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Re-envisioning Nurse Faculty Mentoring: Developmental Network Connections that Count

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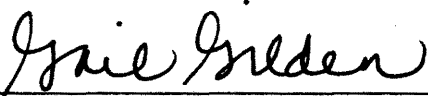
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A dissertation submitted to the faculty of the Medical University of South Carolina in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Graduate Studies

College of Nursing

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ACKNOWLEDGMENTS AND DEDICATION

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Abstract

Fears surrounding the nurse faculty shortage in the United States have prompted significant emphasis on supporting novice educators and those in transition to new roles within academia through mentoring. Yet a continued focus on traditionally held notions of a hierarchical dyad limits possibilities for facilitating rich, diverse, mentoring relationships. A novel theoretical framework incorporating social network perspective is used to conceptualize the dynamic, multilevel reality of mentoring in examination of nurse faculty mentoring. This dissertation presents the results of an integrative review and qualitative study that explore evidence and experiences of nurse faculty mentoring using the unique developmental network lens, as well as a methodological consideration of technology employed in the study for remote videoconference interviews. The primary purpose of the first manuscript is to establish the foundation of evidence for nurse faculty mentoring, evaluating the research literature, and framing results with broad concepts from developmental network theory. Results of the integrative review confirm the essential nature of mentoring, but also the predominant view of dyadic mentoring as the ideal and the significant lack of evidence for structuring mentoring support through faculty orientation and development. Significant barriers to mentoring included a lack of mentor time and protégé insecurity in seeking a mentor, while important facilitators were identified as an organizational culture of support and a formal structure with defined goals. The second manuscript reports on a qualitative study describing the experiences of mentoring by a diverse group of nurse faculty. Developmental network theory again provides a framework for designing interview questions, and presentation of findings. Results of the analysis indicated general dissatisfaction with formally matched mentors, but revealed common themes that corroborate the critical need for mentoring support of nurse faculty. The third manuscript represents an innovative

methodological examination of the voice over internet protocol (VoIP) videoconference technology utilized to conduct remote interviews using participant comments and current literature, and provides a comprehensive list of design, implementation and dissemination considerations for qualitative researchers interested in using the technology. VoIP videoconference can be a valuable tool in accessing remote participants, preserving the intimate connection and qualities of a face-to-face interview, but it requires careful regard for possible limitations imposed by access issues.

Introduction

Nurse Faculty: Valuable and Vulnerable

The National League for Nursing (NLN) and the American Association of Colleges of Nursing (AACN) both hail a dramatic nursing faculty shortage, with vacancies of 1181 positions (AACN, 2012) and a national vacancy rate of 7.6 % in baccalaureate or higher degree programs in the United States (NLN, 2010). The faculty vacancy rate represents a 32% increase since 2002 (NLN, 2010) and results in US nursing schools turning away thousands of qualified applicants for entry level, master's, and doctoral programs, threatening the continued supply of well-educated nurses at the bedside.

Several factors may contribute to the nursing faculty shortage, but the aging nature of nurses in academic roles and lack of competitive salaries are key issues. The average age of doctorally prepared faculty holding the rank of assistant professor or above is 51.5-60.5 years and 50.9-57.7 years for master's degree-prepared faculty. Forty-eight percent of all faculty are age 55 or over with an expected 50% set to retire sometime in the next 10 years (NLN, 2010). Nursing schools cite lack of available and competitive funds to hire faculty, and nurses with advanced degrees have opportunities to earn higher compensation in clinical or private sector employment.

Additionally, there is growing evidence for the many ways nurse academics are at risk and vulnerable. Increasing workloads and the necessity of performing multiple roles within academia create stress. Nursing faculty may be vulnerable due to susceptibility from sources including student incivility, horizontal violence from colleagues, and lack of support from administrators (DalPezzo & Jett, 2010). Glass (2003a & b; 2001a & b) has also built a foundation of evidence for a 'dis-ease' in nursing academia and workplace violence. Difficulty

transitioning to the academic role with a need for information, skill development, and knowledge across the scholarly domains of academic life is well documented (Dunham-Taylor, Lynn, Moore, McDaniel & Walker, 2008). These vulnerabilities combined with aging demographics of nurse faculty threaten this valuable group of scholars, and healthcare education infrastructure.

There is an imperative to support nurse faculty as the critical link for educating the next generation of nurses and continued quality patient care at the bedside. With few options to increase compensation in attracting nurse faculty, mentoring is receiving increased attention as an acclaimed strategy addressing recruitment and retention issues prompted by the acute faculty shortage. Additionally, mentoring support for nurse faculty transitioning to or adding a more scholarly role with academe involving research or publication, or to an administrative or leadership role is considered essential to productivity and career development. Lack of support creates isolation and frustration not only affecting the individual, but also institutional morale and productivity, creating a cycle of dissatisfaction. Discontent with an academic career at the master's level can inhibit personal desire to pursue doctoral study, again perpetuating the shortage.

In recognition of the need to address these issues for faculty, formalized mentoring in orientation and development programs are directed towards recruitment, retention, and support of role transition and professional growth (Danna, Schabaut & Jones, 2010; Cash, Daines, Doyle & von Tettenborn, 2009; NLN, 2006; Schriner, 2007; Shirey, 2006; Siler & Kleiner, 2001). Morin and Ashton (2004) describe formal FODPs featuring an essential mentoring component as designed to meet the needs of nurse faculty. Byrne and Keefe (2002) advocate using mentoring models in FODPs as appropriate for resources, priorities, objectives and setting. Mentoring has been repeatedly been described and declared in the nursing literature as a primary strategy to

enhance career development, self efficacy, job satisfaction, retention, and scholarship in the academic role in addressing the nursing faculty shortage (NLN, 2006).

What is Mentoring?

The word *mentor* originates in Greek mythology, *Homer's Odyssey*, as Odysseus entrusted his son, Telemachus, to a trusted advisor, Mentor, for guidance and tutoring while he was away. Definitions of mentoring are varied, but typically include the theme of an expert providing advice, counsel, and support to one who is new or less developed in a field. It has long been established as useful in the teacher student relationship, and more recently established in higher education and business organizational culture. In a 1996 evolutionary concept analysis of mentoring in nursing based on a sample of 82 published articles and abstracts, Stewart and Kruger identified 6 essential components of mentoring: a) a teaching-learning process, b) carried out for several years, c) within a reciprocal, d) career-development–focused relationship, e) characterized by a knowledge or competence differential between participants, f) that results in the one mentored being likely to mentor others. This report addressed all types of mentoring in nursing including teacher/student, but foundationally, it is a supportive relationship that should empower the protégé for career development.

Developmental Network Theory

Although mentoring is historically understood, Kram (1985) offered the first theoretical framework regarding developmental relationships for professional growth at work. Kram (1985) identified career development functions facilitated by the mentor as those to help the protégé learn and advance, and psychosocial functions that serve to enhance self-confidence and self-efficacy. Ragins and McFarlin (1990) later added a social function to the psychosocial aspects of mentoring accounting for other influences on the relationship, such as gender. Mentoring

relationships are evolutionary with phases including: initiation, cultivation, separation, and redefinition (Kram, 1985).

Higgins and Kram (2001) applied a social network perspective to Kram's (1985) original Mentor Role Theory due to increasing recognition that an individual's developmental relationships create both opportunities and constraints. An egocentric (protégé as the focal individual) developmental network emerged as a subset of the protégé's social ties (Higgins & Kram, 2001). Developers, or mentors, in the network, from a range of social spheres, provide varying amounts and types of mentoring support, and are instrumental for career development and personal learning (Higgins & Kram, 2001; Dobrow, Chandler, Murphy & Kram, 2011). The network represents a constellation of people who take interest and action in advancing a protégé's career (Higgin & Kram, 2001). A developmental network can be viewed in terms of factors that influence it including antecedents or contexts of the relationships, mediating processes, resulting structure, and developmental outcomes. A typology of four networks (traditional, opportunistic, receptive and entrepreneurial) and associated outcomes resulting from combinations of strengths and diversities are proposed by Higgins & Kram (2001).

Mentoring relationship initiation in the developmental network is of current theoretical interest. Higgins, Chandler & Kram (2007) define developmental initiation as a set of help, feedback or information seeking behaviors on the part of the protégé to enhance their skills, knowledge, task performance or personal learning. High or low levels of initiation refer to the frequency of enacting the seeking behaviors. Personal factors, such as self-awareness of need, and organizational factors such as size, influence seeking behaviors of the protégé. Relationship initiation is also influenced by mentor perceptions of help-seeking behaviors.

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While there have been multiple attempts over the last two decades to distinguish specific mentor roles such as coach, sponsor, and advisor, the developmental network approach is not role-limited as it exists from the protégé's perspective of those providing developmental assistance. The protégé determines the supportive role each mentor plays in the constructed network. The value of a developmental network lens for viewing MRs includes the ability to quantitatively explore network structure and dimension with testable propositions. Organizational boundaries are also removed in acknowledgment of relationships that are varied in duration, and geographically and institutionally diverse.

This unique theory is applied in exploration of nurse faculty mentoring through a series of papers; an integrative review to establish current evidence for mentoring of nurse faculty, and a report of an initial qualitative study investigating mentoring relationships of nurse faculty. A methodological reflection on use of remote videoconference technology for interviews in the reported study with participant feedback is included.

The Compendium

The articles included in this compendium represent an arc of systematic exploration of what is known or assumed about nurse faculty mentoring, a rich description of mentoring experiences, and methodological considerations. Specifically, the compendium contains three articles: 1) an integrative review of the research literature on nurse faculty mentoring, 2) the report of a qualitative descriptive study on nurse faculty mentoring, and 3) a methodological article examining use of voice over internet protocol (VoIP) videoconference for remote interviews in the reported study. Mentoring in the integrative review and study is framed using the Developmental Network Theory (Kram & Higgins, 2001) for a dynamic new perspective not yet applied to nurse faculty or in the academic nursing literature.

An integrative review of the research literature to examine evidence regarding nurse faculty mentoring provides a foundation for what is known and how it can inform orientation and development programs. Systematic review of the literature can also illuminate gaps in knowledge and assumptions about mentoring that influence how it is understood, structured and facilitated, as well as providing direction for inquiry. The Developmental Network Theory offers broad factors for considering mentoring relationships that may better represent the reality of multiple and evolving mentor connections. A literature matrix constructed with reviewed study findings and organized using major factors from the Developmental Network Theory is presented. Continuing to use the novel theoretical perspective or developmental networks, an initial qualitative study that describes nurse faculty mentoring relationships from the perspective of the protégé was completed. Interview questions and probes were created using developmental network concepts and findings are presented accordingly. The study provides new information on formally matched faculty mentoring relationships and fresh insight into relationship initiation. Finally, an examination of the remote interview techniques used to connect with diverse participants in the study is included. Methodological inquiry of technology-assisted interviews is incumbent upon those who use it to advance and enhance the science of qualitative research.

MANUSCRIPT I: MENTORING OF NURSE FACULTY: AN INTEGRATIVE REVIEW TO INFORM DEVELOPMENT STRATEGIES

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Abstract

Mentoring, as a frequently noted component of nurse faculty orientation and development programs, varies significantly in implementation. Kram's developmental network theory provides an approach to understanding mentoring relationships at work (2001), and is applied here to explore the themes in the empirical nurse faculty mentoring literature. A search of the CINHAL, PubMed, ERIC, and Ovid MEDLINE databases yielded 15 empirical papers. Results indicate the essential nature of structured faculty mentoring at key role transition stages across three academic realms: teaching, research/scholarship, and leadership/administration. Further research is needed regarding specific needs, behaviors, and outcomes of mentoring for implementation in development programs.

Keywords: mentoring, nursing faculty, faculty development

Mentoring of Nurse Faculty: An Integrative Review to Inform Development Strategies

Academic scholars consider formalized nurse faculty orientation and development programs to be critical in facilitating the role transition from clinical practice into academia and promoting productivity in scholarship throughout an academic nursing career (Hand, 2008). Mentoring is frequently cited as a key means of providing role modeling, guidance, and leadership for assistance in meeting expectations of the academic setting. Although mentoring is widely accepted as an effective strategy for recruiting and retaining nursing faculty, there is a need for systematic review of the empirical literature on mentoring of nurse faculty. The purpose of this analysis is to critically examine studies of nurse faculty mentoring, guided by Kram's (Higgins & Kram, 2001) "developmental network" theoretical conceptualization of mentoring, to identify assumptions, knowledge gaps, and implications for programs and research.

Background and Significance

Novice nurse faculty frequently report difficulty transitioning to an academic role, and a great need for information, skill development, and knowledge across the scholarly domains of academic life (Dunham-Taylor, Lynn, Moore, McDaniel & Walker, 2008). Recognition of the critical need for support of nurse faculty at every career stage has led to purposeful, formalized, structured mentoring as a part of orientation and development programs to support recruitment, retention, role transition, and professional growth (Byrne & Keefe, 2002; Danna, Schabaut & Jones, 2010; Cash, Daines, Doyle & von Tettenborn, 2009; NLN, 2006; Morin & Ashton, 2004; Schriner, 2007; Shirey, 2006; Siler & Kleiner, 2001). Mentoring has been repeatedly described in the nursing literature as the primary strategy in development programs to enhance career development, self-efficacy, job satisfaction, and scholarship in the academic role in addressing the nursing faculty shortage (AACN, 2009; NLN, 2006; 2010).

Although the literature provides clear support of mentoring as a primary means of fostering relationships and positive career development, empirical evidence for the most effective mentoring structure has yet to be established (Berk, Berg, Mortimer, Walton, Moss & Yeo, 2005). Variations in conceptualizing mentoring goals, expectations, actualization, or evaluation create confusion over the structure for implementation in faculty development programs. Understanding contexts that contribute to effective mentoring is essential for successful design and implementation. A new theoretical perspective provides a framework to view and evaluate current mentoring evidence.

Theoretical Framework

Traditionally, mentoring is depicted as a dyadic, hierarchical relationship between the expert mentor and novice protégé. Kram's (1985) original Mentor Role Theory identifies career development functions facilitated by the mentor to help the protégé learn and advance, and psychosocial functions that enhance protégé self-confidence and self-efficacy (See Table 1-1.). More recently, Higgins and Kram (2001) expanded the concept of mentoring, applying a social network perspective that proposes a developmental network of mentors with multiple relationships for professional growth.

