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This paper explores the connection between nursing research and mentorship. The importance of nursing research and the concept of mentoring are discussed based on a review of the literature. Using personal experiences of undergraduate research assistants, positive outcomes of mentorship are explained. Outcomes cited include collaborative effort on projects, future aspirations, preparedness for evidence-based practice, improved patient care, personal and professional development, and increased exposure and awareness of research. The relevance of mentoring to current and future nursing research is described.

Cover Page Footnote

The faculty sponsor of this paper is Elizabeth Gonzalez, PhD, APRN-BC.

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Abstract

This paper explores the connection between nursing research and mentorship. The importance of nursing research and the concept of mentoring are discussed based on a review of the literature. Using personal experiences of undergraduate research assistants, positive outcomes of mentorship are explained. Outcomes cited include collaborative effort on projects, future aspirations, preparedness for evidence-based practice, improved patient care, personal and professional development, and increased exposure and awareness of research. The relevance of mentoring to current and future nursing research is described.

Introduction

The purpose of this article is to discuss and share our experiences as undergraduate Research Assistants (RAs) under the mentorship of nurse researchers at Drexel University. Prior to enrolling as students at Drexel, we had no concept of the educational advancement or research contributions of nurses. It did not occur to us that numerous opportunities are available for nurses outside patient care and teaching. Our idea of a researcher had always been the archetypal image of a scientist in a white lab coat performing experiments and searching for facts within books. In truth, nurses are engaged in scholarly activity and contribute significantly to promoting nursing science and the improvement of people's health. By exploring the evolution of nursing research – where it has come from and where it is headed – along with our own experiences of nurse researcher mentorship, we have learned to value the importance of research activities in our profession.

History of nursing research

In the 1860s, Florence Nightingale conducted the first research in nursing. She hypothesized that cleanliness was an important factor in preventing the spread of disease (Chitty, 2005). In 1946, the Division of Nursing in the Office of the Surgeon General, Public Health Service was created by the federal government as an initial step to address research in nursing. The first extramural nursing research program began in 1955. Investigators with ground-breaking ideas and substantial methodology were invited to submit applications to the Research Grants and Fellowship Branch of the Division of Nursing Resources, Bureau of Medical Services (NINR, 2007). Due to the increasing amount of applications submitted, the National Institutes of Health (NIH) created the Nursing Research

Study Section to review the submissions (NINR, 2007).

In April 1986, the National Center for Nursing Research (NCNR) was created to focus on nursing research (NINR, 2007). It was not until 1993 that the NCNR became the National Institute of Nursing Research (NINR) (NINR, 2007). The NINR was established based on recommendations from the Institute of Medicine (IOM), which proposed that nursing research should become a part of conventional behavioral and biomedical science; and the NIH Task Force, which concluded that nursing research was consistent with the NIH mission (2007), to lead the way in making medical discoveries that improve people's health and save lives.

Importance of nursing research

According to Morrison-Beedy, Aronowitz, Dyne & Mkandawire (2001) it is critical that students are exposed to education that promotes nursing as a science, which is best accomplished through mentoring in research projects. Nursing is a profession based on a scientific body of knowledge. It is understood that knowledge acquired from research when translated into practice contributes to nursing through improvement in patient outcomes and refinement in clinical skills, leading to improved standards of care. A recent study found that nurses did not understand nor value research and had no knowledge of where to find information to base their practices (Pravikoff, Tanner, & Pierce, 2005). Consequently, if nurses were mentored and informed of where to find the information to base their practices, they would be prepared to translate evidence-based information into their practice.

Mentoring

Mentors are individuals in possession of knowledge/expertise who willingly help another of less experience

to learn about the field in which they wish to pursue (Fawcett, 2002). Mentoring is a long-term, mutually beneficial relationship between two individuals that must be voluntary in order to function successfully (Morrison-Beedy et al., 2001). The mentee most likely views his or her mentor as a role model (Fawcett, 2002). A role model is one who possesses the qualities which the protégé or mentee wishes to emulate. A role model does not imply commitment or anything beyond a passive, personal admiration (Bidwell & Brasler, 1989). However, the mentor supersedes the role model in that there is an open relationship and communication involved. Careful thought informs the mentoring process and selection and there is a commitment involved on behalf of both parties.

