Survey of nurses on knowledge and attitudes regarding the physician assistant profession

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Survey of Nurses on Knowledge and Attitudes Regarding the Physician Assistant Profession

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Dedications

This project is dedicated to my wife, Jan, who has stood by me through thick and thin, has been a pillar of strength, and has made this accomplishment possible.
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To my scholarly project advisor, Doctor Hogue, who has supported and guided me through a most challenging curriculum of the Physician Assistant Program at the University of Toledo.

Thank you for helping me make my education complete.

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To the University of Toledo Undergraduate Nursing Students, thank you for acknowledging the importance of my scholarly project and contributing to genuine research.
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Chapter 1

Introduction

From the early 1990’s to present, our health care system saw rising numbers of training programs for non-physician clinicians. Passage of legislation expanded their scope of practice accompanied by increasing managed care models that emphasized containing health care cost. The physician assistant profession continues to thrive with the number of accredited programs rapidly increasing. The physician assistant profession is relatively new in comparison to other health care careers, being in existence less than fifty years. Physician assistants fill a void in the primary care setting, serving a growing health care need.

The University of Toledo, formerly the Medical College of Ohio, began its tutelage of physician assistants in 1996. Today, more questions than answers surround the physician assistant profession. Prior to 1996, knowledge of physician assistant profession in Northwest Ohio was limited. This knowledge deficit was apparent with the lay public as well as physicians and nurses. The PA profession has an ongoing responsibility of educating health professionals as well as perspective patients on their roles, qualifications, and place in health care. Even to this day, medical students, taking common classes with PA students have a limited knowledge of the role of the PA in the health care setting.

Undergraduate nursing students at the University of Toledo, unless experienced personally, have a limited knowledge of the PA profession and the role they play in health care. A basic understanding of the PA profession is a central tenet to the conscious of nursing. The practice of nursing revolves around many health care careers that create a multi-disciplinary environment. The working relationship between PAs and nurses is synergistic with its ultimate goal in providing positive patient outcomes.
History of PA Profession, Roles and Qualifications

Due to the shortage and uneven distribution of primary care physicians, the physician assistant profession was born. Dr. Eugene Stead of the Duke University Medical Center put together the first class of PA’s in 1965 to expand the delivery of quality medical care. The inaugural class was navy corpsmen who had significant medical training during their tours of duty in Vietnam. The first PA program curriculum was based on fast track training of doctors during World War II. On October 6, 1967, Duke University’s PA Program graduated the first PA students. To this date, there are over 79,000 graduates of PA programs. Physician Assistants are educated in the medical model in harmony with physician training. Physician Assistants are health care professions, licensed to practice medicine with physician supervision. The physician assistant’s scope of practice includes conducting physical exams, diagnosing and treating illness, ordering and interpreting tests, preventive health care counseling, assisting in surgery, and writing prescriptions. As the name implies, physician assistants maintain dependent, non-competitive relationships with physicians. As the PA-physician relationship evolves, informal algorithms are formed. For example, with experience, PA’s know when to ask for help when complicated patients are beyond the scope of their practice (American Academy of Physician Assistants [AAPA], 2011).

Background

Undergraduate nursing students at the University of Toledo, unless experienced personally, have a limited knowledge of the PA profession and the role they play in health care. A basic understanding of the PA profession is a central tenet to the conscious of nursing. The
practice of nursing revolves around many health care careers that create a multi-disciplinary environment. The working relationship between PAs and nurses is synergistic with its ultimate goal in providing positive patient outcomes.

**Statement of the Problem**

Favorable attitudes about a subject or group are strongly influenced by knowledge and understanding. Less favorable attitudes toward PAs by nurses are induced by minimal exposure to the PA profession and its roles and responsibilities. To reverse this trend, interdisciplinary education should proceed early in nursing curricula to facilitate interactions with PAs while on their clinical rotations.

**Statement of the Purpose**

The purpose of this study will be to discover the knowledge and attitudes of undergraduate nursing students toward the PA profession. The knowledge and attitudes will be assessed before and after a lecture on the PA profession to discover if the knowledge level increases and attitudes become more favorable after the presentation.

**Literature Review**

In 1980, Oliver and Preston conducted a regional study, *What Iowa Family Physicians and Medical Students Think about Physician Assistants*. The study conveyed that acceptance and use of physician assistants was dependent on a clear perception of their roles and a positive attitude towards them by physicians. This study used survey data from Iowa physicians who employed PAs, sophomore medical students, family practice physicians, and practicing PAs. The survey tool queried respondents about perceptions of usefulness of services rendered, view on need for PAs, quality of PA trainers, and circumstances that would cumulate in hiring of a PA. This study indicated that physicians that employed PAs perceived them as extremely useful.
In close comparison, family practice residents also viewed PAs as useful. Only a small percentage of medical students would not hire a PA. All groups surveyed had a positive attitude towards PAs, but physicians who employ PAs had the most favorable attitude toward them (Oliver & Preston, 1980).

