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Review Article

Family Nurse Practitioner Students' Knowledge and Experience of Health Literacy Strategies

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Abstract

Background: Health literacy is one of the best predictors of health status. The purpose of this pilot study was to determine first-semester Family Nurse Practitioner (FNP) students' knowledge and experience regarding health literacy because FNPs often care for the most vulnerable of populations. Most vulnerable populations have low health literacy and poorer health outcomes. A working knowledge of assessing health literacy and implementation strategies to address varying levels of health literacy is critical for improved patient outcomes in vulnerable populations.

Method: This descriptive correlational study used a convenience sample ($n = 35$) of first-semester FNP students at a public university. The Health Literacy Knowledge and Experience Survey was administered to first-semester FNP students to determine their health literacy knowledge levels.

Results: Students entering into an FNP program had limited knowledge about health literacy and the strategies needed to provide health care for patients with low health literacy.

Conclusion: Although FNP students have some health literacy knowledge and experience, there are significant gaps in both health literacy knowledge and experience.

Keywords: Family nurse practitioners; Health literacy

Introduction

Health literacy is not always visible. Health literacy has been defined as "The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate decisions" [1]. Limited health literacy is associated with increased health care use, poorer health outcomes, and increased health care costs. Approximately 90 million Americans are health illiterate and face serious challenges when seeking health care. Persistent arcane language and medical jargon compound the problem. The design and complexity of the health care system combined with culture and society, the educational system, and the capacity of an individual to communicate determine an individual's health literacy skills [2]. Therefore, it is incumbent upon providers to institute policies, strategies, and practices that

are designed to simplify and standardize health care delivery to enhance communication effectiveness during patient-provider encounters. As patient-centered care and interdisciplinary teams become the norm, health care providers need to have a working knowledge of health literacy, which will allow them to assess and implement strategies to address varying levels of health literacy.

Purpose

The purpose of this study is to assess the knowledge and experience of first-semester Family Nurse Practitioner (FNP) students regarding health literacy using the Health Literacy Knowledge and Experience Survey (HL-KES) [3]. This pilot study will determine the current health literacy knowledge and experience of FNPs in the University of North Carolina Wilmington program. This will enable the development and implementation of a specific module for health literacy learning and the use of assessment and

intervention strategies in the clinical setting. A follow-up study will implement a health literacy learning module, with subsequent implementation into clinical practice.

Research Questions

The study research questions are as follows:

- 1) What are the characteristics of FNP students?
- 2) To what extent do FNP students have health literacy knowledge?
- 3) To what extent do FNP students have health literacy experience?
- 4) What is the relationship between health literacy knowledge and health literacy experience?

Background

More than 60% of Nurse Practitioners (NPs) reported their primary area of practice as FNPs [4]. Because FNPs are able to practice autonomously and have been educated at the post-bachelor's level in health diagnosis and assessment, physiology, and pharmacology, they can serve in a primary care role. This group often provides much-needed services to underserved populations that would otherwise have very limited access to preventative care or health care of any kind. The FNP manages acute, episodic, and chronic conditions; oversees the health and wellness of women; provides health and wellness care to infants and children; and treats minor acute injuries for people of all ages [5]. Within these roles is the inherent need to provide education for health prevention, health promotion, and care management. Because of the increased complexity of health care, there are increased expectations for FNPs to provide patient education. FNPs are expected to provide patient education that is culturally sensitive and consistent with the level the patient understands and to enable them to implement health care instructions. Incumbent in this teaching role is the necessary understanding of health literacy and implementation strategies based on a patient's health literacy to support positive patient outcomes.

Individuals with limited health literacy have less knowledge about their medical conditions, receive less preventive care, have less ability to navigate the health care system, are more likely to be hospitalized, and have increased mortality risk [6-8]. Thus, adequate health literacy is a key component of health care in the United States [2,6,9]. The complexity of health care systems requires coordination of multiple health care providers to understand the principles of health literacy, how to assess health literacy, and how to utilize interventions that are consistent with the patient's health literacy level. It has been shown that many health care providers are not aware of the severity of the effects of low health literacy [2]. Coleman, [9] identified that many health care providers overestimate the health literacy of their patients. The onus is on the health care system and health care providers to become more aware of their clients' literacy limits and take action

to enhance the effectiveness of patient-provider encounters [10].

There are few studies that explore FNPs' knowledge and use of health literacy in practice; a PubMed search identified 13 articles using a specific search with the terms "Health Literacy" and "Nurse Practitioner". There are no studies investigating health literacy knowledge or use among FNP students. A few studies have investigated health literacy knowledge among nursing students. Many programs do not address health literacy in their curricula [10,11]. Cafiero [11] used the HL-KES and found that practicing NP's had some knowledge about health literacy, but few used health literacy strategies in practice. The study also noted that many NP programs do not include health literacy content in their curriculum, which results in a low level of health literacy knowledge.

It is important for FNP students to learn about health literacy and its effect on their patients, and to learn strategies that address health literacy for improved outcomes in these patients. The ability to appropriately assess health literacy will allow the FNP to select interventions and strategies that support the success of their patient. Most FNP curricula include advanced assessment for health disparities and vulnerable populations, health promotion, and maintenance and management of both chronic and acute illness [5]. It is important for the FNPs to have an understanding of health literacy for the success of their patients. It is crucial to develop strategies in the classroom and in clinical experiences so that all NPs gain consistent knowledge and experience. This starts with initial evaluations of NP students' knowledge and experience in health literacy.

