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Registered Nurse Perception of Physician Assistants

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REGISTERED NURSE PERCEPTION OF PHYSICIAN ASSISTANTS

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ABSTRACT

The physician assistant (PA) profession is a relatively new and ever-growing field within healthcare. PAs serve patients in many different specialties alongside a wide variety of other members of healthcare teams. With the exponential growth of the PA profession the understanding of the role they provide is essential to other healthcare workers. Since the emergence of the PA there has been one study on the relationship between Registered Nurses (RNs) and PAs, and this occurred over thirty years ago. An understanding between team members continues to be key to promoting effective care of patients in healthcare teams. Therefore, the study aims to assess RNs' overall knowledge of the PA profession and how it correlates to their perception of PAs. An original questionnaire was created utilizing Bethel's Qualtrics program and distributed to Bethel University's Nurse Midwife program and via Facebook recruitment. A total of 45 participants completed the survey and were assessed based on the number of years worked with PAs. Sixteen RNs worked less than one year, 17 worked 1-3 years with PAs and 12 worked over 3 years with PAs. Knowledge questions were asked to obtain a baseline for the RNs' understanding of PAs' role. The sample responded correctly to 96.2% of factual questions on average. Eight questions were asked to obtain the RNs' overall perception of PAs. The section was graded using the Likert Scale. Of the sample, the average score came to 4.5, with a 5 being the most positive perception option for all questions. Finally, the knowledge score was compared to the perception score of each participant. The Pearson's Correlation value was calculated for this data and was 0.0049. The data analysis revealed RNs have adequate knowledge about the PA profession and overall positive perception of PAs. Additionally, there was no correlation between the RNs knowledge and perception of PAs.

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Chapter 1: Introduction

Introduction

Physician Assistants (PAs) are skilled medical providers who have contributed to healthcare teams for over 50 years. The responsibilities of PAs have changed dramatically since the emergence of the profession (Sadler & Davis, 2017). Today, PAs fulfill a variety of roles on healthcare teams and work alongside both Registered Nurses (RNs) and physicians (Timmermans et al., 2017). With the rapid growth and the variety of roles the profession has filled, a potential for misperceptions surrounding the position of PAs on healthcare teams seems inevitable. Accurate perceptions of the different roles of healthcare team members is vital to team unity and patient care (Kvarnström, 2008). Specifically, RN perceptions of PAs has been minimally researched (Erkert, 1985). Since misperceptions cannot be addressed until they are discovered, this research project will assess RN perceptions of PAs (Kvarnström, 2008). Chapter 1 will summarize the historical background of the subject and explain the purpose of the research project.

Background

Since PAs began practicing, their ability to provide care for patients has been analyzed in multiple studies (Sadler & Davis, 2017; Timmermans, et al., 2017). In 1969, Roger O. Egeberg, MD, Assistant Secretary of the Department of Health, Education, and Welfare, ordered the National Institutes of Health (NIH) to investigate if physicians and RNs believed that PAs were necessary additions to the American medical system (Sadler et al., 1975). The research indicated that physicians and RNs recognized a need for PAs. The study did not, however, assess the healthcare professionals' factual knowledge about PAs (Sadler et al., 1975). While the RNs and

physicians support of the PA profession was encouraging, it remained unknown if misperceptions existed between the healthcare professionals and PAs (Sadler et al., 1975).

Following the release of the NIH's findings, the American Medical Association recommended an amendment to the state medical practice act that would allow for PAs to function under a licensed physician (Sadler et al., 1975). With the amendment, PAs were held legally accountable for an outlined scope of practice. The change helped RNs and physicians better understand the PA role on healthcare teams (Sadler & Davis, 2017).

Changes in state medical acts inevitably led to studies investigating the possible beneficial or detrimental role of PAs on healthcare teams. One such study in 2017 by Timmermans et al., analyzed patient outcomes and satisfaction from two different patient care models: exclusively physician based vs. the contemporary PA/physician model. Findings concluded that care quality and patient hospitalization length were the same between both care models. However, the PA/physician care model provided a superior patient experience, as evident through patient surveys (Timmermans et al., 2017). PAs assisted physicians in providing satisfactory care while also bringing the value of an improved patient healthcare experience.

Research has continued to focus on the ability of PAs to care for patients and fill the growing need for medical providers. PAs have increased accessibility of care, particularly in rural communities, which has led to increased acceptance of PAs (Grumbach et al., 2003). PAs are also broadening their scope of practice continually, which has allowed them to keep up with the changing healthcare field (Hooker & Everett, 2011).