Table 1-1. *Mentor role functions*

Career Development Functions	Psychosocial Functions
• Sponsoring promotions and lateral moves (sponsor) • Coaching the protégé (coach) • Protecting the protégé from adverse forces (protector) • Providing challenging assignments (challenger) • Increasing protégé exposure and visibility (advocate)	• Helping the protégé develop a sense of professional self (acceptance and confirmation) • Providing problem solving and a sounding board for the protégé (counselor) • Giving respect and support (friendship) • Providing identification and role modeling (role model)

(Adapted from Kram, 1985)

Rather than labeling of mentor roles or types of support provided, multiple relationships in the developmental network are described in terms of strength and diversity. Relationship

strength is determined by the degree of closeness and/or the frequency of communication between the protégé and mentor. Strength of the bond between protégé and mentor determines the motivation for helping, mutuality, reciprocity, interdependence, and career enhancement. Diversity of the network is reflected in the range of social arenas where the relationships occur, and density, the degree to which individuals in the network know one another (Higgins & Kram, 2001). Greater diversity is hypothesized to be associated with greater career development as there is less repetitive information from mentors. With a developmental network perspective, initiation of relationships in the network becomes significant. Higgins, Chandler & Kram (2007) describe developmental seeking as a set of help, feedback, or information seeking behaviors used by protégés to enhance skills, knowledge, task performance or personal learning. Personal and organizational factors moderate protégé seeking behaviors, mentor perceptions of help seeking, and the composition of the network itself.

A developmental network can be examined further in terms of the factors that shape it: 1) relationship antecedents that provide broad context for initiation, 2) mediating processes for interaction in the network, 3) resulting network structure, and 4) developmental consequences or outcomes. Context is created by the antecedent organizational and individual influences shaping relationship initiation drivers and interactions that affect network structure. Network structure is described in terms of diversity and strength. Mediating processes in the network can be viewed as barriers and facilitators of relationships and interaction in the network, and clearly link to context with individual and organizational influences. Outcomes are the result of network structure and may include work satisfaction and productivity, perception of organizational acceptance and engagement, and meaningful supportive, social connections (Higgins & Kram, 2001). The developmental network perspective provides a framework to organize and evaluate

findings from the reviewed literature regarding mentoring antecedents or context, relationship structure, mediating processes, and developmental outcomes, allowing for examination of current empirical knowledge about each component.

Methods

The integrative review methodology of Whittemore and Knafl (2005) guided exploration and analysis of the published empirical literature on mentoring of nurse faculty relationships. A computer-assisted search of the Cumulative Index of Nursing and Allied Health Literature (CINAHL) (1966 - October 2012) and Ovid/MEDLINE (1944 -October 2012) databases, using combinations of key words *nurse, faculty mentoring, faculty development, and research,* was conducted. Related terms for mentoring including *mentorship and mentor* were also used in the search. No publication date limitations were placed. Initially, 360 articles were identified. Titles and abstracts were reviewed for relevance. Criteria for inclusion in the review included empirical research with a clear focus on mentoring of nurse faculty. Reports were excluded if mentoring was discussed in relation to faculty-student, or graduate-staff nurse relationships. Unpublished manuscripts such as abstracts or dissertations, books and book chapters, and non-English reports were also excluded. Reference lists of retrieved reports were hand searched for relevant articles.

Fifteen articles were included in the final review (See Appendix.). The final sample included 5 qualitative, 7 quantitative, and 3 mixed methods studies. These studies addressed mentoring of nurse faculty across three primary academic roles; teaching, research/scholarship, and administrative/leadership. Although the skills for each role may differ, the fundamental aspects of mentoring are similar (See Figure 1-1.).

Figure 1-1. *Mentoring Across Academic Realms*

Teaching

Classroom/clinical
teaching and
evaluation skills

Scholarship
Research,
grantsmanship skills

Presentation and
publication skills

Administration

Leadership and
management skills

**Common
Mentoring
Elements**

Role specific
responsibilities and
skills

Interpersonal and
professional growth

Guidance
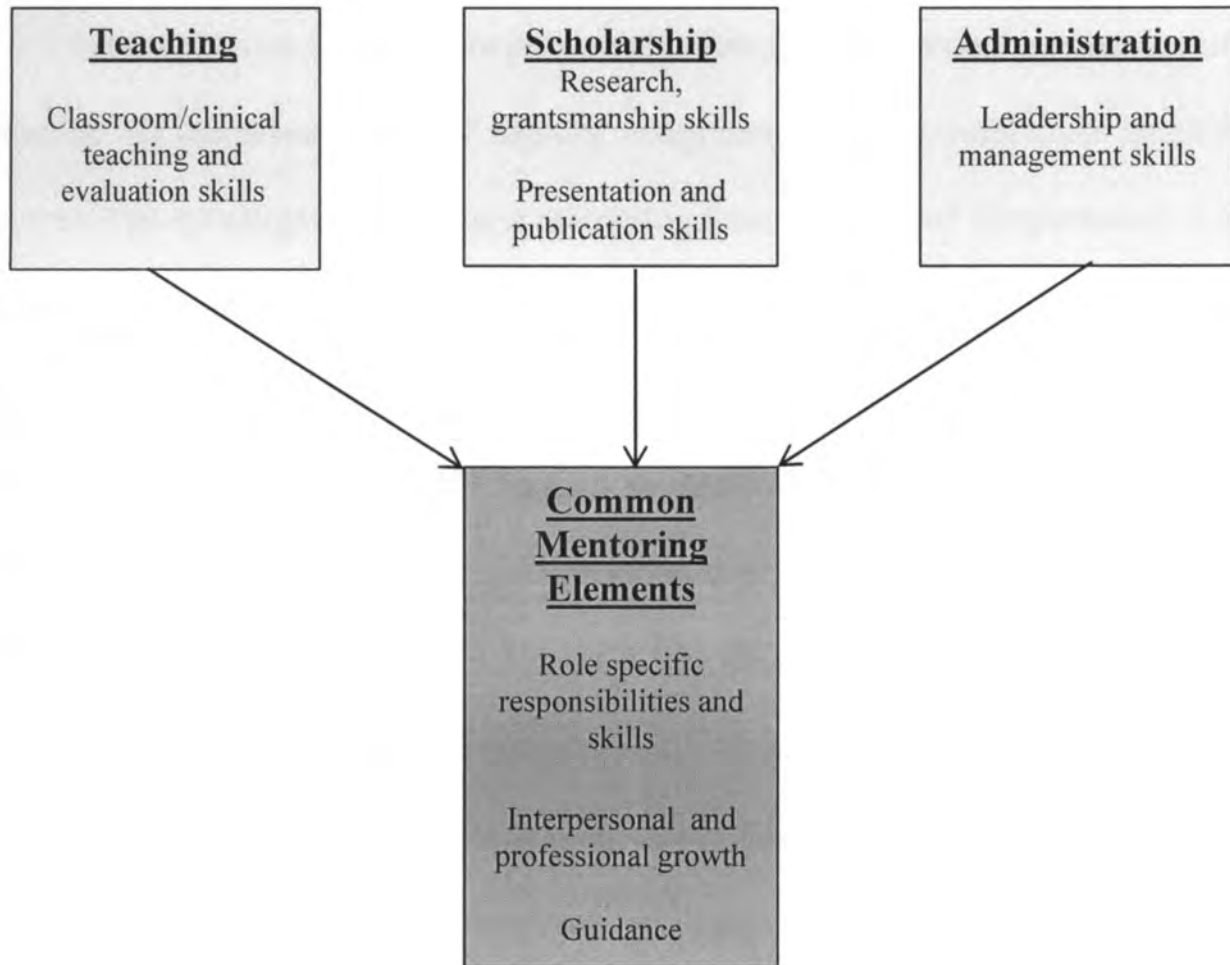
Findings

Although some studies were published before 2000, empirical interest in nurse faculty mentoring has increased in the 21st century, congruent with increasing nurse faculty shortage concerns. The investigators examined mentoring from a variety of perspectives: experiences as a component of a structured faculty development program (White, et al., 2010; Wilson et al, 2010), as a need in support of role transition (Anibas et al., 2009), in terms of characteristics and importance of the relationship with barriers and facilitators (Hubbard et al., 2010; Kavoosi et al., 1995; Short, 1997; Taylor, 1992), and in relation to scholarship and productivity (Turnbull, 2010; Turnbull & Roberts, 2005; Williams & Blackburn, 1988).

Study samples represented predominantly white, female academic nursing faculty from programs in the US and Australia (Turnbull, 2010; Turnbull & Roberts, 2005) in varied roles (teaching, research or administrative), rank, and years of experience. Samples were predominantly regional or institutional, with national samples noted in White (1988), Rawl & Peterson (1992), Short (1997), Hubbard et al. (2010), and Kavoosi et al. (1995).

Qualitative studies utilized primarily face-to-face, semi-structured interviews, but also included focus groups (Anibas et al., 2009), and recursive interviewing (Turnbull, 2010) techniques. Quantitative studies predominantly used investigator developed, written, self-report, mailed surveys (Hubbard et al., 2010; Rawl & Peterson, 1992; Williams & Blackburn, 1988; Kavoosi et al., 1995; Sawatzky & Enns, 2009; White, 1988), with few reports of reliability or validity testing. Feasibility, cost, or time involved was difficult to determine from reported use of instruments.

Definitions of Mentoring

Definitions of mentoring varied as the reviewed studies employed a variety of theories and theoretical frameworks to conceptualize mentoring, however similar themes were apparent. Most authors described mentoring as a significant long-term relationship emphasizing guidance and support for protégé career development. Career and psychosocial functions of a mentor were addressed by Sawatzky & Enns (2009) and Short (1997), while others noted both personal and professional aspects of growth (Hubbard, et al., 2010; Kavoosi, et al., 1995; Turnbull, 2010). Some investigators did not specifically define mentoring (Gwyn, 2012; Turnbull & Roberts, 2005; White, Wilson & Brannan, 2010; Wilson, Brannan & White, 2010). Anibas, Brenner & Zorn (2009), Turnbull (2010), and Smith, et al. (2012) clearly differentiated precepting from mentoring, in that precepting was characterized by a task-focused relationship of shorter duration.

Relationship Antecedents - Context

Relationship context includes the organizational and individual influences on the initial relationship development that shape the network (Higgins & Kram, 2001). Formal initiation of relationships through mentoring or faculty orientation and development programs was reported by Anibas et al. (2009), White, et al. (2010), Wilson et al. (2010), Gwyn (2012), and Taylor (1992). White at al. (2010) noted protégé input in assignment of the mentor. Many authors did not identify the nature of relationship initiation (Hubbard et al., 2010; Rawl & Peterson, 1992; Short, 1997; Smith et al., 2012) or included both formal and informally mediated relationships (Gwyn, 2012; Turnbull, 2010; Turnbull & Roberts, 2005). Informal relationships, developed voluntarily through mutual self-selection of protégé and mentor, were reported by White (1988), Williams & Blackburn (1988), Kavoosi et al. (1995) and Sawatzky & Enns (2009). Kavoosi et

al. noted motivation of mentors to engage in relationships originated from a sense of professional identity, not a directive or mandate.

Mediating Processes

Processes can be viewed as relationship mediators and include opportunities and constraints for cultivation of the developmental network as well as help seeking behaviors of the individual (Higgins & Kram, 2001). Relationship processes are closely related to the context and are viewed here as individual or organizational facilitators and barriers to mentoring relationships and network development. The primary barrier to mentoring relationships included heavy workload with lack of mentor time or accessibility (Anibas at al., 2009; Wilson et al., 2010; Sawatzky & Enns, 2009; Turnbull & Roberts, 2005). Other identified barriers included a lack of qualified mentors (Turnbull, 2010), protégé fear and insecurity (Anibas et al, 2009; Hubbard et al., 2010), and a non-supportive organizational climate or structured plan (Hubbard et al., 2010; Sawatzky & Enns, 2009; Turnbull & Roberts, 2005). Lack of incentive to participate and disinterest in a mentoring relationship were also noted (Turnbull & Roberts, 2005; Hubbard et al., 2010).

The primary facilitator of mentoring was identified as a supportive, collegial organizational environment providing formal opportunities to initiate relationships (Hubbard et al., 2010; White et al., 2010; Wilson et al., 2010; Smith et al., 2012; Rawl & Peterson, 1992). Deliberate, planned activities with explicit goals and desired outcomes for mentoring were reported as important facilitators for an effective relationship (Hubbard et al., 2010; White et al., 2010). A relationship based on reciprocity and open communication between protégé and mentor was also viewed as a facilitator (White et al., 2010). Rawl & Peterson (1992) described influencers of the relationship including attitudes and characteristics of the participants, as well

as the kinds of help asked for and received by the protégé. Taylor (1992) suggested workshops devoted to selecting a mentor and how to be an effective mentor grounded in professional values to facilitate relationships.

Resulting Network Structure

Relationship structure is described by the diversity and strength of mentoring relationships within an individual's developmental network. Relationship diversity was not usually specified in the reviewed literature, but the dyadic and hierarchical nature of the relationship was revealed in study questions, instruments, and language used. Sawatzky & Enns (2009) described mentoring as a relationship between 2 people, one with greater rank and experience. Kavoosi et al. (1995) and Rawl & Peterson (1992) included age as a relationship factor, with the mentor as older and protégé younger. Four studies identified the mentoring relationship as multidimensional and evolutionary (Anibas et al., 2009; Short, 1997; Smith et al., 2012; Williams & Blackburn, 1988). Short (1997) and Turnbull & Roberts (2005) further identified extra-organizational and interdisciplinary mentors, thereby contributing to diversity. White (1988) reported that some nurse faculty indicated having more than one significant mentor in their careers.