To this day, little current research addresses attitudes of nurses towards PAs. The last research was done in 1985 by Erkert (1). As PAs work closely with physicians and nurses, their attitudes will directly impact the effectiveness of PAs as a member of the health care team. Many schools are learning the importance of teaching students about other health care disciplines as a way to impart knowledge and respect. The importance and effectiveness of interdisciplinary education is a topic of many current studies and papers. Erkert’s 1985 study, *Nurses Attitudes Toward PAs*, examined the general extent to which nurses have worked with physician assistants, their understanding of the PA role in health care, and their attitudes towards them. Efficiency in which PAs perform tasks and assess patients is dependent upon a spirit of mutualism and reciprocity with the nursing staff. Taking this into consideration, attitudes of nursing staff greatly affects either positively or negatively the role of PAs in health care. Erkert surveyed nurses from two institutions, one that employs PAs and one that does not. Erkert’s conclusions indicated that nurses familiar with PAs either conceptually or from first-hand experience were more likely to have positive attitudes toward PAs (Erkert, 1985).
Definition of Terms

Knowledge – a familiarity with someone or something, that includes facts, descriptions, information, and or skills acquired through skills or education.

Perceptions – the process by which people translate sensory impressions into a coherent and unified view of the world around them. Social perception is a part of perception that allows people to understand the individuals and groups of their social world.

Nurse – a health care professional focused on caring of individuals, families, and communities so they may attain, maintain, or recover optimal health and quality of life from conception to death.

Physician Assistant – persons trained, certified, and licensed to take medical histories, conduct physical exams, and diagnose medical conditions under the supervision of a physician.

Attitude – a hypothetical construct that represents an individual’s degree of like or dislike for something; manner, disposition, feeling, position, etc. with regard to a person or thing; tendency or orientation, especially of the mind.

Research Questions

1. Can a lecture session on the PA profession improve knowledge toward it?
2. Can a lecture session on the PA profession improve attitudes toward it?
**Statistical Hypothesis**

1. There will be no statistically significant difference in the attitudes regarding the PA profession and the level of knowledge possessed by the nursing students.

2. There will be no statistically significant difference in level of knowledge among nursing students prior to and after an information session on the PA profession.

3. There will be no statistically significant difference in the attitudes regarding the PA profession among nursing students prior to and after attending an information session on the PA profession.

**Scope**

I will focus on the level of knowledge of a person as it relates to their attitudes regarding the PA profession. It is my belief that the higher the level of knowledge a person has on the PA profession, the more likely they will be open to the idea of working with PAs. Since the PA-nurse relationship is extremely important in providing quality health care, PAs must depend on the nursing team as much as physicians do. PAs and nurses are both valuable members of the health care team. The scope of this study is to focus on the attitudes possessed by nursing students toward the PA profession. The study will attempt to provide data to support the idea that a higher level of knowledge will result in much more favorable attitudes toward the profession. I chose to examine the attitudes of nursing students because I believe it is important to form favorable attitudes while in the classroom environment. Favorable attitudes and knowledge on the PA profession must be placed early in the education process in order to have the most beneficial results for all persons involved. Optimally, while nursing students are on
their nursing rotations, they will be exposed to the PA profession and will be able to have a good understanding of the role of the PA as a health care provider. I chose to begin with the education of nursing students because nurses and PAs work in such close association with one another. More specifically, I will focus on the level of knowledge and attitudes of the PA profession by undergraduate nursing students at the University of Toledo following a pre-test/post-test information session.

**Summary**

In conducting this study, my focus emphasizes the importance of education as a way to implement positive attitudes in interdisciplinary education regarding all health care professionals. An informational session about differences in health care professionals may be all that is required to foster improved attitudes and increased knowledge and respect for other health care providers. In summary, favorable attitudes and knowledge on the PA profession must be placed early in the education process in order to have the most beneficial results for all persons involved.
Chapter 2

Literature Review

Perceptions, Knowledge, and Attitudes toward Physician Assistants

Perceptions, Knowledge, and Attitudes toward Physician Assistants by Physicians

In 1995, Bergeson, Cash, Bolger, and Bergeron conducted a study, Attitudes of Rural Minnesota Family Physicians toward Nurse Practitioners and Physicians Assistants. Their survey data indicated that Minnesota physicians generally had positive attitudes toward physician assistants. They had positive experiences with PAs because of their strong degree of capabilities and clinical judgment (3). This study demonstrated another positive perception of PA’s from physicians who have personal experiences with them (Bergeson, Cash, Bolger & Bergeron, 1997).