Sample

This descriptive correlational study was used to assess the health literacy knowledge and experiences of first-semester FNP students. The target population for the study were 68 FNP students who were beginning their first semester in an FNP program in a public university located in the southeast United States. Inclusion criteria included that the students were in the first semester of an FNP program other semester students were excluded to avoid knowledge gained while in the FNP program. There were no other exclusion or inclusion criteria. Thirty-five of the 68 students in the class completed the HL-KES survey.

Methods/Data Collection

Initial contact with the participants was made through an email flyer distributed before the participants attended orientation for the FNP program. The flyer included a short description of the importance of health literacy in an FNP's practice, IRB approval, and explained that the survey would be used to develop strategies for health literacy inclusion in the FNP program. All attendees were also invited in person by the researcher to participate in the study. The survey instrument, the HL-KES, was made available in

a separate room during the orientation day at the School of Nursing for the newly admitted FNP students. A hard copy distribution of the survey was selected to support quicker completion of the questionnaire, given the participants' time constraints during the orientation day. The survey was available on orientation day and during student attendance at clinical simulation day. Students picked up a survey and completed during breaks. This was a single administration survey to incoming students, with the survey taking approximately 25 minutes to complete.

Institutional review board approval as exempt status was obtained from the college. Permission was also obtained from the NP faculty that was hosting the educational conference where the data were collected. All data were kept confidential, and no identifying information was collected on the instruments. All data were kept in a locked file in the investigator's office. Data coding sheets were used, and data were reported on the aggregate level. Consent was implicit upon the completion and return of the survey.

Measurement

The HL-KES was used to collect information on nurses' knowledge and current use of health literacy strategies. The survey consists of two sections. The first section assesses health literacy knowledge in the following five areas: 1) basic facts about health literacy; 2) consequences associated with low health literacy; 3) health literacy screening; 4) guidelines for written health care materials; and 5) evaluation of health literacy interventions. The second section measures how often participants engage in health literacy learning activities. Both subscales demonstrated extensive reliability, with Cronbach's alphas of 0.79 and 0.76, respectively.

Results

Research question 1 addressed the following question: "What are the characteristics of the incoming FNP students?" A total of 35 students participated in the study. Most study participants were women (83%), while 17% were men. The age of participants ranged from 23 to 59 years. With regard to the ethnicity of the group identified as 77% of the group identified as Caucasian and 22% as African American. All participants were employed as registered nurses in the state.

The second research question examined the extent to which FNP students had health literacy knowledge. The health literacy knowledge scale of the HL-KES instrument was used to assess participants' health literacy knowledge in five content areas, including basic facts on health literacy, consequences associated with low health literacy, health literacy screening, guidelines for written health care materials, and evaluation of health literacy intervention. All analyses were completed by item. The results of the HL-KES had a mean of 79.1%, with a variance of 55.18 and standard deviation of 7.43. Responses showed that 56% of participants believed that socioeconomic status was the best

predictor of health care status. Concerns related to the results of the survey were that only 20% of participants knew what the functional health literacy instrument was, 45% believed that lists of five to six pieces of information was best when preparing educational materials, and 75% did not know how to actively engage patients in learning.

The third research question asking about current health literacy experience or knowledge found that although participants demonstrated that they had experience in some areas of health literacy, 60% reported that health literacy was never or only sometimes addressed in their nursing curriculum. Only 3-5% responded that they always participated in health literacy activities. The only item on the health literacy experience scale for which the majority of participants indicated frequent use or interaction was using written materials to provide health care information to individuals or community groups. The fourth research question assessed the relationship between health literacy knowledge and health literacy experience. Pearson's correlation coefficient was analyzed using SPSS 2019. The correlation reached significance at the $P < 0.01$ level. Results from this study demonstrated an inverse relationship between health literacy knowledge and health literacy experience. This may be because new nurses are entering the workforce with health literacy knowledge gained from their nursing curriculum, but lack health literacy experience. Conversely, nurses with many years of experience with health literacy may have gained experience from working with patients with low health literacy and not from their nursing curriculum.

Discussion

FNPs comprise the largest segment of nurse practitioner professionals [5]. This study demonstrated that although FNP students have some health literacy knowledge and experience, there are significant gaps in both health literacy knowledge and experience. Most participants had health literacy knowledge in the areas of the consequences associated with low health literacy and evaluation of health literacy interventions. However, most participants did not have knowledge of health literacy screening or guidelines for written health care materials. The study also found inconsistency in levels of health literacy experience. Participants' strongest health literacy experience was in using health care materials and videotapes to provide health care information to patients and community groups. However, there were three areas in which participants exhibited less health literacy experience. These areas included using health literacy screening tools, evaluating the reading level of health care materials before using them for patient teaching and using audiotapes to provide health care information, and using computer software to provide health information.

Conclusion

FNPs provide care across the lifespan and are already in an

optimal position to make a positive impact on health outcomes. Assessing and understanding health literacy provides an excellent opportunity for FNP's to empower patients by providing patient education that meets the specific needs of patients in a way that patients can comprehend.

FNPs need to be proficient in both identifying limited health literacy and applying appropriate interventions. Developing competencies in the FNP curriculum will allow them to increase knowledge and competencies in health literacy. Nursing educators must take a hard look at established nursing curricula to determine whether they are providing nursing students with the knowledge and experiences that are required to provide health care to individuals with low health literacy skills. As FNP programs continue to grow, with an estimated 224,000 FNP in practice by 2024 [4], the new practitioners will be equipped with the tools to improve quality patient outcomes and meet the needs of health care organizations where they are employed.

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