Relationship strength was also not addressed in the reported literature using frequency or type of communication, but White, et al. (2010) described a formal mentoring program that encouraged bi-weekly communication between mentor and protégé with monthly journal submission. Many authors identified the mentoring relationship as strong (Turnbull & Roberts, 2005), meaningful (Smith et al., 2012), caring (Sawatzky & Enns, 2009), powerful and emotional (Kavoosi et al., 1995), or connected and trusting (Anibas et al., 2009), thus implying some degree of the closeness of bond between protégé and mentor.

Developmental Consequences and Outcomes

Developmental outcomes are the results attributed to participation in mentoring relationships in the network such as personal learning, organizational commitment, work satisfaction and career development (Higgins & Kram, 2001). Positive responses to both having a mentor and being a mentor were noted in the reviewed literature. Having a mentor was generally associated with increased scholarly productivity and professional development (Turnbull, 2010; Rawl & Peterson, 1992; Short, 1997; Sawatzky & Enns, 2009; Turnbull & Roberts, 2005), but Williams & Blackburn (1988) noted the importance of role or project specific mentoring for research-oriented productivity. Taylor (1992) reported positive benefits of mentoring, but no strong influence in scholarly endeavors. Protégés noted more successful transition to academia (White et al., 2010), enhanced networking and resource sharing (Anibas et al., 2009), improved teaching practices (Sawatzky & Enns, 2009), and increased likelihood they would serve as mentors in the future (White, 1988). Mentors also expressed positive reactions to mentoring and satisfaction in sharing of wisdom (Short, 1997; Wilson et al., 2010).

Organizational outcomes of mentoring were also recounted in the reviewed literature. Gwyn (2012) reported that mentoring does not enhance occupational commitment, but the quality of mentoring can impact emotional career attachment. Smith et al. (2012) noted a healthier organizational environment as a result of mentoring, perhaps resulting from individuals with a greater sense of belonging in the academic community.

Discussion

Results of this review reveal the paucity of empirical evidence supporting specific strategies or practice for facilitating nurse faculty mentoring, but they also provide a foundation for understanding and further research. Collectively, previous research has established mentoring

as a key component in professional career development and productivity that is usually associated with positive mentor and protégé satisfaction. Deconstructing the empirical literature using the developmental network lens highlights the gaps and assumptions that still exist. There has been considerable anecdotal literature on mentoring of nurse faculty published in the last decade describing programs, strategies, and opinions, yet empirical studies have not kept pace in validating best practices for faculty development and acknowledging evolution of the concept. There is a clear need to expand upon traditional notions of mentoring and a strong directive to increase the evidence base.

Other research and anecdotal literature have established the critical need to help novice nurse educators transition to academia from clinical practice (Anderson, 2009; Boyden, 2000; Cangelosi et al., 2009; Dattilo et al., 2009; Dempsey, 2007; McArthur-Rouse, 2007; McDonald, 2010; Snelson et al., 2002; Suplee & Gardener, 2009), as well as later transition to scholarship and administrative roles within academia (Mundt, 2001; Records & Emerson, 2003; Race & Skees, 2010; Triolo et al., 1997; Wills & Kaiser, 2002; Zambroski & Freeman, 2004). Mentoring is strongly asserted to enhance productivity, leadership and success throughout an academic career (Billings & Kowalski, 2008; Blauvelt & Spath, 2008; Smith & Zsohar, 2007), but a lack of evidence precludes decision making in planning the best options for facilitating effective relationships.

The most significant assumption in the majority of reviewed literature is that mentoring structure occurs in a hierarchical dyad. Interestingly, an older study reported multiple and diverse mentors (Short, 1997), while more current reports primarily describe dyads, although there was not enough information to determine a difference in outcomes. Higgins & Kram (2001) hypothesize a developmental network typology based on relationship strength and diversity (See

Table 1-2.). The predominant view of dyadic mentoring in the literature reflects receptive or

traditional networks with few mentors. Diversity of relationships and resources are limited when

a traditional dyad is assumed to be the ideal. Strength of the relationship was largely absent from

discussion in the literature.

Table 1-2. *Developmental Network Typology*

Receptive	Traditional
- Low diversity, few developers, same social system - Low strength, weak ties - Consistent, but weak support, possibility of repetitive information from developers	- Low diversity, few developers, same social system - High strength, strong ties - Highly motivated developers, but possibility of repetitive information
Opportunistic	**Entrepreneurial**
- High diversity - Low strength, weak ties - Protégé passivity, asking for help infrequently but not reciprocating thereby preventing strong ties from forming	- High diversity, many developers - High strength, strong ties - Highly motivated developers with a wide variety of resources to draw from, diverse information

From Higgins & Kram (2001)

More current research reports differentiated precepting from mentoring (Smith et al.,

2012; Anibas et al., 2009), an important distinction in terms of relationship goals and outcomes.

An initial precepting relationship is used for transition, workplace learning, or other task-specific

purposes that usually lasts 1-2 years, and a stronger, long-term relationship for professional

development is consistent with mentoring. However, using the developmental network theory

conceptualization of mentoring, external labels are not applied, as it is the protégé who names

what role each mentor plays in their development. Facilitating different relationships for each of

these purposes through faculty development and orientation programs is both possible and

desirable. Role orientation programs created for protégés and mentors with task specific

expertise, followed by ongoing development promoting cultivation of long term relationships for

scholarly productivity are supported by developmental network theory.

A major gap in understanding nurse faculty mentoring is how initiation of the relationship affects the processes and outcomes of the relationship. Literature review reveals primary initiation of mentoring relationships usually occurs through assignment by a third party which adds complexity to the interaction. Missing from the research literature is a discussion of the nuances that can influence mentoring such as gender, ethnicity, and personality, which may be particularly important in a female-dominated discipline trying to increase diversity. For an initial orientation relationship created for the transitional purpose of workplace learning, it may be reasonable to have a third party involved in developing faculty connections. A functional approach, connecting protégé and mentor in a directed purpose or project may be the foundation for a broader mentoring relationship. There is also merit in identifying and cultivating seeking behaviors of protégés as part of faculty development. There was no strong evidence for formal versus informal mentoring in this review with both perceived as beneficial. Thus, facilitating a strong and diverse constellation of mentors is dependent on a combination of assigned and naturally occurring relationships, with program emphasis on enhancing initiation behaviors.

The reviewed literature is most inclusive of potential barriers and facilitators that affect processes in the relationship. Although is not clear how effective mentoring is enhanced or inhibited by organizational culture, it is generally viewed as a facilitator of the relationship. Faculty orientation and development should facilitate entry to an intellectual and social community for the purpose of advancing skills and knowledge in explicit areas, while providing support for transitioning to new roles. There must be an investment of time, attention, and resources in support of development of professional growth of nurse faculty, along with clear goals, objectives, projects, and means of evaluation. Comprehensive mentoring programs with

acceptance, commitment, and involvement of many individuals in the institution may create a culture more supportive of mentorship.

Lack of time to engage in mentoring is a significant barrier. Expert mentors provide their services as motivated by professional identity, or monetary incentives such as workload or stipends. The workload and stress of an academic appointment have been well established for seasoned faculty balancing multiple roles in teaching, practice, research, and administration. Further, there is a need for willing experts, individuals well established in their area of scholarship, to provide mentoring for cultivation of future academic nursing scholars and mentors. Reciprocity of the relationships may be an influencing factor in the motivation to participate.

Implications for Research

Undoubtedly there is a need and desire for facilitating mentoring relationships, however, objectives should be identified and evaluated in measurement of success. Self report for satisfaction and use of the knowledge and skills gained with rating scales are valid, but should be combined with outcome measures for success such as quantifying academic or scholarly productivity. This evaluation strategy would be beneficial in determining not only individual outcomes, but also institutional advantages of supporting faculty career development through mentoring. Using pre-determined scholarly productivity expectations according to academic rank is one way to accomplish this.

Qualitative studies contribute to and are valuable in exploration of both protégés and mentor attitudes, beliefs, and experiences of the relationship, process or structure. Recognition of the deeply contextual nature of the mentoring relationship has resulted in empirical research in the interpretivist tradition. Organizational climate, individual differences of the participants in

the mentoring relationship, and program activities, provide a context of complex, interrelated patterns. Lack of controlled trials is a valid criticism of the body of empirical literature on nurse faculty mentoring. While structured mentoring has been implemented and accepted, research methods to illuminate the process and outcomes are needed for guidance in optimizing the structure. Program structure should be built on best evidence derived from outcomes in controlled trials and longitudinal studies. Multi–site studies using valid and reliable instruments, informed by qualitative findings, would be helpful. Currently, there is a lack of standardization for mentoring in faculty development programs and a lack of measurement instruments to enable rigorous quantitative exploration.

Although nursing has a long history of relying on research conducted in other complementary disciplines, rigorous approaches to nursing educational research that contribute to our understanding of mentoring as a part of nurse faculty orientation and development are necessary. Lack of a consistent operational definition and theoretical framework confounds measurement of mentoring outcomes; however, developmental network theory allows focus on the relationships themselves in objective terms of strength and diversity. Inquiry into relationship initiation behaviors can further conceptual understanding and provide information for use in faculty development programs.

Sampling strategies were primarily convenience based with participant self selection, yet there may be important differences in how mentoring is needed or experienced based on gender, race/ethnicity, experience, academic setting type, career goals, and specific characteristics of mentors and protégés. Investigative specificity is required to illuminate these nuances and increase generalizability of findings. Instrument development for measuring aspects of mentoring is lacking in the nursing literature. Administration of written surveys with Likert type

scale responses or open-ended interview questions are reasonable for determining needs and satisfaction levels for mentoring. Other outcomes of mentoring such as scholarly productivity need to be addressed with appropriate instruments. Validity may be the most pressing issue in instrument development as meanings, implementations, and expectations of mentoring are contextual, and reliability is dependent upon establishing validity.

Limitations of Review

This review is limited by use of one reviewer for data collection, analysis, and interpretation, which may contribute to omission of search terms, databases, articles, or perspectives. Inclusion of only literature from the nursing discipline with exclusion of unpublished work are also limiting factors, however, the review was purposefully centered in disciplinary context. Exclusion of the many theoretical articles on faculty mentoring in the disciplinary literature may be viewed as a limitation. Reports of experiences of mentoring and opinion contribute to faculty development strategies, however, best practices must be built must upon evidence.

Conclusion

Results of this review indicate a need for mentorship across a career in nursing academe, structured in some way through faculty development programs: 1) upon entry into teaching from clinical practice, 2) transitioning to a research career or other scholarly work, and 3) in a transition to administration or leadership. There is a predominant assumption in academic nurse literature that mentoring is an assigned relationship between 2 individuals. This view limits the possibilities for true professional growth across the academic domains of teaching, service, practice, and research on a long-term basis. Although one person as part of an inner core may

provide primarily psychosocial support, there should be opportunities for evolving relationships with geographically, institutionally, and professionally diverse individuals for mentorship.

Results of this review call attention to the need for further exploration of nurse faculty mentoring relationships with respect to needs, strategies, initiation behaviors, and outcomes. It is essential to acknowledge the conceptual evolution of mentoring from a dyadic, hierarchical structure to multiple and evolving relationships in order to facilitate initiation of diverse, meaningful, and effective nurse faculty relationships. Finally, the knowledge gained about supporting nurse faculty career development with mentoring has significant impact that is usually unrecognized. Nurse faculty provide the critical link to improved student, and ultimately, patient outcomes. Mentoring of nurse faculty is central to the mission of faculty orientation and development, but effective structure and best practices must be informed by evidence.

MANUSCRIPT II: CONNECTIONS THAT COUNT: A QUALITATIVE STUDY OF NURSE FACULTY MENTORING USING THE DEVELOPMENTAL NETWORK PERSPECTIVE

Abstract

A qualitative descriptive study using directed content analysis was used to explore nurse faculty mentoring relationships. Utilizing voice over Internet protocol (VoIP), ten faculty with various ranks and years of experience in academia from different institutions in the Southeast were asked to describe their experiences as protégés with mentors. Emerging themes are presented using pre-determined categories from the Developmental Network Theory to provide new perspective for conceptualizing mentoring as a multilevel, dynamic, and evolving phenomenon. Significant findings include continued perception of the essential nature of mentoring for nurse faculty, differentiation of mentoring for tasks and scholarship, ineffective mentoring relationships resulting from formal assignment of mentors in structured programs, and importance of the organization in creating a safe and open culture. Implications for reframing formal mentoring programs and recommendations for future investigations are included.

Key words: nurse faculty, nursing education, mentoring, faculty development

Connections that Count: A Qualitative Study of Nurse Faculty Mentoring Using the Developmental Network Perspective

Faculty mentoring of nurse faculty has been associated with positive effects on teaching self-efficacy, job satisfaction and intent to stay in academe, and asserted as the single most influential way to recruit and retain nurse faculty, benefitting institutions and the profession at large (Dunham-Taylor et al., 2007; Blauvelt & Spath, 2008; NLN, 2006; Smith & Zsohar, 2007). Yet, there is little empirical evidence for the most effective structure for mentoring. The purpose of this study was to systematically explore the critical experiences of mentoring, including the structure, processes and relationship initiations for nurse faculty in the protégé role through the unique lens of the developmental network.

Background

Difficulty in transitioning to an academic role is associated with feelings of isolation, uncertainty, frustration and dissatisfaction among faculty, a downward spiral affecting not only the individual, but also the institution (Sawatzky & Enns, 2009; Dunham-Taylor et al., 2008). The nursing faculty shortage (National League for Nursing [NLN], 2010) has focused attention to supporting, recruiting and retaining nurse faculty (Cash, Daines, Doyle & von Tettenborn, 2009; NLN, 2006) through mentoring programs as a part of orientation and faculty development (McDonald, 2010; Morin & Ashton, 2004; Anderson, 2009; Suplee and Gardner, 2007; Schriner, 2007; Smith & Zsohar, 2007; Shirey, 2006).

Developmental Network Theory reconceptualizes mentoring to reflect multiple relationships. Higgins and Kram (2001, p. 268) define the developmental network as "a group of people who take an interest in and action to advance a focal individual's career." Hence, a developmental network is described as egocentric, consisting of relationships identified by the

protégé as instrumental in career development and personal learning and a subset of the individual's social network that evolves based upon perceived needs (Higgins, Chandler & Kram, 2007).