Ford and Kish conducted a study in 1998, Family Physicians Perceptions of Nurse Practitioners and Physician Assistants in a Family Practice Setting. This study revealed that PAs are cost effective providers which alleviate excessive work loads (Ford & Kish, 1998).

In a literature review by Hooker, Klocko, and Larkin, Physician Assistants in Emergency Medicine: the Impact of Their Role, the view of the American College of Emergency Physicians (ACEP) overwhelmingly view PAs with positive perceptions. Since a mounting void of qualified emergency physicians has materialized, hospital administrators have turned to PAs to meet increase health care needs. This increased utilization of PAs in the emergency department, suggests that physicians are realizing the effectiveness of PAs. The favorable perception and attitudes by emergency physicians toward physician assistants was evident by how PAs favorably affected patient care, and improved clinical and financial outcomes (Hooker, Klocko, & Larkin, 2011).
What are the perceptions, knowledge, and attitudes of academic medical centers towards physician assistants? The answer to this question lies in the research conducted by Moore, Krsek, Kleinpill, and Todd. They collaborated with academic medical centers across the U.S., using a questionnaire format to uncover perceived organizational value, patient satisfaction, and financial impact. Their report indicated PAs provided a high degree of value and contribute in continuity of care, increased physician productivity, decreased length of stay, as well as increasing physician time for other activities (Moore, Krsek, Kleinpill, & Todd, 2011).

Perceptions, knowledge, and attitudes toward physician assistants by physicians can be reflected in a research study conducted by Dr. Eyab Kawar and Dr. Bruno Digiovine, *MICU Care Delivered by PAs Versus Residents: Do PAs Measure Up?* Although difficult to generalize, they compared clinical outcomes between patients admitted to a resident run MICU and a PA un MICU. In this study, the authors (medical doctors) found that care provided by physician assistants in the medical intensive care was quite similar to care provided in the resident run MICU (Kawar & Digiovine, 2011).

Positive perceptions of the PA profession are supported by an article in *Medical Economics* by Weiss. The article summarizes that PAs can add significantly to a physician’s bottom line. Hiring a physician assistant can allow physicians to see more acute patients, while continuing to expand their practice by not turning away new patients. Bringing a PA in the fold makes economic sense by reducing overall physicians’ workload in a typical internist office. PAs can write scripts, do patient education, visit nursing homes, help with hospital rounding, and do discharge summaries to offset a growing physician responsibility (Weiss, 2007).

Montague of *Hospitals and Health Care Networks* writes that MDs are now acknowledging the value of physician extenders such as PAs. His interviews with health care
administrators revealed that when physicians learn what physician assistants can do, they become addicted to them, often wondering how they got along without them. This positive perception of the PA profession from physicians and administrators is a tremendous windfall for patients, including the underserved (Montague, 1994).

Johnson and Freeborn studied attitudes of physicians working in health maintenance organizations toward use of nurse practitioners and physician assistants. Their summary of the data concluded that physicians like internists and pediatricians had favorable attitudes towards both nurse practitioners and physician assistants (Johnson & Freeborn).

**Perceptions, Knowledge, and Attitudes toward Physician Assistants by the Lay Public**

The familiarity of the role of the PA is weak at best. Many patients confuse PAs with office assistants. Some maintain that a PA student will eventually become a physician through continued education. PAs are mid-level practitioners who practice under the supervision of a physician. PAs as physician extenders are trained to perform many of the same tasks as a physician, but remain as dependent practitioners.

However, the lay public’s perception of the PA profession is still evolving. For example, public awareness and acceptance of dermatology PAs has not been a significant problem. Continued access to a dermatologist remains unrestrained, however, over time many patients became willing to see a PA as well (Clark, Monroe, Feidman, Fleisher, Hauser, & Hines, 2000).

When examining the geriatric population, as a subset of the lay public, older patients report that services provided by PAs resulted in equal satisfaction versus their physician counterparts (Dacey, Vail, & Tataronis, 2007).

In a study conducted by Smith, *Patients Attitude toward Physician Assistants*, patients conveyed general acceptance of physician assistants. His questionnaire, administered to two
hundred patients in a Midwestern specialty clinic queried patients on overall attitude toward the use of physician assistants, satisfaction with physician assistants, and their understanding of their role in training. The end results of his investigation indicated patients generally accept physician assistants provided they are closely supervised by the physician. However, he also was able to extract from the data that there was a surprising degree of misunderstanding of the role and training of the physician assistant (Smith, 1981).

Hooker, who comments in, *PAs and NPs in HMOs*, reports by health economics and medical sociologists, PAs were confident and cost effective and patients were pleased with their care (Hooker, 1994).

