (good-bad, right-wrong), absolute, and authority-based categories to understand people, knowledge, and values; legitimate knowledge conflicts are not perceived. Multiplicity reflects a beginning acknowledgment that complex questions have multiple answers. In relativism, Perry hypothesized that individuals recognized knowledge as contextual; however, they assumed responsibility for "right" or "wrong" contextual decisions. Commitment in relativism occurs when individuals, who are operating in a relativistic frame of reference, make decisions about major issues, such as career or marriage, through internal affirmation. In Frisch's (1987) elaboration of commitment in relativism, she asserts that at this level "the individual understands that diversity exists, that there will be several points of view from which to analyze an event and that an adult must make considered choices with full recognition that a commitment has both positive and negative consequences" (p. 26).

A sample of 123 baccalaureate students from three schools participated in Valiga's (1983) study of cognitive development during nursing education. Cognitive development scores were obtained with an essay instrument to measure Perry's (1970) theoretical stages. Although the findings indicated that students generally increased somewhat in cognitive development as they progressed through their programs (freshman through senior years), on graduation baccalaureate students' mean scores reflected Perry's category of dualism. No scores reached the commitment in relativism category. Frisch's (1987) study of 42 junior baccalaureate students yielded similar outcome results, with no changes produced after an academic semester designed to impact cognitive development.
Reflective Judgment Model

King and Kitchener's (1981, 1994) Reflective Judgment Model (RJM) of postadolescent cognitive development was derived from the Dewey-Piaget school and based largely on previous work by Perry (1970), Harvey (1966) and Harvey, Hunt, and Schroder's (1961) work, and that of others, was used to elaborate the higher stages. The RJM specifies a framework of knowledge concepts and justification processes through which individuals perceive and attempt to solve ill-structured problems. The seven sequential RJM stages are grouped and labeled as (1) prereflective thinking (stages 1 through 3), (2) quasireflective thinking (stages 4 and 5), and (3) reflective thinking (stages 6 and 7).

With prereflective thinking, an individual's reasoning assumptions do not recognize that knowledge is uncertain, do not understand that problems may not have absolutely correct answers, and do not use evidence to reason towards problem solutions (similar to Perry's dualism). Individuals using quasireflective thinking recognize that some issues are truly uncertain and problematic, but they have difficulty using evidence to draw reasoned conclusions or justify their beliefs. With reflective thinking, individuals assume that knowledge must be constructed and understood in the context in which it was generated, judgments are grounded in relevant data, and conclusions remain open to re-evaluation.

King and Kitchener (1994) assert that the RJM provides conceptualizations of cognitive development at higher levels than Perry's (1970) theory. These authors indicate that decisions made in Perry's commitment in relativism are "acts of personal commitment" and "do not reflect cognitive development or change in underlying epistemology beyond relativism" (King & Kitchener, p. 37).

Sakalys (1984) employed the Reflective Judgment Interview (RJI), a measure of cognitive development or reflective judgment levels, to compare the effects of a research methods course on undergraduate nursing students. Half of the 50 participants were enrolled in the course, and half served as controls. RJI scores obtained before and after the course showed no statistically significant pre-post differences in reflective judgment level. Overall, participants' RJI scores indicated that they were functioning in Kitchener and King's stage 3 (prereflective thinking, similar to Perry's dualism). Sakalys (1984) concluded that senior baccalaureate nursing students do not possess reasoning processes compatible with research productivity (stages 5 through 7).

Anticipated Effects of Abstract Orientation

According to Valiga (1983), Perry's (1970) theory implies that nursing students operating in the category of commitment in relativism would possess the following professional abilities: (1) function independently, (2) take responsibility for making decisions in complex/ambiguous/uncertain situations, (3) establish an identity as a nurse with a lifelong commitment to learning, (4) not act in subordinate roles to other health team members, (5) appreciate and accept diversity of opinion, and (6) display true empathy. Similar implications have been made for individuals with more abstract conceptual systems (Miller & Harvey, 1973) and for those using reflective judgment (King & Kitchener, 1994). In Watson's (1981) review of the research and literature regarding bureaucratic organizations, evidence supports that more abstract professionals tend to encounter difficulties when employed by more concrete organizations. On the other hand, she adds that more abstract nurses also have more potential for integrating these two conflicting systems.