A developmental network can be viewed in terms of its relationship antecedents or context, mediating processes, resulting structure, and outcomes. Organizational influences such as tasks involved and individual influences such as personality are antecedents of mentoring relationships that create context. Mediating processes include the organizational opportunities and individual developmental help seeking behaviors for advice, information, or feedback that drive initial interactions and affect relationships and resulting network structure. The resulting network structure is described in terms of diversity and strength. Relationship strength is based on the frequency of communication, reciprocity and emotional affect, and diversity refers to the extent relationships are redundant with repetitive, similar information from mentors (Higgins & Kram, 2001). Outcomes are the result of network structure and may include work satisfaction and productivity, perception of organizational acceptance and engagement, and meaningful supportive, social connections. Application of this theoretical perspective to examine the mentoring experiences of faculty can stimulate recommendations for future research of faculty mentoring strategies.

Study Methods

A qualitative descriptive methodology (Sandelowski, 2001; 2010) with directed content analysis (Hsieh & Shannon, 2005) was used for this study. Developmental Network Theory guided development of interview questions, analysis of data, and presentation of findings.

Participants and Recruitment

After university Institutional Review Board approval, participants were recruited from

126 CCNE or NLNAC accredited schools located in the southeastern US. All schools awarded a

baccalaureate or higher degree. Deans and directors distributed the research invitation to faculty.

Faculty participants self-selected and contacted the PI by email. A purposive, maximum

variation sampling strategy was used to include participants representative of nurse faculty at

various ranks, appointments, and career stages, as well as the experience of either formally or

informally mediated mentoring. The mean age for the sample of 48.6 years, with years of

experience in academia ranging from 1 year to 28 years (mean = 9 yrs). See Table 2-1 for a

detailed description of participant characteristics.

Table 2-1. *Participant Characteristics*

Participant	Age	Ethnic back-ground	Gender	State	Highest degree earned	Academic rank	Primary faculty role	Years of experience in academia
1	55	White	F	SC	Master's	Lecturer	Classroom and clinical teaching	5
2	48	White	F	TN	Master's	Assistant Professor	Classroom and clinical teaching	4
3	38	White	F	AL	PhD	Assistant Professor	Online teaching and research	6
4	60	White	F	FL	PhD	Professor	Research, teaching	28
5	60	White	F	SC	PhD	Instructor	Classroom and clinical	9
6	44	White	F	KY	Master's	Lecturer	Classroom and clinical	1
7	29	White	M	KY	Master's	Lecturer	Classroom	4
8	47	White	F	GA	PhD	Program Director	Administrative	5
9	54	Black	F	GA	Master's	Assistant Professor	Classroom and clinical	5
10	51	Black	F	AL	DSN	Assistant Professor	Clinical teaching	23

Data Collection

Participants were interviewed remotely using semi-structured, open-ended questions via VoIP (Skype®) in the setting and time of the participants choosing. Verbal informed consent was obtained and recorded at the beginning of the call. Interviews lasted approximately 40 to 70 minutes, concluding when the participant felt they had provided all possible responses to the question probes, or when the data for that specific interview was repeating. Demographic and academic career data were assessed after the interview. All interviews were conducted by the first author, audio-recorded using call recorder software, and professionally transcribed verbatim. The first author made field notes during the interviews to record observations of responses to questions and personal narratives of emerging researcher thoughts related to the interview.

Data Analysis

A directed content analysis approach as described by Hsieh and Shannon (2005) was used to systematically analyze data from the interviews. Analysis started after completion of the first interview and early findings were compared to established mentoring literature and developmental network theory, which allowed for refinement in data collection. Transcripts of recorded interviews were read repeatedly for sections that described the context, structure, processes, and stated outcomes of mentoring. Codes were ascribed using participant phrasing. Coded concepts were then grouped into themes and each participant's description of his or her mentoring experiences was used to create a representation of common elements. Field notes were also analyzed to enhance or support emerging findings. Data collection and coding analysis continued until participant descriptions of mentoring revealed no new information.

Quality checks of the data included an audit trail of memos generated from impressions and observations during the interviews, verification of transcription accuracy by comparing

recordings to printed transcripts, and review of interview text for verification and validation of common themes. Constant comparison of data allowed identification of similarities, differences or relationships of concepts across interviews. The categories were predetermined from the Developmental Network Theory and included relationship context, structure, processes and outcomes. These categories aligned with the research question, probes used in the interview, and provided an organizing framework for coding.

Results

The final participant group consisted of 10 nursing faculty from 6 states in the Southeastern United States at various ranks and experience levels. The participant's phrasing of experiences and themes were organized and presented using predetermined developmental network factors including relationship antecedents (context), mediating processes, resulting structure, and developmental outcomes.

Relationship Antecedents - Context

Organizational influences. Many nurse faculty reported the presence of a formal mentoring program at their institution, but most were dissatisfied with the relationship:

I was assigned someone in name, but I would say that is as far as it went. This person was more of a roadblock than a help in many ways. I don't think at any time did she offer help or resources.

I don't think she was given clear and concise direction as to what the expectations of being a mentor were. It was my understanding later there was a form at the end of the process

she was supposed to hand in, but she didn't know about it. That was a bit of a challenge. There were written instructions, but she was unaware of them.

Another said it would be the administration's perception they had a mentoring program for faculty, but that she "fell through the cracks, somehow." There was a consistent expression of participants not wanting to bother anyone, even assigned mentors, with task or career related questions because they "just don't have time for you."

I don't blame anyone, it's a small faculty and no one really had time to do that. You need to come in with your feet running. There is just not enough time or resources to do that.

The presence of a structured faculty mentoring program, even if ineffective in developing long lasting mentoring relationships, did eliminate the initial feeling of being "on your own." However, most faculty noted seeking information and mentors outside of an assigned relationship.

A need for administrative support for faculty mentoring, not necessarily through formal programs, but rather through creation of a "culture open to questions" and promoting an understanding that "everyone is not coming from the same place" was described by all nurse faculty. Once faculty member characterized her experience with administrators this way:

They are not particularly concerned with your career advancement. They need the work of the program to be completed.

Another faculty member reported a much different experience with organizational culture:

I've never felt like I couldn't walk down the hallway and speak to pretty much any faculty

member and say 'this is the issue I am having and this is what I am thinking, what do you think?'

Individual influences. All nurse faculty reported self perceptions of assertiveness in identifying and communicating their needs. They identified themselves as being active in getting their needs met, one to the point of being "aggressive." If faculty did not feel they were getting what they need from one relationship, they found another one or figured out a solution on their own. Needs expressed included "knowing what it takes to work in this school," "a roadmap to advance," and more task-oriented needs simply based on "what is going on at the time." One faculty member involved in an ongoing formal mentoring relationship expressed the awareness of a change in needs over time:

X was good for a while, but now I feel like I don't need her advice, it was all about

curriculum and things I pretty much have down now. The things I am looking at now are my

own research and my own projects. "

No participants reported purposefully seeking individuals based on gender, yet one identified that she actively sought extra-organizational mentorship through organizations that supported connections among minority nurse faculty for the purposes of scholarship. A feeling of isolation and lack of support after moving to a new institution prompted one to seek mentoring relationships, while others shared frustration in seeking support and mentoring:

There's nothing worse than feeling like you have nowhere to go.

Mediating Processes

Safety. While the opportunity for cultivation of mentoring relationship may be presented through a formal program, an important factor influencing nurse faculty consideration of help seeking behaviors and initiation of relationships was safety. While some faculty felt comfortable in a mentoring relationship with someone of seniority, for others, the possibility of being evaluated by the mentor was discomforting:

Most important to me is a person that is open. Ones who are open to new folks, who understand I was where you are, I understand your frustration, and this is how I deal with it. And if can get to where I feel safe coming to them for a question, I don't feel like I am bothering them, I feel like they have an open door policy, then that's likely who I am going to again.

One of the first people I did try to talk to a lot, did try to, like, throw me under the bus a little later down the road.

Guidance. Nurse faculty described their experiences trying to initiate relationships for the purpose of meeting knowledge, support or advancement needs in various ways. Many were unsure of who to ask or where to look and described meeting resistance:

It's not even that I am looking for time or anything, I don't need hand-holding. I was just looking to be pointed in the right direction and to be treated professionally.

You can tell in your first interaction with someone whether that person is going to be responsive to your questions, and you can pretty much tell people who just don't have time for you, or won't make time for you.

Interpersonal connection. An interpersonal connection with a formally mediated or assigned mentor was not reported by nurse faculty, even when they felt their initial needs were met by the relationship:

I wasn't given a choice as to picking a mentor I thought I could bond with, it was just, this is your mentor and she will help you through the initial roadblocks of the system. So I guess to me it was like a job. She was nice and all, I just never felt a connection.

Willingness. The connection most faculty reported with informal mentors was based in a perception of the mentor doing more than just a service or a job, going "above and beyond faculty obligations" by providing opportunities with passion and personal interest:

She didn't make me feel like her time was so precious I couldn't get it.

I valued the willingness to pour into me because I really do feel it's not hard, you can make it hard or you can make it easy.

Reciprocity. Reciprocity in the mentoring relationship was also important to nurse faculty. The need not to bother another individual was tempered when faculty felt they were also offering something in the relationship. One participant described her experience with an informal mentor:

We connected on a personal and professional level…It's just kind of a relationship that is mutually beneficial.

Network Structure

Relationship Diversity. Participants described 4 or fewer mentors but included some individuals who provided limited information or support that they did not consider mentoring. The nurse faculty in this study primarily identified interdepartmental and inter-institutional relationships. A few multidisciplinary relationships, actively sought in response to specific perceived needs related to either teaching or research-oriented skills were reported, usually within the same institution. There was also a tendency to remain in contact with mentors established in a master's or doctoral program.

Relationship Strength. Two faculty described regular, face to face, monthly meetings with a mentor, but most reported interaction with mentors on an as-needed basis. The primary mode of communication was face to face due to proximity as participants identified mentors "down the hallway."

The relationships described by nurse faculty generally reflected traditional and receptive networks with the following characteristics; 1) small networks with few mentors that are

interdepartmental and therefore lacking in diversity, or 2) larger networks, with numerous individuals providing answers to questions on an as needed basis, but with low relationship strength.

Developmental Outcomes

Although meeting specific career advancement goals through mentorship was not specifically addressed in the interview questions, nurse faculty shared a desire to mentor others themselves after successful transition to academia.

Perpetuation of mentoring. Being a strong and effective mentor themselves was important for participants, although for different reasons. Faculty felt a willingness to "pass on" what they had received themselves, a "trickle down" of "good" mentoring, or wanted to make sure new faculty didn't have the poor experiences they did. Some nurse faculty described having individuals new to the faculty role now assigned to them through formal mentoring programs:

I try to show them what I know, have them shadow me, explain things.

Now my door is open so I have 3 new faculty on the hall so I will see them when they need help. They will come in and ask.

I have several new faculty come to my office and I don't know if it is because I try to be nice. They don't have anybody that has the time, not that I have the time, but I know how helpful people have been to me.

Successful transition to academics. Although many nurse faculty felt frustrated with mentoring, they felt they had succeeded in making the transition to academia due to their own

persistence and self-sufficiency. Those practicing in the academic setting for a longer period of time expressed a greater appreciation for mentors as a catalyst for their achievements in scholarship and leadership. One noted "better" mentoring at the leadership level because those individuals had to have been "well mentored themselves" and "have more appreciation of what the needs are for someone who needs to 'learn the ropes'." In terms of developing scholarship and leadership skills, they were better able to state specific needs to mentors, and had experienced mentors who offered information without being asked.

Discussion

Persistent themes regarding mentoring emerged from the data, and can be used to consider recommendations for future change in mentoring programs. First, faculty described the need for consistent, basic, task-related information or "learning the ropes" at the beginning of any new role. Two types of mentorship were described: a task-oriented relationship, more similar to a preceptorship, or a scholarship-oriented relationship, similar to that found in other literature (Turnbull, 2010; Anibas, Brenner & Zorn, 2009; Dattilo, Brewer & Street, 2009). Scholarship-oriented mentoring relationships were described as stronger, longer-term, and more diverse in nature. Task-oriented relationships were primarily based on proximity and centered on meeting immediate needs which may not be considered as mentoring by some, but were described as such by participants or externally labeled in formal programs. Previous research reports that interest in scholarship and productivity can come only after mastering initial, specific tasks to function in a new role (Anderson, 2009; Martin & Hodge, 2011). This suggests an organizational imperative to assess faculty need for short-term task-oriented relationships as well as scholarship-oriented, long term mentoring, ensuring that both needs are met.

A second recurring theme was that proximity and personality were the primary means of determining where to seek information and support, looking for "open doors". There are numerous reports of overworked faculty lacking time for active mentoring of junior academics, and various monetary or workload incentives for doing so (Barksdale et al., 2011; Anibas et al., 2009; Hubbard et al., 2010; Sawatzky & Enns, 2009; Wilson, Brannan & White, 2010), but it is obvious to protégés when the mentor is motivated by something other than sincere interest in their career development. The challenge of balancing multiple academic roles and workload to make a personal investment in junior faculty is great, but if met successfully, can result in perpetuation of mentoring and a stronger sense of organizational community.

Last, the presence of a "connection", grounded in relationship mutuality and mentor commitment to the role as the foundation for a long term, deeply rewarding mentoring experience was important to these faculty. Consistent with previously reported studies, participants viewed effective mentoring relationships as positive, grounded in trust and respect, improving their job satisfaction and professional commitment (Garbee & Kilacky, 2008, Gwyn, 2012), and essential for role transition and professional development (Dempsey, 2007; Cangelosi, Crocker & Sorrel, 2009; Anderson, 2009; Turnbull, 2010). Barriers to effective mentoring reported in this study included incompatibility, lack of time or motivation on the part of mentors, and even relational aggression, which have also been previously reported (Hubbard, Halcomb, Foley & Roberts, 2010). Clearly, many variables moderate a relationship connection, but future focus in program structure on behaviors and attitudes in relationship initiation instead of an assigned "match" might be useful. The protégé and mentor, rather than an external source, should determine the potential for a lasting connection, with programs helping to support and facilitate individual engagement with mentoring opportunities.