For the undergraduate nursing student, mentoring is most often associated with a clinical setting. Mentoring is provided by an experienced staff nurse and/or clinical professor (van Eps, Cooke, Creedy, & Walker, 2006). However, mentoring is most likely to evolve in graduate education, since research is emphasized more at this level (Byrne & Keefe, 2002). It is in the area of research where mentors can provide guidance to their students while promoting and facilitating their success (Morrison-Beedy et al., 2001).

Students are not the only group who require mentors. While faculty can play the role of mentor, they may also be in need of a mentor themselves. As a mentor, the role is obvious; a student or other faculty member consents to working with the mentor and receives the same long-term guidance and support as in any mentor-mentee relationship. Like students, faculty can participate in peer-to-peer mentoring. Senior researchers can mentor junior researchers for developing research programs, attending research conferences, and strengthening grant-writing skills (Records & Emerson, 2003). In the absence of traditional mentoring by senior faculty, junior faculty can mentor each other, or seek out interdisciplinary faculty for mentorship (Byrne & Keefe, 2002). Relationships such as those between senior and junior faculty often result in strengthened resources and increased productivity (Morrison-Beedy et al., 2001).

Mentor-mentee relationships are multifaceted, and while the result may be successful, problems may arise during the course of the experience. Students have cited positive qualities in mentors including approachability, a positive attitude, and being a role model (Wilkes, 2006). While mentors are valued for their teaching skills and desire to provide support, the mentors have cited problems, such as lack of resources or time and an inability to balance the many expectations set forth. (Wilkes, 2006). In order

for the relationship to be successful, both parties must be supportive and the goal must ultimately be the expansion of knowledge and the professional and personal growth of the mentee (Records & Emerson, 2003).

In order to produce competent nurse researchers, it is important to begin mentoring nurses early. Experienced faculty are in the position to create a basis for research with their students, to emphasize the relationship between research and nursing, and to inspire students to pursue higher education (Morrison-Beedy et al., 2001).

The Interdisciplinary Research Unit at Drexel University

The Interdisciplinary Research Unit (IRU) at Drexel University's College of Nursing and Health Professions was established in early 2006. Researchers were selected from different departments and their offices moved to one central location in an attempt to create a workplace environment where new and interdisciplinary research ideas would flourish. The principal idea behind the co-location of the researchers was a simple one. According to the Associate Dean for Research at Drexel University College of Nursing, Rita Naremore, the best way to socialize researchers from different departments and backgrounds was to remove barriers, the easiest being physical (Naremore, 2006). Careers in research have a tendency to isolate individuals, and the proximity of the faculty is critical to fostering synergy (Naremore, 2006). One of the key conditions for interdisciplinary research is communication. Through conversations and connections, researchers can bring new perspectives to one another and increase productivity among themselves (Committee on Facilitating Interdisciplinary Research, Committee on Science, Engineering, and Public Policy, National Academy of Science, National Academy of Engineering, & IOM, 2005).

Currently, the IRU includes one non-faculty project manager and 16 faculty members from the following departments: Nursing (ten), Couple and Family Therapy (two), Physical Therapy (one), Rehabilitation Sciences (one), Health Sciences (one), and Philosophy/Ethics (one).

In this environment, mentoring becomes an almost built-in component. Faculty openly communicate with one another about current plans and concerns, and knowledge is transferred as researchers from different backgrounds relate their experiences to each other. Researchers also regularly meet for peer mentoring sessions which are used for discussing current research plans. These sessions are a forum for constructive criticism, advice, and guidance, all of which is generated by an interdisciplinary perspective which renders the research increasingly comprehensive.