Cipher, Hooker, and Sakscenski focused in on older patients in regards to knowledge, satisfaction, and perceptions of physician assistants. They designed a cross sectional national survey of people aged sixty-five and older. Their participants were Medicare recipients which they derived data from satisfaction surveys. Their results demonstrated satisfaction with PAs and were rated as favorably as physicians. The writers’ opinions suggest that the role of the PA should be expanded to meet the needs of the elder population (Cipher, Hooker, & Sakscenski, 2006).

*Perceptions, Knowledge, and Attitudes toward Physician Assistants by Nurses*

There is a cavernous void in professional writing in the literature regarding nursing perceptions and attitudes toward the physician assistant profession. However, Grey, once an associate professor of nursing at the University of Pennsylvania, wrote a personal story of an encounter with a physician assistant. Grey stated an opinion in *New Jersey Nurse* that PAs have shown to be effective providers of health care and can be a strong ally of the nursing profession.
In her personal experiences, Grey believes PAs are committed to primary care, but also are very skillful in the patient care setting (Grey, 1992).

**Previous Studies on Knowledge and Attitudes by Nurses toward Physician Assistants**

As stated in Chapter One, Erkert’s research, although dated, gave a conceptual first-hand glance of nurses’ attitudes toward physician assistants (Erkert, 1985).

In a regional study at the Medical College of Ohio, now the University of Toledo, Calaway conducted correlational research to determine knowledge and attitudes of nursing students before and after a presentation of the PA profession. Calaway’s study showed statistical differences between pre and post-test knowledge and attitudes of the physician assistant profession by undergraduate nursing students (Calaway, 1999).

**Interdisciplinary Education**

The literature review on interdisciplinary education is vast and discriminating. Hall and Weaver conducted an examination of literature on interdisciplinary education titled, *Interdisciplinary Education and Teamwork, A Long and Winding Road*. Review of the study included that interdisciplinary education is an integral component of a health care professional’s education. Common themes of interdisciplinary education include addressing role blurring, conflict resolution, communication skills, and each members’ contributions to holistic care. Clinicians face proliferating complexities of patient care as manifested by increased specialization of health professions and the need to collaborate between them (Hall & Weaver, 2001).

O’Brien, Martin, Heyworth, and Meyer conducted a study that supports interdisciplinary education and the consequences if it is ignored. *A Phenomenological Perspective on Advanced Practice Nurse-Physician Collaboration Within an Interdisciplinary Health Care Team*
investigated how advanced practice nurses and physicians perceived and described their experiences and collaboration in an interdisciplinary team. They found that when interdisciplinary team collaboration is instilled, a “synergistic alliance” occurs. This resulting alliance maximizes and optimizes contributions from each participant. On the other hand, ignoring interdisciplinary education results in a lack of collaboration, leading to fragmentation of care and dissatisfied patients with poor outcomes. The timing of interdisciplinary education should be staged early in a health care professional’s learning, at least within the first two years (O’Brian, Martin, Heyworth & Meyer, 2009).

Bassof revealed in his journal writings that different health disciplines are educated in isolation from one another. After planned interdisciplinary education, students faced stereotypical attitudes about one another, shared feeling about their roles, and learned roles and self perceptions of other providers. The overall impact from interdisciplinary education resulted in increased respect for other health care providers, while fostering a team approach (Bassof, 1983).

In the professional writings of Henderson, O’Keefe, and Alexander *Interprofessional Education in Clinical Practice: Not a Single Vaccine*, the authors comment on how the environment of health care is complex with a wide range of clinical professionals from rich, varied backgrounds. Although students may collaborate in clinical settings, there is usually a void of cross-disciplinary interactions (Henderson, O’Keefe, & Alexander, 2010).

**Summary**

The review of the literature strongly supports positive attitudes and perceptions by the lay public and physicians on the PA profession. RN and MD are common titles in a household vernacular, while PA is not. The physician assistant profession and its notoriety are still
evolving with its roots still in its infancy. Interdisciplinary education is well-supported in the literature. Without it, health care professionals may be left in isolation of each other, unable to coalesce and optimize patient care.

There is a shallow amount of literature that addresses knowledge, attitudes, and perceptions of nurses on the PA profession. Although Erkert’s study was groundbreaking in its time, it remains dated. Calaway’s study, although regional, provided solid evidence that even a brief session of interdisciplinary education can alter knowledge and attitudes. This study lays the foundation for this research. It is important to evaluate if the knowledge deficit of ten years ago still exists with undergraduate nursing students of today.
Chapter 3
Methodology

Study Design

The study design will be a pre-experimental one group pre-test/post-test of undergraduate nursing students.

Subjects

The population of study will include available undergraduate nursing students at the University of Toledo, Ohio.