A structured, formal plan, with clearly articulated goals and outcomes is usually considered to be facilitator (White, Brannan & Wilson, 2010). However, the negative characterization of participant experiences with assigned mentors in this study is not supportive of the formally matched mentoring programs generally structured and reported in the literature. Being deliberate about creating an open culture, with availability of internal/external resources, may be more important than being deliberate and rigid in structure or processes.

Mkandawire-Valhmu, Kako, and Stevens (2010) note that mentoring is particularly beneficial when the mentor and protégé are of the same gender, race, and ethnicity. Minority participants in this study did not describe such a relationship as essential however; they did identify a few extra-organizational mentors of the same gender or race. Homogeneity of nurse faculty creates challenges in providing the types of gender and ethnically diverse relationships that may benefit these individuals most, however even if these connections cannot be facilitated in the department, effort should be made to provide resources, direction, or even a simple introduction to extra-organizational opportunities.

In the literature, there is continued focus on traditional, long term, dyadic mentoring, and rare distinctions between formal and informal mentoring. This view may not accurately reflect the reality of multiple and evolving mentors. Institutional faculty development programs that attempt to match an individual faculty member with another for mentoring may be limiting potential rather than enhancing it. Technology allows for access to individuals outside the primary organization, and increasingly collaborative approaches in both practice and academia have eliminated geographical and disciplinary boundaries, creating broad opportunities to establish mentoring relationships. Mentoring has transformed into an intra and extra

organizational, multilevel, multiple relationship phenomena based on mutuality and reciprocity (Higgins & Kram, 2001).

Acknowledgment of the contextual and dynamic nature of mentoring requires a new approach to facilitating relationships. Advantages of using the developmental network lens for nurse faculty mentoring include an increased attention on multiple, diverse relationships and protégé developmental seeking behaviors. Instead of external mediation of mentoring relationships, there is focus on individual internal motivation for seeking and establishing relationships that successfully meet identified needs. This key difference may provide a new framework for mentoring nurse faculty, supporting recruitment, retention, and professional career development.

Limitations of this study include the use of one person for data collection and analysis, small scope affecting generalizability, and the potential for sampling bias as self-selected participants may be more likely to be very satisfied or dissatisfied with their mentoring relationships.

Conclusion

This study identifies new information regarding how nurse faculty experience mentoring and highlights the inadequacy of formally assigned mentors in creating successful, long term mentoring relationships as they seemingly intend. Using the developmental network approach offers new avenues for inquiry. Further qualitative work can refine dimensions for survey development and empirical measurement of specific behaviors within the mentoring relationship. Identifying specific needs that drive developmental seeking behaviors can contribute to faculty development program design or organizational structures that support appropriate engagement with mentors. Personal characteristics or communication styles that influence developmental

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relationships may be examined for influence on initiation and outcome. Opportunities to further develop knowledge in this area are vast, but the importance of facilitating productive, collaborative mentoring relationships for nurse faculty cannot be understated as we strive to provide excellent education of future nurses in a dynamic health care environment.

MANUSCRIPT III: VOICE OVER INTERNET PROTOCOL (VOIP)

VIDEOCONFERENCE FOR DISTANCE INTERVIEWING IN QUALITATIVE

RESEARCH

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Abstract

Videoconferencing using Voice over Internet Protocol (VoIP) was employed to conduct semi-structured, open-ended remote interviews with participants in an NLN funded qualitative research study. Although a face-to-face interview may be preferred, videoconference technology is increasingly being implemented as an option when participants are remote and should be evaluated for use as a viable audio/video data collection tool. VoIP allows for synchronous, face-to-face interviews and interviewer capture of non-verbal cues. The technology is inexpensive, accessible, user-friendly, promotes geographic diversity, and the interview can be easily recorded. The technology allows investigators the ability to interview participants in real-time with visualization of non-verbal cues and affect, thus enhancing rapport without incurring travel expenses. Additionally, participants are able to choose their interview setting to ensure comfort. This paper describes the experience of using videoconference VoIP interviews for both researcher and participants, and explores issues with data recording/management, access, and ethical issues. A comprehensive checklist of practical considerations for use in qualitative interviewing is included.

Keywords: qualitative research, voice over Internet protocol, interview, distance interview, remote interview, videoconference

Voice over Internet Protocol (VoIP) Videoconference for Distance Interviewing in Qualitative Research

The interview is the most familiar and commonly used method of data collection in qualitative research for eliciting data not readily observable and capturing another's perspective. Historical challenges of time, expense and geography in reaching participants can potentially be overcome with use of remote interviewing aided by technology. Rapid growth in online opportunities such as email, instant messaging, videoconferencing, and voice over Internet protocol (VoIP) have made even telephone interviews seem dated. The purpose of this paper is to describe participant and researcher use of VoIP videoconference interviews in a recent qualitative study, explore significant issues of method use, and provide a comprehensive checklist of research considerations in study design, implementation and dissemination activities.

Background

Qualitative Interviews

The face-to-face interview has long been the gold standard in qualitative research for entering into a trusting relationship with a participant and cultivating deep understanding of their experiences (Patton, 2002). The broad and holistic approach to collecting data in the qualitative realm relies on more than numbers (King & Horrocks, 2010). A personal conversation, whether informal, generally guided, or standardized and open-ended, allows for authenticity, greater appreciation of context, and immediate clarification or follow-up, yet can be time and resource consuming. In addition, skills, technique, affect, and interest of the interviewer become important influences on the interview itself. Reflexivity, the critical self-awareness of personal perspective in qualitative inquiry, is significant in construction of understanding and knowledge (King & Horrocks, 2010; Patton, 2002). Advances in web technology have expanded interview

options for qualitative researchers. Previously, time, expense and geography limited access to potential participants, but now increased availability and bandwidth have created a viable alternative to the face-to-face interview.

Voice Over Internet Protocol (VoIP)

VoIP has been used in telemedicine to communicate with patients, in clinical education to communicate with students, and in the research setting to communicate with participants. Skype™ is an example of a VoIP application that allows voice alone or full-screen video conferencing calls to other Skype™ users. Remote interviews are possible through other videoconferencing, email, or telephone technology but VoIP is a relatively recent medium for computer-to-computer voice or video calls (Hay-Gibson, 2009). The secure software application requires internet connection, computer, video camera and microphone to make free calls and is user-friendly. Hay-Gibson (2009) identifies specific drivers for use of VoIP including expense, time, availability, practicality, and acceptability. Flexibility and control of scheduling interviews contributes to participant satisfaction, while the ability to set up interviews quickly, eliminating travel time and expenses, was valued by researchers. However, researchers and participants must have the technology available and be versed in its use.

Recent PEW data indicates 66% of households in the US have a broadband Internet connection (2010), and 24% of US adult Internet users have placed phone calls online (2011). Certainly there are more telephone than VoIP users, yet the telephone usually cannot replicate the personal and intimate interview setting created when participants and researcher can see one another. Norvick (2008) notes general perceptions of the inferiority of telephone interviews to generate high quality data, particularly with growing interest in Internet options that test methodological boundaries and calls for more comparison of interview modalities. This paper

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describes the experience of using VoIP videoconferencing for both researcher and participants, and identifies issues of interest to other qualitative researchers interested utilizing in the method.

Utilization of VoIP Videoconferences in Qualitative Research

The Study

The original qualitative description study utilized semi-structured, open-ended interviews via VoIP (Skype™) with 10 nurse faculty from CCNE or NLNAC accredited, BSN or higher degree awarding institutions in the Southeast US region. The primary purpose of the study was to explore critical protégé experiences of mentoring, focused on the structure, processes and relationship initiation using a unique theoretical perspective. At the conclusion of the interview, participants were also asked to comment on their present experience using Skype™ videoconferencing, including their comfort level with the technology.

VoIP videoconference was the interview method of choice to allow for a diverse geographic sample not financially possible otherwise, while preserving the synchronous, personal characteristics of a face-to-face encounter. The potential participants, nurse faculty employed in an academic setting, were considered likely to have the necessary knowledge, skills, and technologic access needed for the interview. The possibility existed that some participants would describe mentors who were colleagues, and although the interview wouldn't elicit sensitive health related information, the participants might share personal encounters, both positive and negative. Use of videoconferencing helped participants feel safe discussing mentors, as they were able to participate in the interview at the place and time of their choosing. Participants were asked not to specifically name their mentors, but risk of identification based on description could be an issue if the conversation was overheard.

After institutional IRB approval, purposive, maximum variation sampling was used with the study invitation recruited via email through deans and directors. Participants self-selected for inclusion based on study criteria that addressed access and knowledge regarding Skype™, and contacted the PI via email to arrange the interview. Confirmation of participant identification and verbal informed consent was obtained and recorded at the beginning of the VoIP call.

Inexpensive call-recording software that integrates with Skype™ was used to digitally capture only the audio from the interview, not video images. Interviews lasted approximately 40 to 70 minutes. The data files prepared by the call recording software were then securely uploaded via the Internet to a professional transcription service. Encryption software was also installed on the PI's computer to prevent unauthorized access to any study information. Field notes were used during the interviews to record pertinent observations and any emerging personal narratives of the researcher. If VoIP distortion or dropping occurred, calls were reinitiated, with questions or responses repeated to prevent lost data. Field notes were taken during the interviews.

Participant Experiences

Of ten interviews, 3 experienced breaks in connection and required multiple call re-initiation. One call did not drop, but there were occasional slowed connection issues that caused distortion. This created difficulty for the transcriptionist, and field notes were vital in maintaining clarity of meaning and preventing loss of data. Connection interruption issues, while frustrating were not seen as a barrier by any participant, but rather as "one of those things." Although the PI did not discuss explicit contingency plans for re-initiating the call in the case of issues, generally the participant was the one to make the reconnection. The PI completed all interviews using the same computer, Internet connection, and specific location for consistency and to minimize the risk of connection issues. Yet, unforeseen issues with Internet service

provider line maintenance, weather interfering with signal strength, or simply technology

"glitches" did not dampen participant enthusiasm for interviews or the technology itself. They

were flexible, relaxed, and accommodating, voicing an appreciation for use of VoIP.

All participants expressed an appreciation for being able to see the interviewer and an

ability to see visual cues, as well as the ease of use. Many had used VoIP for both professional

and personal reasons, communicating with distance students, as a student in a distance-learning

program themselves, or communicating with distant colleagues, friends or family members.

Participants' ability to determine where the interview took place was also significant in finding

time in busy schedules to complete the interview. Detailed information about interview calls and

participant experiences with Skype™ are summarized in Table 3-1.

Table 3-1. *Participant Experiences With VoIP Interview*

Participant	Technology Comfort Level	Connection Issues	Notes/Comments
1	High	None	"If I wasn't familiar with it (Skype) it might be a challenge to download and to use, but you kind of get a feeling for how these things work."
2	Moderate	3 connections needed to complete interview	More familiar with use of Skype voice on cellular phone, but also had computer difficulties.
3	High	None	Uses VoIP frequently for personal use.
4	Low	Intermittent distortion	Interview conducted at work with tech support, but noted ease of use. "It's been very smooth...rather easy."
5	High	None	"I prefer to see people rather than not to see them."
6	High	None	"I can hear you, I can see you, and there are no technologic difficulties."
7	High	2 connections needed to compete interview	Completing interview from home in rural area that might have affected signal strength.
8	High	2 connections needed to complete interview	Internet land service provider unexpectedly working on line, used cellular provider wireless access for second call with no further issues.
9	High	None	"I am a nurse, I like to see and assess, not just hear."
10	Moderate	None	Familiar with VoIP, but had not used Skype™, had help from IT department to set up software

Researcher Experiences

The PI was experienced in Skype™ use and therefore comfortable with VoIP technology. The ability to connect with participants, putting a face with a voice, was invaluable in developing the rapport necessary for a personal, balanced interview. Watching participants gather their thoughts before answering, and their facial expressions as they discussed ineffective or successful mentoring relationships added richness and depth to data analysis.

Peel et al. (2006) note themes of participant altruism, therapeutic effects of speaking about issues, and perceptions of the innocuous nature of an interview as motivation for taking part in qualitative research. Although a small incentive of a $25 gift card was provided in the study, some participants noted the novelty of Skype™ use for the interview as an intriguing factor for self-selection in this study.

The active nature of the interviews was appealing to this researcher. The ability to give natural visual cues through facial expression and body language also contributed to the connections felt with the participants. Researcher self-presentation was considered just as if the interviews were to be face-to face in terms of appearance and setting, in an attempt to minimize distractions and foster rapport.

Although participants had the opportunity to read about the study and consent to participate was implied based on contacting the PI for the interview, it was important to facilitate verbal informed consent that would be recorded in the transcript. This also allowed the participant the option to withdraw at anytime and ensured common understanding of the study purpose and expectations.

Field notes were taken during the interviews to add depth to audio-recorded data by including non-verbal behaviors, but they proved invaluable during periods of distortion, lag time,

or dropped calls. Making a quick note of the current topic or direction of the conversation allowed redirection to that point once a strong call connection was re-established. The researcher was acutely aware that the participants could not see the notebook on camera and did inform them that notes might be taken during the interview so they would not be concerned or curious.

Implications for Research

Feasibility of VoIP Use

Use of VoIP videoconference interviews for collecting qualitative research data may be motivated by preference, convenience, or access, but it can be a cost effective option with global reach. VoIP video calls create a synchronous virtual environment where the researcher is able to see the participant engaged or distracted, thinking or speaking, which promotes a focused, productive exchange. Communication may be less open to misinterpretation when visual cues can be seen. In addition, the opportunity to share or create images on an electronic whiteboard enhances communication and opens up collaborative possibilities for rich interaction with data generation. Skype™ offers the ability to share screens, documents, or web pages with participants, which is helpful when diagrams or pictures are used for clarification or are generated as a part of the research. Just as the question drives the methods, the interview style drives the technology used. Video conferencing such as VoIP is well suited to semi-structured or unstructured interview styles because it most closely resembles the face-to-face experience, while a structured interview eliciting primarily yes or no questions may be done using only a voice call (Salmons, 2012).