At the IRU, we as RAs have access to everything necessary to perform our activities. We have a shared office space and access to computers, internet telephone, fax machine, printer, scanner, photocopier, departmental printing charge cards, and the university library. Integral to the maintenance of the resources is the project manager to whom we can inquire about ordering additional supplies. Additional resources are derived from the allotment of funds from grants which are also handled by the project manager. The resources we have as research assistants allow us to efficiently perform tasks for the principal investigators (PIs) with whom we work.

It is also within this environment where the collaboration for this article arose. By working literally side-by-side, we are able to establish relationships and tap into each other's resources and knowledge to gain different perspectives. This has fostered a collaborative effort in carrying out a plan to record our views on mentoring and its relation to nursing research. We have both experienced mentorship with similar positive outcomes, raising our awareness of research and its relevance to patient care.

Role of a Research Assistant

At Drexel University, our time as research assistants (RA) are compensated through departmental budget (J.M.P.) and grant monies awarded to senior researcher (T.V.D.). The role of an RA entails various responsibilities that involve knowledge of the research process and training in research protocol. Duties include: literature searches using various databases and library resources and print materials, data entry collected from participants, verbal and written communications for the PI with other collaborators, participants and referral sources, knowledge of the institutions' policies and protocols, knowledge and understanding of the project, maintenance of files on participants, and participating in manuscript writing.

Skills in communication are critical in one's role as an RA. Communicating with the PI on a daily basis establishes the structure for what is required to be accomplished. The RA must also prioritize the assignments based on time and importance. An able RA is one who requires little supervision and thus allows the PI more time for executive management of the project (Morrison-Beedy et al., 2001).

Personal experiences

(J.M.P.) In my time as an RA at the IRU, I have had many experiences in peer-to-peer mentoring with fellow RAs. Working closely day in and day out with peers brings about conversations and new perspectives. We often offer advice to one another on topics, ranging from performing more efficient literature searches to working with citation managers, as well as tips for using word processors. As

a new RA, it was helpful to obtain guidance from more experienced RAs who informed me about certain aspects of the job, especially with regard to faculty expectations. In fact, it is a type of peer mentoring that inspired my work on co-authoring this article, because without my fellow RA (T.V.D.), it would not have been possible. The advice and guidance I have received from my peers has been invaluable; it is always a help to draw support from those around who understand your situation and are willing to communicate with you and offer assistance.

As an RA, I have had the pleasure of working for five nurse researchers at the IRU, as well as others on an as needed basis. Overall, I contribute to the productivity of the researchers by facilitating the various research projects on which I work. Performing literature searches, collecting and entering data, and making contact with participants are all part of my daily routine. The projects I have been engaged in included an adolescent obesity study, a study on adverse birth outcomes in minority women, a study on Human Immunodeficiency Virus (HIV), sleep, and depression in women, and a study on health in migrant farm workers.

My time is divided equally among the research projects, but my most unique experience has been working on a Chronic Obstructive Pulmonary Disease (COPD) and sleep study, a grant from Sigma Theta Tau International Honor Society Foundation awarded to Judith Reishtein, PhD, RN. The study examines sleep and neurobehavioral patterns in COPD patients.

My role in the COPD and sleep study allows me to support the PI's goal, which is to achieve a greater understanding of the effects of COPD. This understanding will provide more scientific knowledge about the disease, consequently further promoting the profession of nursing and care for patients with COPD. I have a great responsibility as an RA on this study and my time working on it has been an incredibly rewarding experience. What I have learned with regard to nursing research and personal development has been invaluable. This has been my most active role on a research project and the knowledge I have gained from this experience will have future implications – should I choose to pursue my own research.

Working as an RA in this context has been a unique experience in mentoring. My relationship with each of the faculty members I have worked with has been a "mentoring-like" relationship. As accomplished researchers, the faculty pass on their knowledge and experiences to me, a student with interest in their field. From this I have gained greater experience and responsibility with regard to independent decision-making as well as an increased development in

personal and professional responsibility. My knowledge of research and the basic skills for conducting research has increased significantly. In working with five different researchers, and hearing five different perspectives, I have gained distinctive insight on the research process.