Protection of Human Subjects

There will be no risk, discomforts, or harm to human subjects in the study. After a brief presentation on the PA profession, participants will reflect their increased knowledge through the survey method.

Sample Size

The population consists of fifty-one undergraduate nursing students at the University of Toledo.

Selection of Subjects

Undergraduate nursing students were selected purely on a volunteer basis after completion of daily nursing curriculum requirements. Recruitment of subjects was undertaken without regard to gender, race, natural origin, religion, creed, education, or socioeconomic status.

Definition of Terms

Non-physician clinician: Refers to a physician assistant (PA) or a nurse practitioner (NP).

Mid-level provider: Refers to a physician assistant (PA) or a nurse practitioner (NP).
**Interdisciplinary education:** Education of a variety of professionals through methods such as sharing clinical training resources, cross-teaching by professional faculties, exploring the roles of professionals, and the modeling of effective team integration in the delivery of health care.

**Nursing student:** Refers to a first year nursing student at the University of Toledo.

**Attitude:** Manner, disposition, feeling or position toward a person or thing.

**Knowledge:** Acquaintance with facts, truths, or principles, as from study or investigation.

**Measures**

**Independent Variable**

In this study, a fifteen-minute video presentation of the assisted physician profession is the independent variable and is viewed as the cause of change in knowledge and attitudes of undergraduate nursing students.

**Dependent Variable**

The change in knowledge and attitudes of nursing students toward the PA profession will be viewed as the dependent variables.

**Intervening Variable**

An intervening variable to be considered is the nursing students’ previous exposure to the PA profession.
Reliability and Validity Statement

Reliability was determined after collecting and analyzing data obtained at two separate PA information sessions. The Cronbach Alpha will be used to establish a coefficient of reliability.

Content validity of the survey tool was established by review by three health care professionals, two physician assistants, and one nurse practitioner.

Procedures

A survey pertaining to knowledge and attitudes toward the PA profession will be administered to the subjects. A 30 minute presentation on the role and responsibilities of a PA in health care will be given. The same survey will then be given after the presentation.

Summary

This study will examine the knowledge of undergraduate nursing students on the PA profession in a pre-test/post-test design after a brief information session. Data will be collected, and entered in a Microsoft Excel software program then imported to SPSS software. Results will then be tabulated and analyzed to accept or reject stated hypotheses.
Chapter Four

Results

Response Rate

Fifty-two undergraduate nursing students participated in this study. All pre and post surveys were usable.

Demographic and Background Characteristics of Respondents

Of the fifty-two respondents, seven were male, and forty-five were female. Broken down by age, four were under 20, thirty-nine were between 20-30, five were between 31-40, and four were over 40. Sixty-nine percent of the respondents were from Ohio.

The statistics for exposure to the PA profession were as follows: 90% of the respondents had never taken classes with a physician assistant. 69% of the respondents do not know a University of Toledo PA student. 31% knew four or less. 69% of the respondents had never had care from a physician assistant. 94% of the respondents had never had classes taught by a physician assistant. 77% of the respondents had never worked with a physician assistant.

Survey Tool Results

The following are the results of each question in section four of the survey concerning attitudes of the PA profession.

Section IV, Item 1. Twenty-nine (56%) of the nursing students strongly agreed that PAs are a valuable part of the health care team on the pre-survey while the number went up on the post-survey to forty (80%). On the post-survey 0% of students disagreed that PAs are a valuable part of the health care team.

Section IV, Item 2. PAs take jobs from physicians was strongly disagreed upon by fifteen (28.8%) on the pre-survey while this number went up to twenty-seven (54%) on the post-survey.
Only 6% of students strongly agreed or agreed that PAs take jobs away from physicians on the post-survey.

**Section IV, Item 3.** Thirty-two (61.5%) strongly agreed and fifteen (28.8%) agreed that they would work with a PA on the post-survey. The numbers went to thirty-seven, which is 74%, and ten, which is 20% on the post-survey. Only one (2%) disagreed that they would work with a PA on the post-survey.

**Section IV, Item 4.** When respondents were asked if PAs take jobs away from nurses, eighteen (34.6%) disagreed and fifteen (28.8%) strongly disagreed on the pre-survey, compared with seventeen (34%) and twenty-five (50%) respectively on the post-survey. A combined 12% of nursing students either agreed or strongly agreed on the post-survey that PAs take jobs away from nurses.