Currently the free version of Skype™ does not offer videoconference calling with more than one other location, and attempting to interview more than one person at the remote site would probably detract from the one-on-one, personal experience the researcher is trying to

foster. When an individual is the usual distance from a computer, typically only the upper body and face are visible, so any study where full body language is required would not be suitable.

Call and video quality is affected by the stability of the Internet connection and computer speed, on the part of both researcher and the participant. Connection reliability may be the key to establishing flow of the interview, and preventing loss of data. Frequent distortion, lag time, or dropped calls can be frustrating for all involved and may affect the quality of the interview, especially for emotionally charged areas of questioning. Matthews & Cramer (2008) recommend use of VoIP only in situations with certainty of equipment and broadband service, but acknowledge the rapidly increasing availability and access of the technology.

There are multiple options for recording data from a remote interview. Software that integrates with the VoIP medium can create easily manageable files and is usually inexpensive. Another recording option is use of a digital recorder with a microphone set near computer speakers (Hay-Gibson, 2009). The researcher should give consideration to the capabilities of the computer being used to facilitate the VoIP call. Recording both video and audio can create large files that may need to be converted prior to use. Computer assisted qualitative data analysis programs may also be more easily and quickly applied to data. Piloting all equipment before data collection is essential.

Ethics in Data Recording and Handling

There can be particular ethical challenges with use of VoIP for e-interviews and digital data collection. Digital collection, storage and transmission of text, sounds or images using the Internet generate technologic vulnerability. Security in the call may be similar to the interception of an email (Hay-Gibson, 2009). Lack of awareness about potential issues, combined with

external reviewers who may be unfamiliar with VoIP as an emerging interview method, may result in unintended harms.

Using a remote interviewing technique usually requires verbal consent for inclusion in the study and recording of voice and images (if desired). Recording and storing video if it is not needed for data may create additional liability (Hay-Gibson, 2009). Consent is completed at the beginning of the interview and as a continuing part of the interview, with participants free to exit at any time. Participants make their own decision about where to take the scheduled call, but should be advised to do so in as private a setting as possible, especially if sensitive information may be shared (King & Horrocks, 2010). However, it should be noted there is no control over the setting for the participant and no way to confirm the presence of another in the room if they are off camera. If the participant chooses to be interviewed at their workplace, there may be issues with institutional permissions to film the physical setting. Confidentiality and privacy are also respected when the researcher considers the possibility of being overheard in determining where to initiate the call. In order to place the VoIP call, a user name is needed. Participants will need to provide this to the researcher, but with common understanding that identifying information will be removed from study data and not used for any other purposes.

Access to Technology

Determining the ability, knowledge, and skill of potential participants to access and use the technology is of utmost importance. Consideration of the limitations in the potential study sample that might be established is required (Hewson, 2007). In the study presented, the population of interest was expected to have some access and familiarity with the technology. However, in health research common to nursing, the desired sample may be least likely to have access to the technology, and further, the technology may require training before use. Internet

access options and video web cameras are becoming less expensive, and many VoIP software options are free for basic use, so researchers may choose to purchase and provide equipment to participants for utilization in a study. Matthews and Cramer (2008) argue use of technology such as such as the Internet and VoIP for interviewing may allow researchers to locate historically private, marginalized, or inaccessible communities. Conversely, utilization of VoIP instead of face-to-face interviews may introduce bias, in that the most rural, lowest socioeconomic, or most elderly populations may be excluded from sampling because of low access to technology. Limitations may also include participants with visual or hearing impairments (Hay-Gibson, 2009).

The Virtual Setting

Use of VoIP requires technologic skills for both researcher and participants. Practical strategies such as ensuring equipment readiness and confirmation of call plan help to minimize the potential for difficulties. Discomfort with the technology can contribute to less focus or confusion during the interview. Some participants may simply not be comfortable with being on video. Consequently, the PI may not be able to distinguish discomfort with the technology from discomfort with the interview topic (Kazmer & Xie, 2008). None of the participants in the reported study felt uncomfortable speaking via Skype, even those interviewed at their workplace, but these was potential for unease if difficult mentoring relationships with current colleagues were discussed.

The nature of the phenomenon of interest may also influence the desire to use VoIP as an interview method. The physical or virtual location of an interview can influence the proceedings (King & Horrocks, 2010). Establishing a connection and trust during questioning in a sensitive or complex topic area can be achieved in a virtual setting through the same considerations of

comfort, privacy, and rapport (King & Horrocks, 2010). Preservation of a natural context in the virtual setting is an advantage of VoIP. In the reported study, participants were asked to share experiences with mentors, and not all were successful. Hanna (2009) notes the neutrality of the virtual environment as contributing to a participant's feeling of "safety" without worry of researcher physical encroachment in their "personal space," thus participants may be willing to share more information in a remote interview than face-to-face. The participants in the reported study were very interested in learning about the study and initial dialogue about study purposes served not only for consent, but also encouraged a positive relationship. Broad initial questioning with additional probing questions further into the interview can help establish comfort (Salmons, 2010). Before the last question, the researcher should signal closure, and as with any new medium, participants can be asked about the use of VoIP in the study (Salmons, 2010). Trust can be further enhanced in the virtual setting through active researcher listening, maintaining appropriate eye contact, and being aware of distracting non-verbal behaviors. It is important to note that looking at the screen will not result in eye-to-eye contact, as it may appear the individual is looking away from the camera (Salmons, 2010). Virtual eye contact is established when interactions come as close as possible to direct visual contact and best achieved through closer positioning of camera to face.

Sharing Findings *and* Methods

Qualitative researchers employing VoIP as a remote interview method have an obligation to be explicit about the relationship of the technology to the study. An emerging technologic method must be explored and examined in the context of actual usage to be meaningful. The significance of not only the research, but also the Internet research method and how they are linked should be articulated in dissemination of findings. The drivers for choosing VoIP to

conduct interviews as well as alignment with study purpose can be identified, as well as a reporting of the process. The ultimate purpose is to validate the method in it's own right rather than continuing notions that it is a lesser, but appropriate option in some circumstances. In an attempt to validate the method, there can also be exploration of specific and unique researcher skills needed to employ it.

A comprehensive checklist of considerations for utilizing VoIP interviews in research is presented in Table 3-2. The considerations were synthesized from the literature and the practical experience of conducting the study. Appropriate use of the technology must be clear from design through dissemination phases. Asking the right questions in the design phase creates the foundation for scientific merit and supports all choices made in the study (Salmons, 2010). Practical tips for implementation of technology should be viewed as supplemental, but crucial to usual preparation of interview questions and personal skills for facilitating the interview (Salmons, 2010). Finally, design decisions, implementation processes, and evaluation of the method by researcher and participants should be revealed in the dissemination of findings.

Table 3-2. *Checklist for Utilizing VoIP Videoconference Interviews in Qualitative Research*

Design Questions	Implementation Strategies	Dissemination Activities
✓ Is there a clear motivation/rationale for choosing remote interviews in the study? ✓ Does the VoIP interview method align with study purpose? ✓ Is use of the technology appropriate for the population or does it create sampling bias? ✓ What is the tech-literacy level and access of the potential participants? ✓ Does sampling criteria reflect additional information that	✓ Clarify intentions for VoIP voice or video call, confirm access and skill ability, and make sure consent covers what you are recording. ✓ Confirm arrangements regarding call initiation (can be done via email). ✓ Discuss contingency plans for call re-initiation in case of poor connection or disconnection. ✓ Be flexible and have a back up plan. ✓ Consider researcher setting and what will be visible in the	✓ Describe why VoIP was chosen to facilitate interviews in the study. ✓ Describe sampling criteria and include the possibility of sampling bias in limitations ✓ Describe the process and any adjustments needed based on technology use. ✓ Describe participant response to use of technology.

Design Questions	Implementation Strategies	Dissemination Activities
addresses the technology? ✓ Are there limitations of the technology that affect interview style? ✓ Does the consent process include collection of video images if applicable?	screen shot. ✓ Use full screen option for maximizing the realistic visual appearance. ✓ Be patient if lag time or dropped calls occur. ✓ Use headphones with built in microphone to help minimize feedback and improve call/recording quality.	

Patton (2002, p. 341) reminds us "the quality of information obtained during an interview is largely dependent on the interviewer." Onwuegbuzi et al. (2010) have called for an era of methodological innovation for approaching reflexivity and technology in qualitative research. In such an era of methodological innovation, the quality of information may also be significantly dependent upon appropriate interviewer use of technology. Critical self-reflection on the researcher's role in use of technology for interviews and how it impacts the entire process becomes an important form of reflexivity.

Conclusion

Creativity and technologic advances have led to multiple options for qualitative researchers. In this manuscript we described the methodological, ethical, and practical considerations in using VoIP videoconferencing for interviews, including a checklist of design, implementation and dissemination issues. Advantages of VoIP videoconferencing include the ability to recreate the synchronous, visual experience of an interview interaction with low costs and greater geographic reach. VoIP is a feasible option for remote interviews; however, consideration of study purpose and sample access is essential. Use of VoIP for remote online interviews is an emergent method and as such, there are no standards for review (Salmons, 2010;

2012). Researchers are challenged to create a coherent discussion of technology use, demonstrate alignment with the method in terms study purpose, design, and implementation, and reflect the efficacy of technology use in dissemination activities.

Summary and Conclusions

This collection of manuscripts represents an initial inquiry into nurse faculty relationships and includes a report on use of technology to enable distance qualitative interviews while preserving the face-to-face qualities valued by researchers. Applying a new theoretical lens to the concept of mentoring in inquiry allows for emphasizing gaps and assumptions in understanding. Further, it provides fresh insight into important elements for facilitating mentoring relationships. The addition of VoIP for distance interviewing of participants in the study provides an opportunity for methodological inquiry and highlights a technology that can also be used to create connections between protégés and mentors.

Summary of Findings

The integrative review of research literature regarding nurse faculty mentoring confirmed the overwhelming need for mentorship of nurse faculty than spans a career from initial transition to academics, and into research, scholarship, and leadership roles within nursing academe. Further, it must be structured in some way through faculty development programs. The predominant assumption in academic nurse research literature is that mentoring is a hierarchical relationship between 2 individuals. The relationship is usually externally mediated, assigned with arbitrary criteria such as interest or personality type. Holding this view severely limits the possibilities for long-term professional growth across academic domains of teaching, service, practice, and research. Opportunities for geographically, institutionally, and professionally diverse relationships for mentorship should be facilitated through faculty development programs, yet the evidence for best structure is lacking. There are numerous opinion and case reports in the literature that have led to unsupported assumptions about faculty mentoring. Continued reliance

on antiquated notions of the protégé-mentor relationship will not result in the type of varied support and use of the network approach new generations of nurse faculty require.

The paucity of research on nurse faculty mentoring represented in the review highlights the need for further exploration of relationships with respect to needs, strategies, initiation behaviors, and outcomes. Using a developmental network perspective offers multiple opportunities for inquiry. There has been conceptual evolution of mentoring from a dyadic, hierarchical structure to multiple and evolving network relationships that facilitate initiation of diverse, meaningful, and effective relationships. Mentoring of nurse faculty is central to the mission of faculty orientation and development, but effective structure and best practices have evolved without evidence for best practices.

The reported study in manuscript two identifies new information regarding nurse faculty experiences of mentoring and highlights the inadequacy of formally assigned mentors in creating successful, long term mentoring relationships as they seemingly intend. Study participants acknowledged a desire for mentoring and noted the essential contribution of mentoring to career development. However, participants differentiated between initial task-oriented essentials and career-oriented relationships, thus indicating an evolution in need. Nurse faculty in the study were acutely aware of both their task and scholarship needs and were assertive in meeting those needs. Structure for mentoring was considered to be important, but formally matched mentors were not successful or effective, leaving participants dissatisfied and seeking other sources for information and support. Thus an approach to facilitating mentoring and network building that helps protégés know what, who, and how to ask in planning faculty development is warranted.

Traditional and receptive networks with the following characteristics; 1) small networks with few, homogenous mentors, or 2) larger networks, with low relationship strength were

reflected in study results. Although gender and race were not significant influencers of mentoring relationships for the participants in this study, the desire to increase diversity in the both the profession and professoriate mandates further exploration in this area. The faculty considered minorities in this sample did convey seeking extra-organizational connections for scholarship-oriented development, contributing to network structure, perhaps again differentiating tasks from socialization or mentoring.

Most important to faculty was a sense of safety in approaching mentors with questions or for guidance. If they felt rebuked or that the information received was not helpful in meeting their needs, they sought mentoring elsewhere. Establishing a connection was viewed as an important element in effective mentoring relationships. The sense of a connection was fostered by perceptions of the mentor functioning beyond what their obligation might be and the protégé being able to offer something back to the mentor in the relationship, highlighting the importance of mutuality and reciprocity. A final key finding in study participants was the motivation to participate as a mentor for others either because they remember how difficult their initial experiences were, or how well mentored they were during transition.

The last paper in the compendium is a methodological reflection on use of VoIP for interviews of faculty in the reported study. Advances in technology have enhanced opportunities for researchers to conduct qualitative interviews with research participants. Methodological considerations for using VoIP videoconference interviews based on current literature, researcher and participant experiences for using VoIP videoconference interviews span design, implementation and dissemination activities. There are distinct advantages of VoIP video-conferencing; most importantly researchers have the ability to achieve a synchronous, visual interview experience with low costs and greater geographic reach. In study design, congruence

with study purpose and potential limitations of the sample must be considered. Study participants self-selected according to access and comfort level with the technology, which was appropriate for the population of interest, but technology access may unintentionally limit the potential sample. During implementation, researchers must consider the connection they are making with participants just as in a face-to-face encounter, but with additional attention to monitor positioning and connectivity. Dissemination activities include robust examinations of the technology as VoIP enabled videoconference interviews are an emergent method and should be subject to methodological inquiry. Manuscript three contributes to ongoing discussions of feasibility and efficacy of the method in terms study purpose, design, and implementation.

Limitations

There are limitations to this initial inquiry. The focus of this inquiry has been protégé centered, just as the constellation of mentors is centered on the protégé. In this model, the protégé determines needs and labels the type of support different mentors may provide therefore beginning inquiry with protégé perspective is warranted. Yet the mentor perspective is valuable and should not be neglected in future exploration. Because ideally, relationships in the network are reciprocal, mentor attitudes and experiences are important to examine. Mentor perceptions of protégé developmental initiation would also be helpful in educating new faculty in appropriate help seeking behaviors.