Equipping professional nursing graduates with an orientation to live effectively and productively in the world of tomorrow requires a focus on preparation for the "unexpected" and "training for uncertainty" (Valiga, 1983; Watson, 1981). "The intensity of care in these (future) settings (community-based acute care) will demand that practitioners be extremely competent, flexible, and capable of independent judgment" (Starck, Duffy, & Vogler, 1993, p. 212). As documented in the literature and in students' residency vignettes, clinical ethical issues, such as death, quality of life, and patients' expectations, will become more complicated as will the research methodologies needed for investigating problems from both a nursing and interdisciplinary approach. Harvey, Hunt, and Schroder (1961) demonstrated in hundreds of subsequent studies (Coates & Leong, 1988) that individuals whose conceptual systems may be characterized as abstract are far more likely to possess such skills than persons whose conceptual systems are concrete. Watson (1988, p. 46) envisioned the principle outcome of CU ND Program as "the development of a cadre of health professional nurses for the 21st century who are prepared to deal creatively, coherently, and humanely with the ethical, technical, and scientific issues and values that are emerging as critical elements in nursing and health care practices." Watson's (1988) vision
could be exemplified in the words of Black Elk, a Native American, “Sometimes dreams are wiser than waking” (cited in Boulet, 1989, p. 21).

THE RESIDENCY PHASES

The progressive developmental phases of the CU ND residency, derived from students’ vignettes, closely followed phases identified in the cognitive epistemological development theories of Perry (1970) and King and Kitchener (1981, 1994) described above. Because Harvey, Hunt, and Schroder’s (1961) theory of four conceptual systems moving from concrete to abstract depicts personality styles, data were not generated to support personality changes during the entire 4-year residency. (Previously presented TIB scores support changes in perceptual style during the ND program.) However, Harvey (1974) has speculated that movement to a higher conceptual level (evidenced in progression through the residency experience) involves a dialectic of comfort with structure and an experience that may force individuals to reconceptualize their world and thus throw them into a state of cynicism and denial. Resolution of the dialectic represents movement into a more complex cognitive system that provides integration.

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The students’ anxiety experienced during residency anticipation (anxiety: phase 1) may have arisen from their recognition of the impending experience that would force changes in their world views and conceptualizations of themselves as professional nurses. Overall, students may have been functioning at higher conceptual levels in personality styles and recognized the inevitability of future problems. The congruence of residency phases 2 through 4 with cognitive development theories is depicted in Table 1.

FACILITATING STUDENTS’ GROWTH

Writing Vignettes to Initiate the Reflective Process

Consistent with findings of Howell (1991) and Jochums and Pershey (1993), students said that the vignettes helped them recognize changes within themselves. In addition to being a data source, Howell was aware that journal-keeping by the participants in her study was considered therapeutic by many women. The reflective process in which one engages while journaling “plays an active role in reconstructing a life, but it does so without imposing external categories or interpretations or theories on the individual’s experience” (Progoff, 1975, p. 9). Scheduling of the first writing for evaluation purposes may have underrepresented the residency’s early events and processes and should be initiated earlier in the planning phase of the residency. The reflective written narrative method is useful not only for generating evaluation data but also facilitates students’ cognitive growth within themselves and could be used to enhance student–mentor interactions.

Enhancing the Mentoring Processes

Frisch (1987), King and Kitchener (1994), Sakalys (1984, 1985), and other educators have emphasized that students can be expected to cognitively mature if they are challenged to actively interact with divergent ideas and experiences and are supported emotionally. Mentors are called to support ND students through their major developmental task during the residency—understanding the complexities of the nurse’s world. According the Carter (1988), the “body of knowledge and ways of thinking required for professional practice are more complex in nursing than in any other health profession” (p. 50). Sakalys (1985) recommended including supportive strategies, such as individual
counseling and giving specific, consistent feedback regarding student progress.

Conclusions

This exploratory evaluation study documents evidence that the CU ND professional residency provided necessary experiences conducive to the development of nurses who are advanced clinicians and clinical scholars. Students, faculty, and mentors must understand and support the ND nurse’s need to be differentiated and individuated before he or she can become interconnected with and integral to the health care system. Building professional relationships (particularly with other nurses) frequently proceeds from animosity or defensiveness to advocacy and reciprocity. Students in this first CU ND residency developed balance in aspects of care—from purely psychosocial (initially viewed as superior) to integrating the essential physical and technical components. With support, they gained respect as ND nurses, knew their patients in highly sophisticated ways, and found their professional “fit” while developing comfort in being themselves. The educational literature reviewed and findings from this study support that the essential developmental experiences and processes that produced fully professional nurses during this ND program could not have occurred within the confines of baccalaureate education.

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References