**Section IV, Item 5.** Twenty-seven (59.9%) strongly agreed and eighteen (34.6%) agreed that their overall attitude toward PAs was positive on the pre-test. The numbers changed on the post-test to thirty-six (72%) strongly agreeing and thirteen (26%) agreeing respectively.
Testing the Research Questions and Hypothesis

**Hypothesis 1.** There will be no statistically significant difference between in the level of knowledge among nursing students prior to and after attending an information session on the PA profession. A McNemar test revealed a statistically significant difference between pre and post survey knowledge of the nursing students. (Table 3) (McNemar > .000, df=2, p < .05)

The items in the knowledge section were answered “true,” “false,” or “don’t know.” There were a total of nineteen questions with 52 respondents for a total of 988 answers on the pre and post survey. Actual responses for all questions, pre and post survey, were compared to the expected results by a McNemar test. Table 1 represents comprehensive data.

**Hypothesis 2.** There will be no statistically significant difference in the attitudes regarding the PA profession among nursing students prior to and after an information session on the PA profession. The items in Section IV, attitudes toward the PA profession were answered with a scale ranging from “strongly agree” to “strongly disagree” including “neither agree nor disagree” and “don’t know.” Table 2 contains comprehensive data corresponding to the attitudes section. A McNemar test revealed a statistically significant difference between pre and post survey attitudes towards the PA profession. (McNemar > .000, df=2, p < .05) Each possible response was given a value in the corresponding manner, “strongly agree” =1, “agree” = 2, “neither agree nor disagree” = 3, “disagree” = 4, “strongly disagree” = 5, and “don’t know” = 6. A total value for each question was annotated by adding up all 52 respondents’ corresponding answers. The pre and post- values compared as a whole to the expected pre and post- values using a McNemar test. Table 3 contains comprehensive data to calculate a McNemar test.

**Research Questions** Can a lecture session on the PA profession improve knowledge towards it? Using the statistical measure of the McNemar test comparing pre and post- survey knowledge of
nursing students, it can be maintained that the information session did indeed improve nursing knowledge towards the PA profession.

Can an information session on the PA profession improve attitudes toward it? Using the statistical measure of the McNemar test comparing pre and post-survey knowledge of nursing students, it also can be supported by statistical analysis that a lecture session on the PA profession improves attitudes toward it.

Summary

Analysis of the data supported by the McNemar test showed statistical differences in attitudes and knowledge of nursing students using the pre and post-survey format. Not coincidentally, research questions supported by the McNemar test, maintained that an information session improved knowledge and attitudes of undergraduate nursing students toward the PA profession.
Chapter 5

Discussion

**Accepted Hypothesis: Analysis of Hypothesis 1.**

Data analysis revealed that there was a statistically significant difference between the pre and post-survey knowledge of the PA profession by undergraduate nursing students at the University of Toledo. Therefore, the null hypothesis is rejected. The research demonstrated of the subject matter increased with exposure. While there was an increase of 24% in correct responses from pre and post-survey results, there also was a comparative of 24% decrease in wrong and “don’t know.” This observed change in pre and post survey was strikingly similar to Calaway’s results from a previous 1999 study (Calaway, 1999). This study, as well as the Calaway study, showed that exposure to an informational session led to increased knowledge.

**Accepted Hypothesis: Analysis of Hypothesis 2.**

Data analysis revealed a statistically significant difference between pre and post-survey attitudes toward the PA profession. Therefore, the null hypothesis is rejected. Although statistical differences were evident between pre and post-survey attitudes among nursing students, the differences were not as striking as originally hypothesized. Knowledge of the PA profession is more evident now among nursing students and health-care personnel.

**Discussion**

The outcome of this study closely paralleled with Calaway’s study of 12 years ago. This study, as well as the Calaway study, closely patterned a study by Erkert. He also examined nurses’ attitudes toward the nursing profession. His study concluded that nurses who were acquainted with PAs, were likely to have positive attitudes toward them (Erkert, 1985). His
result provided grounding relating closely to the research of this study. Attitudes of nursing students during the pre-survey session were fairly positive, but became more positive after nursing students attended a fifteen minute information session. This study regarding nursing student knowledge towards the PA profession was enhanced and became more positive after a fifteen minute information session. As a result, nursing students have a more positive outlook on the PA profession.

**Limitations**

Limitations of this study were as follows: this research only studied undergraduate nursing students from the University of Toledo. The sample size was limited and generalizations to a larger sample can only be implied. However, this study replicated an earlier study using similar sample sizes and obtained similar results (Calaway, 1999).

This study was limited by only assessing attitudes and knowledge of undergraduate nursing students, not established nursing personnel. The information session was limited to a fifteen-minute video, which did not fully cover all physician assistant responsibilities and qualifications queried in the survey tool.