The research in the integrative review and study is limited by the single researcher point of view in data collection and analysis. Sampling bias in the study may be present related to technology access and self-selection for the study based on overwhelmingly positive or negative mentoring experiences. While the study sample size is small, the purposeful diversity of

participants allows for some generalizability. This initial investigation creates a foundation for future inquiry with broader scope and specific purposes.

Future Directions for Inquiry

Use of the Developmental Network Theory allows for further investigation of mentoring relationships in new and specific ways. The research reported in this study is an important first step toward a new understanding of mentoring that can prompt future investigation. With respect to the theory itself, methods to enhance identification of mentors in the network and valid scales to measure developmental support should be research initiatives.

Although matched dyads based on common interests and personalities is the norm in formal mentoring programs, the influence of demographic or psychological characteristics has not been evaluated, especially in the context of developmental network structure, processes, or outcomes. The possibility of determining optimal matches might exist, but without evidence, guessing about common interests and personality, or even gender and ethnicity/race to facilitate relationships is, at best, a random attempt. Similarities may initially draw mentors and protégés together, but differences can stimulate learning and growth for both parties (Fletcher & Ragins, 2007). Examination of dysfunctional mentoring relationships for effect on future relationship initiation behaviors on part of the protégé, motivation to engage in in new relationships on the part of both mentor and protégé, as well as career development outcomes would be interesting and informative. This type of information could help in better identifying measurable characteristics of quality mentor-protégé connections.

Qualitative inquiry can refine key concepts and dimensions for survey development allowing for empirical measurement of specific behaviors within the mentoring relationship. Identifying drivers of developmental seeking behaviors as well as self-awareness of needs can

contribute to faculty development program design with organizational supporting structure for appropriate engagement with mentors. The relationship of self-reflection skills in determining needs for the protégé and motivation to engage in mentoring relationships for mentors is of interest. Additionally, personal characteristics or communication styles that influence developmental relationships may be examined for influence on initiation and outcome.

de Janasz and Sullivan (2004) suggest that academic careers are no longer linear in progression, but with increasing faculty mobility there may be a series of learning cycles as an individual moves from project to project. These influences could be considered in applying a competency-based approach to network development and "mentor for the moment" interactions, which are evaluated for effectiveness. Further, longitudinal studies of network evolution could be important in identifying needs and linking network type to productivity or other professional outcomes over the course of an academic career.

Organizational culture and administrative support are influencers of effective network development, but specific organizational characteristics and their impact on outcomes has not been explored. General benefits of mentoring are known, but because network structure can now be understood in terms of strength and diversity, it may be possible to identify to determine specific individual and organizational outcomes of different network types. Organizations could experience greater scholarly productivity as a result of fostering intra and extra organizational mentoring relationships in diverse developmental networks for nurse faculty.

Exploration of the mentor role is also important in understanding their perceptions of the type and amount of development support they provide. Misalignment in protégé and mentor expectations or perceptions of their individual relationship within the network, and can have effects on the network structure itself with respect to interconnected relationships in the

constellation. A focus on mentor outcomes for investigation would also contribute to understanding of mutuality in the relationships.

Finally, the impact of technology in shaping developmental networks is intriguing. Studying the various ways technology influences relationship initiation, communication, and engagement between protégé and mentors allows for determination of the impact in network strength and diversity. In the reported study, proximity was a key variable in protégés determining where to seek help, but in this millennium, proximity may no longer be established by geography alone. Comparison of physical face-to-face contact and protégé-mentor contact mediated by technology to replicate face-to-face interactions for effect on strength of tie, and subsequent network structure would be valuable.

Further inquiry is necessary for establishing best practices for nurse faculty mentoring using the developmental network perspective. Faculty orientation and development programs must be structured to: 1) facilitate optimal self- reflective skills and proactive, savvy developmental seeking behaviors in protégés, 2) demonstrate alignment of strategies and goals for mentoring relationships, 3) enable evaluation of outcomes, and 4) establish visible administrative support for mentors and protégés. Helping nurse faculty take advantage of globalization and technologic advances in developing effective networks, and maximizing social capital for career development and support is the key. There are many opportunities to develop knowledge in this area, and the importance of facilitating productive, collaborative mentoring relationships in cultivation of a developmental network for nurse faculty cannot be understated as we strive to provide excellent education of future nurses in a dynamic health care environment.

Contributions to Science and Nursing

Collectively the manuscripts in this compendium reflect the essential, complex nature of and lack of evidence for facilitating nurse faculty mentoring. Additionally, the ineffectiveness and dissatisfaction with formally matched dyads for the purpose of mentoring is duly noted. Rarely do formally assigned mentors evolve into the developmental relationships that enhance networks.

If mentoring is an imperative for addressing the shortage and supporting future generations of nurse faculty, it is also vital we provide evidence for the most cost-effective and sustainable ways to promote productive, satisfying careers in nursing academia. This research provides the first evidence that formally matched relationship initiation can limit network structure and negatively impact protégés. The challenges facing nurse faculty are great: mentors and protégés overwhelmed by academic roles and responsibilities prohibiting connections with others that are mutually beneficial, and administrations struggling with limited resources yet charged with educating the future nursing workforce. Yet the general benefits and far-reaching effects of mentoring are evident. Mentoring should be encouraged within an academic organizational culture supportive of protégés and mentors, but based on the best evidence. Incorporating a developmental network perspective of encouraging diverse and multiple mentors who are motivated to engage in relationships, protégés with strong awareness of needs and skillful relationship seeking and building skills, in a collaborative, collegial organizational environments can strengthen the professoriate.

Appendix

Literature Matrix

Qualitative Studies

Reference & Purpose	Definition of Mentoring	Relationship Antecedents/Context (Initiation)	Mediating Processes (Facilitators & Barriers)	Network Structure (Strength & Diversity)	Developmental Outcomes
Anibas, Brenner & Zorn (2009) *To describe the experiences versus expectations and needs of novice teaching staff with respect to mentoring.*	An actively pursued, multidimensional, evolutionary, long-term relationship that changes over time and is grounded in feelings of trust and a connection and differentiated from a preceptor (helping to organize forms and assignments).	Formal orientation or preceptorship, but no participants described a long-term naturally occurring relationship.	Barrier: Protégé hesitancy in seeking help due to heavy workload of potential mentors.	Not specifically identified, senior faculty answering questions on an as needed basis.	Dialogue and networking facilitated resource sharing.
Hubbard, Halcomb, Foley & Roberts (2010) *To explore barriers and facilitators of mentoring relationship for nurse educators.*	A process of coaching and advising aimed at enhancing personal and professional growth and development.	Not identified. 72% of participants reported being in some type of mentoring relationship.	Barriers: lack of time and availability, horizontal violence, non-supportive environment, incompatibility, fear and insecurity, disinterest in process, and lack of formal plan. Facilitators: supportive environment, collegiality, accessibility of mentor, structured, formal mentoring structure with defined goals and outcomes.	Not identified.	Hypothesized the potential to produce committed, qualified, caring professional faculty.
Turnbull (2010) *To explore*	A guiding and helping relationship of depth and duration	Formal or informal.	Barrier: Lack of qualified mentors	Dyadic.	Potential to positively impact professional

Reference & Purpose	Definition of Mentoring	Relationship Antecedents/Context (Initiation)	Mediating Processes (Facilitators & Barriers)	Network Structure (Strength & Diversity)	Developmental Outcomes
the relationship of mentoring to scholarly productivity.	between an advanced career person and a less experienced faculty person, encompassing personal and professional domains. Administrative mentoring differentiated from mentoring for scholarship.				development
White, Brannan & Wilson (2010) *To describe the experiences of protégés who participated in a year-long mentorship program.*	None.	Formal, protégés given input in assignment of mentoring dyads	Facilitator: Deliberate and planned activities over time in a formal program, reciprocal relationships with open communication	Dyadic. Biweekly contact and submission of a journal once a month encouraged.	Successful transition to academia
Wilson, Brannan & White (2010) *To describe the experiences of mentors who participated in a year-long mentorship program.*	None.	Formally matched, one mentor, 2 proteges.	Facilitators: connectedness, open face-to-face communication, collegiality, reciprocity, formal structure Barrier: Mentors balancing an egalitarian relationship while sharing knowledge within constraints of a heavy workload, distance from protégé	Dyadic.	Sharing of wisdom,

Quantitative Studies

Reference & Purpose	Definition of Mentoring	Relationship Antecedents/ Context (Initiation)	Mediating Processes (Facilitators & Barriers)	Network Structure (Strength & Diversity)	Developmental Outcomes
Gwyn (2012) *To examine the relationship of mentoring quality and occupational commitment.*	None.	Matched senior and new faculty members for both formal and informal mentoring.	Not identified.	Dyadic.	Mentoring does not enhance occupational commitment, but the quality of mentoring improves emotional career attachment.
Rawl & Peterson (1992) *To analyze the influence of mentoring on career development of nurse educator administrators.*	The process by which a more experienced person guides and nurtures a younger one, instrumental for career progress.	Not identified.	Influencers: attitudes of participants, needs characteristics, willingness to help, kinds of help requested and received and impact, timing of the experience within the protégés career, and organizational environment.	Dyadic.	Greater variety and assistance provided by mentor, improves protégé satisfaction with mentoring relationship, correlated with higher the number of publications.
Short (1997) *To determine participation in mentoring relationships, perceived importance of mentoring functions, and the influence of administration.*	Mentoring described in terms of psychosocial and career functions.	Not identified.	Barrier: no opportunity to develop a mentoring relationship, potential mentors threatened by knowledge and expertise Facilitator: having a mentor	Multiple, evolving mentors with higher positions, some in the same institution as well as extra-organizational and interdisciplinary, most hierarchical.	Mentors extremely helpful in professional, career development, but also role-modeling, networking and education. Positive responses to having served as a mentor.
Smith, Hecker-Fernandes, Zorn & Duffy (2012) *To describe perceptions of*	Mentoring, differentiated from precepting, as a long term, evolutionary, career focused, meaningful relationship focused	Not identified.	Early career facilitators: a welcoming community	Not identified.	Healthier organizational environment, sense of belonging, personal and professional

Reference & Purpose	Definition of Mentoring	Relationship Antecedents/ Context (Initiation)	Mediating Processes (Facilitators & Barriers)	Network Structure (Strength & Diversity)	Developmental Outcomes
mentoring and precepting during career phases and organizational support for mentoring needs.	on professional success beyond the institution.				development, successful professional trajectory. Late career dissatisfaction with mentoring.
Taylor (1992) *To assess the frequency, characteristics, and importance of the mentor-protégé relationship.*	An important relationship with a more experienced individual providing teaching, guidance, and support in facilitating the professional growth and development of a colleague.	20.9% established a mentoring relationship though assignment as a part of a structured institutional program.	Facilitator: Discussion in development programs on selecting a mentor, benefits and process of the relationship, how to be an effective mentor, mentor integrity, professional values, trustworthiness, mastery of concepts and hard work ethic.	60% reported having at least one mentor.	Positive and pivotal benefits, but mentors did not strongly influence research or scholarship endeavors.
White (1988) *To determine perceptions of mentoring in career development and success of academic nurse administrators.*	Guidance and support from another individual related to career development issues.	Voluntarily initiated mutually or by the mentor	Similar personalities not essential for success.	Majority reported having significant career mentors, one or more individuals who assisted them in some way.	Protégés may be more likely to serve as mentors in the future than those not mentored.
Williams & Blackburn (1988) *To determine the extent to which mentoring relationship between senior and junior faculty influence*	A multidimensional phenomenon with an accomplished senior faculty mentor as advocate, encourager, and organizational socializer to further productivity.	Self identified, voluntary, informal.		Dyadic, majority with similar backgrounds, interests, gender and ethnicity.	Mentoring alone does not produce scholarly output, but role specific mentoring, working together on a project predicts research-oriented productivity.

Reference & Purpose	Definition of Mentoring	Relationship Antecedents/ Context (Initiation)	Mediating Processes (Facilitators & Barriers)	Network Structure (Strength & Diversity)	Developmental Outcomes
productivity, intuitional support of mentoring influences mentoring, productivity and outcomes.					

Mixed Method Studies

Reference & Purpose	Definition of Mentoring	Relationship Antecedents/ Context (Initiation)	Mediating Processes (Facilitators & Barriers)	Network Structure (Strength & Diversity)	Developmental Outcomes
Kavoosi, Elman & Mauch (1995) *To investigate the relationship between senior nursing faculty mentoring activities and support provided by nursing program administrators.*	A significant, powerful personal, emotional relationship between an older, experienced, trusted individual and a younger person for nurturing, support and personal/career development.	Most faculty reported informal mentoring networks with mentors choosing to participate out of a sense of professional identity, not from a directive.	Most prevalent mechanism for rewarding mentors are informal. Administrative support for faculty mentoring through formal programs did not impact the extent of reported mentoring activities	Dyadic, high strength.	Career skills with a personal growth component.
Sawatzky & Enns (2009) *To complete a mentoring needs assessment of faculty in establishing a formal mentoring program.*	A relationship of 2 people, one with greater rank and experience/expertise, caring, counseling, guiding and helping the other in both career and psychosocial functions.	Primarily informal mentoring experiences, yet advocate for a formal, structured program.	Barriers: lack of time and infrastructure support.	Not identified.	Improved teaching practices, help with scholarly productivity, opportunity for sharing and evaluation.
Turnbull & Roberts (2005) *To examine the experience of mentoring for nurse academics related to scholarly productivity.*	A positive strategy supporting scholarly productivity.	Formal and informal.	Barriers: workload of teaching, lack of incentive, climate of non-support Facilitators: a culture of caring and productivity	Participants reported mentorship originating from more than one place, primarily from in the discipline. Nearly half of participants reported strong relationships (strength not defined).	Majority report mentoring as highly facilitative of scholarly productivity.