(T.V.D.) Prior to enrolling at Drexel University, I had worked as a data collector for research projects at various universities. Upon hearing that nurses were conducting research, my curiosity was piqued. I was curious about the type of questions nurses are trying to solve and the type of research methods used.

Although I already possess the experience in data collection, I continue to gain experience and knowledge in every aspect of research from the conception of the idea to the dissemination of findings. I am currently involved in an intervention study for family caregivers of persons with Alzheimer's disease, a grant awarded to Dr. Elizabeth Gonzalez by the NINR. In addition to her status as a seasoned researcher, she has a private practice in adult psychiatric and mental health. I was trained to conduct interviews using the research protocol. In addition, my responsibilities include: literature searches, data entry from questionnaires, maintenance of files, correspondence with outside agencies, recruitment of participants, and scheduling interviews with participants.

Self motivation is necessary for assisting the PI. Although I am supervised and directed as to what my duties are, I have a great deal of independence. Time management, organization skill, interest in the project and creativity are necessary to be productive. I find that communication with respect to my ideas and thoughts is essential. With my mentor's input and guidance, I am learning the research process. Additionally, we also discuss why it is necessary to maintain consistencies in the research protocol. The one-on-one relationship with the PI allows this experience to be individualized. The supportive relationship with my mentor has helped build my confidence. Because I am challenged beyond my comfort level, especially in writing, I am starting to overcome my fears in this area. The nurturing atmosphere allows me to reflect on my weaknesses and strengths. It is with my PI's nurturing nudge that I am writing this paper.

Conclusions

Nursing research is integral to the continuation and advancement of nursing as a science. Understanding nursing research is important to all levels of nursing, which includes clinical, academic, and administrative levels. The most influential way to facilitate this understanding is through mentoring. As numerous authors have pointed out, the practice of mentoring has been shown to increase

appreciation of nursing research, motivation to pursue higher education, and knowledge on how to translate evidence-based information into practice. Mentoring is an essential tool for experienced researchers to transfer knowledge and ensure the future of nursing research (Byrne & Keefe, 2002).

There is little doubt that having a mentor for research is beneficial for the development of the mentee. The mentee gains knowledge and skills, enhanced confidence, and a more defined plan for career and educational advancement. Benefits for the mentor are equally as important, although less apparent. The mentor gains a greater sense of ability in using leadership skills, as well as the personal satisfaction of exerting beneficial influence upon the development of a novice (Lynn, 2006).

Peer mentoring is also an important facet of the mentoring experience. Through the support of peers, one can hope to gain confidence and positive self-esteem along with enhanced creativity (Byrne & Keefe, 2002). Informal peer mentoring relationships may lead to collaboration and may cross disciplines. Such has been the case in the authorship of this article, and such is the hope behind the IRU at Drexel University. Collaborative relationships allow new, comprehensive perspectives and openness among those involved, with a primary goal of increased productivity. Connections with peers create synergy and ultimately greater research output.

By relating our own experiences with various forms of mentoring, both among our peers and the faculty we work with, we have attempted to illustrate the positive effects it produces. Without the experience of mentoring, we may not have encountered nursing research first-hand, and we may not have fully realized its importance for nursing as a science. Our awareness of nursing research and the importance of mentoring and support have been raised through our experiences as research assistants. We agree with the notion that mentoring will ensure the future of nursing research. Our experiences as research assistants being mentored by nurse researchers at Drexel University has made us more cognizant of the need to pursue graduate education in nursing. There is a need to pass on the knowledge that accomplished researchers have gained, and there is a responsibility of those who are both mentors and mentees to continue the tradition of mentoring in order to establish a foundation of research in those who are less experienced. Mentoring is a beneficial experience for all involved, and the field of nursing overall will benefit from it as more prospective individuals move to the forefront of nursing research.

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