**Implications**

Although only a small segment of the University of Toledo nursing population participated in this study, the ones that did ultimately benefitted by being presented a unique learning opportunity. This study revealed that even a fifteen-minute presentation session on the PA profession increased knowledge and helped contribute to attaining positive attitudes toward the PA profession. Many of the University of Toledo nursing students gained insight to the profession as it was manifested in their post-survey scores.
Recommendations

As a matriculating PA student, and a former RN, I would highly recommend that nursing students learn about the PA profession before they start their clinical rotations. Nursing students may work with PA students and PAs during their rotations, and it would be beneficial to know their roles in the health-care team. The PA/nurse relationship is based on mutual respect and knowledge and continues to provide the basis of effective patient care.
References


Calaway, L. (1999). *Undergraduate nursing students’ knowledge and attitudes toward PAs*. (Unpublished master's scholarly project). Medical College of Ohio, Toledo, OH.


Survey Tool

Survey of Knowledge and Attitudes toward Physician Assistants (PAs)

Section I. Demographic Information

Please fill in or circle the correct answer.

1. Gender: Male Female

2. Age: Under 20 20-30 31-40 over 40

3. Were you born and raised in Ohio? Yes No If No, where? _______________

Section II. Exposure to the PA Profession

Please circle the correct answer.

1. Have you ever taken any classes with a physician assistant student? Yes No

2. How many University of Toledo PA students do you know? Zero 1 2 3 4 or more

3. Have you ever received health care from a PA? Yes No

4. Have you had any classes taught by a physician assistant? Yes No

5. Have you ever worked with a physician assistant? Yes No

Section III. Knowledge of the PA Profession

Please circle the correct answer. Circle “T” if the statement is true, “F” if the statement is false, or “DK” if you do not know the answer.

Physician Assistants (PAs):

T  F  DK can perform a physical exam.
T  F  DK cannot elicit a medical history.
T  F  DK can diagnose and treat a medical illness.
T  F  DK can order and interpret lab tests.
T  F  DK cannot order diagnostic tests.
T  F  DK can perform well-child exams, including immunizations.
T  F  DK cannot perform venipuncture.
T  F  DK cannot suture lacerations.
T  F  DK can assist in surgery.
T  F  DK cannot do a pre-op history and physical.
T  F  DK can do patient education.
T  F  DK cannot counsel patients.

**********PLEASE TURN OVER AND COMPLETE THE OTHER SIDE**********
1. PAs must pass a national certification exam after graduation. True False DK
2. PAs must pass a recertification exam every 6 years. True False DK
3. All PA programs award the same degree. True False DK
4. The University of Toledo awards what type of degree? Certificate Associate Bachelor Masters DK
5. PAs can prescribe medications in most states. True False DK
6. PAs can prescribe medications in Ohio. True False DK
7. PAs have 1 full year of clinical experience before graduation. True False DK

Section IV. Attitude toward the PA Profession
Please circle the choice that best represents your opinion.

SA                      A                                  N        D                      SD
DK
Strongly Agree  Agree    Neither Agree Nor Disagree         Disagree          Strongly Disagree        Don’t Know

1. PAs are a valuable part of the health care team. SA A N D SD DK
2. PAs take jobs away from physicians. SA A N D SD DK
3. I would work with a PA. SA A N D SD DK
4. PAs take jobs away from nurses. SA A N D SD DK
5. My overall attitude towards PAs is positive. SA A N D SD DK
TABLE 1. KNOWLEDGE OF THE PA PROFESSION

<table>
<thead>
<tr>
<th>Total number of responses</th>
<th>PRE SURVEY</th>
<th>POST SURVEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct</td>
<td>633 (64%)</td>
<td>873 (88%)</td>
</tr>
<tr>
<td>Wrong</td>
<td>112 (11%)</td>
<td>36 (4%)</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>243 (25%)</td>
<td>79 (8%)</td>
</tr>
</tbody>
</table>

Survey data bases on 52 respondents and 19 total questions.
### TABLE 2: ATTITUDES TOWARD THE PA PROFESSION

**Section IV, Item 1**

<table>
<thead>
<tr>
<th>PAs are a valuable part of the health care team</th>
<th>PRE SURVEY</th>
<th>POST SURVEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>29 (56%)</td>
<td>40 (80%)</td>
</tr>
<tr>
<td>A</td>
<td>23 (44%)</td>
<td>10 (20%)</td>
</tr>
<tr>
<td>N</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>D</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>SD</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>DK</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Section IV, Item 2**

<table>
<thead>
<tr>
<th>PAs take jobs away from physicians</th>
<th>PRE SURVEY</th>
<th>POST SURVEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>2 (3.8%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>A</td>
<td>4 (7.7%)</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>N</td>
<td>12 (23.1%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>D</td>
<td>17 (32.7%)</td>
<td>18 (36%)</td>
</tr>
<tr>
<td>SD</td>
<td>15 (28.8%)</td>
<td>27 (54%)</td>
</tr>
<tr>
<td>DK</td>
<td>2 (3.8%)</td>
<td>1 (2%)</td>
</tr>
</tbody>
</table>