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References

American Association of Colleges of Nursing. (2012). *Nursing Faculty Shortage Fact Sheet.* Retrieved November 25, 2012 from www.aacn.nche.edu/Media/FactSheets/FacultyShortage.htm

American Nurses Association. (2001). *Code of Ethics for nurses with interpretive statements.* Retrieved October 14, 2011 from http://www.nursingworld.org/MainMenuCategories/EthicsStandards/Code ofEthicsforNurses/Code-of-Ethics.aspx

Anderson, J. K. (2009). The work-role transition of expert clinician to novice nurse educator. *Journal of Nursing Education, 48*(4), 203-208.

Anibas, M. Brenner, G. H. & Zorn, C. R. (2009). Experiences described by novice teaching academic staff in baccalaureate nursing education: A focus on mentoring. *Journal of Professional Nursing, 25*(4), 211-217.

Barksdale, D., Woodley, L., Page, J., Bernhardt, J., Kolowitz, V. & Oermann, M. (2011). Faculty development: Doing more with less. *The Journal of Continuing Education in Nursing, 42*(3), 1-8.

Berk, R. A., Berg, J., Mortimer, R., Walton-Moss, B. & Yeo, T. P. (2005). Measuring the effectiveness of faculty mentoring relationships. *Academic Medicine, 80*(1), 66-71.

Billings, D. & Kowalski, K. (2008). Developing your career as a nurse educator: The importance of having (or being) a mentor. *The Journal of Continuing Education in Nursing, 39*(11), 490-491.

Blauvelt, M. J. & Spath, M. L. (2008). Passing the torch: A faculty mentoring program at one school of nursing. *Nursing Education Perspectives, 29*(1), 29-33.

Boyden, K. (2000). Development of new faculty in higher education. *Journal of Professional Nursing, 16*(2), 104-111.

Byrne, M. W. & Keefe, M. R. (2002). Buidling research competence in nursing through mentoring. *Journal of Nursing Scholarship, 34*(4), 391-396.

Cangelosi, P., Crocker, S. & Sorrell, J. (2009). Expert to novice: Clinicians learning new roles as clinical nurse educators. *Nursing Education Perspectives, 30*(6), 367-371.

Cash, P., Daines, D., Doyle, R. M. & von Tettenborn, L. (2009). Quality workplace environments for nurse educators: Implications for recruitment and retention. *Nursing Economic$, 27*(5), 315-321.

DalPezzo, N. K. & Jett, K. T. (2010). Nursing faculty: A vulnerable population. *The Journal of Nursing Education, 49*(3),132-136.

Danna, D., Schabaut, R. M. & Jones, J. R. (2010). From practice to education: Perspectives from three nurse leaders. *The Journal of Continuing Education in Nursing, 41*(2), 83-87.

Dattilo, J., Brewer, M. & Streit, L. (2009). Voices of experience: Reflections of nurse educators. *The Journal of Continuing Education in Nursing, 40*(8), 367-370.

de Janasz, S. C. & Sullivan, S. (2004). Multiple mentoring in academe: Developing the professorial network. *Journal of Vocational Behavior, 64*, 263-283.

Dempsey, L. M. (2007). The experiences of Irish nurse lecturers role transition from clinician to educator. *International Journal of Nursing Education Scholarship, 4*(1), article 13.

Dobrow, S. R., Chandler, D. E., Marcinkus, W., & Kram, K. E. (2011). Developmental networks and mentoring: A review, prospects, and agenda. *Journal of Management,* DOI: 10.1177/0149206311415858.

Dunham-Taylor, J., Lynn, C. W., Moore, P., McDaniel, S. & Walker, J. K. (2008). What goes around comes around: Improving faculty retention through more effective mentoring. *Journal of Professional Nursing, 24*(6), 337-346.

Fletcher, J. K., & Ragins, B. R. (2007). Stone center relational cultural theory: A window on relational mentoring. In B. R. Ragins & K. E. Kram (Eds.), *The handbook of mentoring at work: Theory, research and practice* (pp. 373–399). Thousand Oaks, CA: Sage.

Garbee, D. & Killacky, J. (2008). Factors influencing intent to stay in academia for nurse faculty in the Southern United States of America. *International Journal of Nursing Education Scholarship, 5*(1), article 9.

Glass, N. (2001a). The dis-ease of nursing academia: Putting the vulnerability 'out there' (Part 1). *Contemporary Nurse, 10*(3-4), 172-177.

Glass, N. (2001b). The dis-ease of nursing academia: Putting the vulnerability 'out there' (Part 2). *Contemporary Nurse, 10*(3-4), 178-186.

Glass, N. (2003a). Studying women nurse academics: Exposing workplace violence in Australia (Part 1). *Contemporary Nurse, 14*(2), 180-186.

Glass, N. (2003b). Studying women nurse academics: Exposing workplace violence in Australia (Part 2). *Contemporary Nurse, 14*(2), 187-195.

Gwyn, P. (2012). The quality of mentoring relationships' impact on the occupational commitment of nursing faculty. Journal of Professional Nursing, 27(5), 292-298.

Hanna, P. (2012). Using Internet technologies (such as Skype) as a research medium: A research note. *Qualitative Research, 12*(2), 239-242.

Hand, M. W. (2008). Formalized new-faculty orientation programs: Necessity or luxury? *Nurse Educator, 33*(2), 63-66.

Hay-Gibson, N. V. (2009). Interviews via VoIP: Benefits and disadvantages within a PhD study of SMEs. *Library and Information Research, 33*, number 105.

Hewson, C. (2007). Gathering data on the internet: Qualitative approaches and possibilities for mixed method research. In A. Joinson, K. McKenna, T. Postmes, and U. Reips (eds.), *The Oxford Handbook of Internet Psychology*. Oxford: Oxford University Press.

Higgins, M. C. & Kram, K. E. (2001). Reconceptualizing mentoring at work: A developmental network perspective. *Academy of Management Review, 26*, 264-268.

Higgins, M. C., Chandler, D. E. & Kram, K. E. (2007). Developmental initiation and developmental networks. In B. R. Ragins and K. E. Kram (Eds.), *The handbook of mentoring at work: Theory, research and practice* (pp. 349-372). Los Angeles: Sage Publications.

Hseih, H. & Shannon, S. E. (2005). Three approaches to qualitative data analysis. *Qualitative Health Research, 15*, 1277-1288.

Hubbard, C., Halcomb, K., Foley, B. & Roberts, B. (2010). Mentoring: A nurse educator survey. *Teaching and Learning in Nursing, 5*(4), 139-142.

Kavoosi, M. C., Elman, N. S. & Mauch, J. E. (1995). Faculty mentoring and administrative support in schools of nursing. *Journal of Nursing Education, 34*(9), 419 – 426.

Kazmer, M. & Xie, B. (2008). Qualitative interviewing in Internet studies: Playing with the media, playing with the method. *Information, Communication & Society, 11*(2), 257-278. DOI: 10.1080/13691180801946333

King, N., & Horrocks, C. (2010). *Interviews in qualitative research*. London: Sage Publications.

Kram, K. E. (1985). *Mentoring at work: Developmental relationships in organizational life.* Glenview, IL: Scott Foresman.

Martin, C. & Hodge, M. (2011). A nursing department faculty-mentored research project. *Nurse Educator, 36*(1), 35-39.

Matthews, J. & Cramer, E. P. (2008). Using technology to enhance qualitative research with hidden populations. *The Qualitative Report, 13*(2), 301-315. Available at http://www.nove.edu/ssss/QR/QR13-2/Matthews.pdf.

McArthur-Rouse, F. J. (2008). From expert to novice: An exploration of the experiences of new academic staff to a department of adult nursing studies. *Nursing Education Today, 28*, 401-408.

McDonald, P. J. (2010). Transitioning from clinical practice to nurse faculty: Lessons learned. *Journal of Nursing Education, 49*(3), 126-131.

Mkandawire-Valhmu, L., Kako, P. M. & Stevens, P. E. (2010). Mentoring women of color in nursing academia: Creating an environment that supports scholarly growth and retention. *Nursing Outlook, 51*, 135-141.

Morin, K. H. & Ashton, K. C. (2004). Research on faculty orientation programs: Guidelines and directions for nurse educators. *Journal of Professional Nursing, 20*(4), 239-250.

Mundt, M. (2001). An external mentor program: Stimulus for faculty research development. *Journal of Professional Nursing, 17*(1), 40-45.

National League for Nursing. (2006). *Mentoring of nurse faculty.* [Position statement]. [Online]. Available at: www.nln.org/aboutnln/PositionStatements/index.htm. National League for Nursing. (2010). *2010 NLN Nurse Educator Shortage Fact Sheet.* Retrieved October 1, 2011 from www.nln.org/governmentaffairs/pdf/NurseFacultyShortage.pdf

Novick, G. (2008). Is there bias against telephone interviews in qualitative research? *Research in Nursing and Health, 31*, 391-398.

Onwuegbuzie, A., Leech, N. & Collins, K. (2010). Innovative data collection strategies in qualitative research. *The Qualitative Report, 15*(3), 696-726. Available at: http://www.nova.edu/ssss/QR/QR15-3/onwuegbuzie.pdf

Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd. ed.). Thousand Oaks, CA: Sage Publications, Inc.

Peel, E., Parry, O., Douglas, M & Lawton, J. (2006). "It's no skin off my nose": Why people take part in qualitative research. Qualitative Health Research, 16(10), 1335-1349.

Pew Internet and American Life Project. (2010). *Home broadband 2010.* Available at: http://pewintrnet.org/Reports/2010/Home-Broadband-2010.apsx

Pew Internet and American Life Project. (2011). Available at: http://pewinternet.org/Reports/2011/13--Internet-phone-calls--Skype.apsx

Race, T. K. & Skees, J. (2010). Changing tides: Improving outcomes through mentorship on all levels of nursing. *Critical Care Nursing Quarterly, 33*(2), 163-174.

Ragins, B. R. & McFarlin, D. B. (1990). Perceptions of mentor roles in cross gender mentoring relationships. *Journal of Vocational Behavior, 37,* 321-339.

Rawl, S. & Peterson, L. (1992). Nursing education administrators: Level of career development and mentoring. Journal of Professional Nursing, 8(3), 161-169.

Records, K. & Emerson, R. (2003). Mentoring for research skill development. *Journal of Nursing Education, 42*(12), 553-557.

Salmons, J. (2012). *Cases in online interview research.* Thousand Oaks, CA: Sage Publications, Inc.

Salmons, J. (2010). *Online Interviews in realtime.* Thousand Oaks, CA: Sage Publications, Inc.

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health, 23,* 334-340.

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health, 33,* 77-84.

Saumure, K. & Given, L. *Using Skype as a research tool: Lessons learned from qualitative interviews with distance students in a teacher-librarianship program.* Retrieved October 15, 2012 from http://lrsv.umd.edu/abstracts/Saumure_Given.pdf.

Sawatzky, J. V. & Enns, C. L. (2009). A mentoring needs assessment: Validating mentorship in nursing education. *Journal of Professional Nursing, 25*(3), 145-150.

Schriner, C. L. (2007). The influence of culture on clinical nurses transitioning into the faculty role. *Nursing Education Perspectives, 28*(3), 145-149.

Shirey, M. R. (2006). Stress and burnout in nursing faculty. *Nurse Educator, 31*(3), 95-97.

Short, J. (1997). Profile of administrators of schools of nursing, part II: Mentoring relationships and influence activities. *Journal of Professional Nursing, 13*(1), 13-18.

Siler, B. B & Kleiner, C. (2001). Novice faculty: Encountering expectations in academia. *Journal of Nursing Education 40*(9), 397-403.

Smith, J. A. & Zsohar, H. (2007). Essentials of neophyte mentorship in relation to the nursing shortage. *Journal of Nursing Education, 46*(4), 184-186.

Smith, S., Hecker-Fernandes, J., Zorn, C. & Duffy, L. (2012). Precepting and mentoring needs of nursing faculty and clinical instructors: Fostering career development and community. *Journal of Nursing Education, 51*(9), 497-503.

Snelson, C., Martsolf, D., Dieckman, B., Anaya, E., Catechine, K., Miller, et al. (2002). Caring as a theoretical perspective for a faulty mentoring program. *Nurse Education Today, 22*(8), 654-660.

Stewart, B. & Krueger, L. (1996). An evolutionary concept analysis of mentoring in nursing. *Journal of Professional Nursing, 12,* 311-321.

Suplee, P. D. & Gardner. (2009). Fostering a smooth transition into the faculty role. *The Journal of Continuing Education in Nursing, 40*(11), 514-520.

Taylor, L. J. (1992). A survey of mentor relationships in academe. *Journal of Professional Nursing, 8*(1), 48-55.

Triolo, P., Pozehl, B. & Mahaffey, T. (1997). Development of leadership within the university and beyond: Challenges to faculty and their development. *Journal of Professional Nursing, 13*(3), 149-1553.

Turnbull, B. (2010). Scholarship and mentoring: An essential partnership? *International Journal of Nursing Practice, 16,* 573-578.

Turnbull, B. & Roberts, K. (2005). Nurse academics' mentorship: Rhetoric or reality? *Collegian, 12*(2), 33-38.

White, J. F. (1988). The perceived role of mentoring in the career development and success of academic nurse administrators. *Journal of Professional Nursing, 4*(3), 178-185.

White, A., Brannan, J. & Wilson, C. B. (2010). A mentor-protégé program for new faculty, Part 1: Stories of protégés. *Journal of Nursing Education, 49*(11), 665-671.

Whittemore, R. & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of Advanced Nursing, 52*(5), 546-553.

Wills, C. & Kaiser, L. (2002). Navigating the course of scholarly productivity: The protégés role in mentoring. *Nursing Outlook, 50,* 61-66.

Williams, R. & Blackburn, R. (1988). Mentoring and junior faculty productivity. *Journal of Nursing Education, 27*(5), 204-209.

Wilson, C. B., Brannan, J. & White, A. (2010). A mentor-protégé program for new faculty, Part 2: Stories of mentors. *Journal of Nursing Education, 49*(12), 601-607.

Zambroski, C. H. & Freeman, L. H. (2004). Faculty role transition from a community college to a research-intensive university. *Journal of Nursing Education, 43*(3), 104-108.