**Section IV, Item 3**

<table>
<thead>
<tr>
<th>I would work with a PA</th>
<th>PRE SURVEY</th>
<th>POST SURVEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>32 (61.5%)</td>
<td>37 (74%)</td>
</tr>
<tr>
<td>A</td>
<td>15 (28.8%)</td>
<td>10 (20%)</td>
</tr>
<tr>
<td>N</td>
<td>2 (3.8%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>D</td>
<td>2 (3.8%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>SD</td>
<td>1 (1.9%)</td>
<td>0%</td>
</tr>
<tr>
<td>DK</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>N/A</td>
<td>0%</td>
<td>1 (2%)</td>
</tr>
</tbody>
</table>
TABLE 2. continued

Section IV, Item 4

<table>
<thead>
<tr>
<th>PAs take jobs away from nurses</th>
<th>PRE SURVEY</th>
<th>POST SURVEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>0%</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>A</td>
<td>5 (9.6%)</td>
<td>4 (8%)</td>
</tr>
<tr>
<td>N</td>
<td>12 (23.1%)</td>
<td>0%</td>
</tr>
<tr>
<td>D</td>
<td>18 (34.6%)</td>
<td>17 (34%)</td>
</tr>
<tr>
<td>SD</td>
<td>15 (28.8%)</td>
<td>25 (50%)</td>
</tr>
<tr>
<td>DK</td>
<td>2 (3.8%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>N/A</td>
<td>0%</td>
<td>1 (2%)</td>
</tr>
</tbody>
</table>

Section IV, Item 5

<table>
<thead>
<tr>
<th>My overall attitude towards PAs is positive</th>
<th>PRE SURVEY</th>
<th>POST SURVEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>27 (51.9%)</td>
<td>36 (72%)</td>
</tr>
<tr>
<td>A</td>
<td>13 (34.6%)</td>
<td>13 (26%)</td>
</tr>
<tr>
<td>N</td>
<td>7 (13.5%)</td>
<td>0%</td>
</tr>
<tr>
<td>D</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>SD</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>DK</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>N/A</td>
<td>0%</td>
<td>1 (2%)</td>
</tr>
</tbody>
</table>

SA = strongly agree; A = agree; N = neither agree or disagree; D = disagree; SD = strongly disagree; DK = don’t know; N/A = not applicable

Data in chart indicates the number of responses with the percent in parentheses.
TABLE 3. DATA USED FOR McNemar CALCULATION

<table>
<thead>
<tr>
<th>Observed responses</th>
<th>PRE SURVEY</th>
<th>POST SURVEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section IV, Item 1</td>
<td>75</td>
<td>60</td>
</tr>
<tr>
<td>Section IV, Item 2</td>
<td>207</td>
<td>225</td>
</tr>
<tr>
<td>Section IV, Item 3</td>
<td>81</td>
<td>68</td>
</tr>
<tr>
<td>Section IV, Item 4</td>
<td>207</td>
<td>207</td>
</tr>
<tr>
<td>Section IV, Item 5</td>
<td>84</td>
<td>63</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expected responses</th>
<th>PRE SURVEY</th>
<th>POST SURVEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section IV, Item 1</td>
<td>67.5</td>
<td>67.5</td>
</tr>
<tr>
<td>Section IV, Item 2</td>
<td>216</td>
<td>216</td>
</tr>
<tr>
<td>Section IV, Item 3</td>
<td>74.5</td>
<td>74.5</td>
</tr>
<tr>
<td>Section IV, Item 4</td>
<td>207</td>
<td>207</td>
</tr>
<tr>
<td>Section IV, Item 5</td>
<td>73.5</td>
<td>73.5</td>
</tr>
</tbody>
</table>

The responses were figured by giving each possible response a numerical value. The values were then totaled from all of the surveys for each individual question in Section IV of the survey.
Abstract

Introduction: Nurses have a limited knowledge of the PA profession. Nurses familiar with physician assistants conceptually, or from first-hand experience, are more likely to have positive attitudes toward them. Through early placement of interdisciplinary education, favorable attitudes toward the physician assistant profession will develop during nursing curricula.

Objective: The objective is to discover knowledge and attitudes of undergraduate nursing students toward the PA profession. The knowledge and attitudes were assessed before and after a short informational session. Methods: The study examined knowledge and attitudes of undergraduate nursing students on the PA profession in a brief pre-test/post-test design. Results: Research hypothesis shows statistical differences in attitudes and knowledge of nursing students supported by a McNemar test. Conclusion: The study revealed that a short presentation on the physician assistant profession increased knowledge and helped contribute to attaining positive attitudes toward it.