RNs work within every specialty alongside many other healthcare professionals, including PAs. RNs are instrumental to patient care and are valuable members of healthcare teams. The importance of RNs' perceptions of physicians has been well documented. When

RNs' have positive work relationships with physicians, RNs' job satisfaction increases (Wanzer et al., 2009). The positive work relationship has also been shown to correlate to increased patient satisfaction and improved patient outcomes (Wanzer et al., 2009).

The relationships between RNs and PAs, and the implications the relationships have on patient care, has rarely been studied. Only one study by Erkert analyzed RN perception of PAs (1985). The study showed that RNs with high factual knowledge about PAs were more likely to have a positive perception of PAs (Erkert, 1985). No research has been conducted to study RNs' more recent perceptions of PAs. The vital role RNs play on the healthcare team leads to their perceptions of PAs to be of paramount importance.

Problem Statement

PAs have become a larger portion of the healthcare workforce over time as they have begun to work in a variety of specialties and types of healthcare teams (Hooker & Everett, 2011). The improved patient satisfaction when PAs work alongside physicians has been assessed (Timmermans et al., 2017). However, the acceptability of PAs by other healthcare workers, specifically RNs, has not been well studied.

Purpose

As the roles and responsibilities of PAs have changed over the years, the way in which PAs interact with fellow healthcare professionals has evolved. Research regarding how the changing PA profession has affected patient perceptions of PAs has been well documented (Timmermans et al., 2017; Hooker & Everett, 2011). Research surrounding how RNs perceive PAs remains unknown (Hooker & Cawley, 2003). Due to the lack of qualitative and quantitative research about the RN/PA dynamic, the purpose of this study was to analyze RNs' perceptions of PAs' technical and interpersonal skills, as well as RNs' factual knowledge about the PA

profession. The study revealed if a relationship exists between RN perceptions and factual knowledge about PAs.

Significance

Analysis of RN perceptions of PA skills is significant to medical research due to the importance of teamwork and mutual respect on healthcare teams. For medical teams to effectively work together, understanding the different skills that each member brings to the group is essential (Kvarnström, 2008). Research has shown that the biggest hindrance to collaboration for the modern medical team is a misunderstanding of the roles of fellow team members (Kvarnström, 2008). Misunderstandings have been shown to interfere with multidisciplinary patient care and lead to worse patient outcomes (Keebler et al., 2014; Kvarnström, 2008; Schaik et al., 2014). The research explored the presence and type of misperceptions RNs have surrounding the PA profession.

Research Questions

The study addressed the following questions regarding RN factual understanding and perceptions of PAs.

1. How accurate are RNs' understanding of the scope of practice of PAs?
2. What are RNs' overall perception of PA technical and interpersonal skills?
3. What relationship, if any, exists between RNs' factual knowledge and perceptions of PAs?

Definition of Terms

In this section, terms will be defined in the context of the study. Defining terms will avoid any misinterpretations of the terms.

Medical provider: A medical provider is a person authorized by the state to practice medicine within their scope of practice. Providers diagnose illness, prescribe medications and therapies, and educate patients ("Types of healthcare providers", 2019).

Perception: Perception is a thought, belief, or opinion, often held by many people and based on appearances (Cambridge Online Dictionary, 2018).

Registered Nurse: A registered nurse (RN) is a licensed health practitioner who works with physicians, PAs, and other healthcare team members to provide care and treatment to patients in clinics, nursing homes, hospitals, and medical office settings. RNs also educate patients and their families about treatment and related other health issues ("Registered nurse career guide: What is a registered nurse", n.d.).

Limitations

Delimitations of the study, which were chosen by the researchers, included only surveying RNs. Limitations of the study included the low response rate and the non-random collection method. Additionally, there was the possibility of non-RN participants falsely filling out the Facebook survey despite the multiple instructions for the survey to only be completed by RNs.

The study specifically analyzed RN perceptions of PAs. There may be a lack of knowledge about the PA profession in multiple parts of healthcare. Surveying multiple types of healthcare workers was not feasible for this study. A survey of only RNs was chosen specifically as RNs work closely with PAs and patients.

The participants of the study had to be willing to participate. The low response rate may be due to an unwillingness or a lack of time by RNs. RNs volunteered to participate in the study, as such the RNs were not randomly selected for in order to represent a total population. Those

who were unwilling to complete the survey may have represented a different sample than those who were willing to complete the survey.

Conclusion

PAs have been working in healthcare for over 50 years. Roles of PAs on the healthcare team have changed dramatically over time, causing the potential for other healthcare providers to misunderstand the roles of PAs. RN perceptions of PAs have not been well researched. The study will explore RN perceptions of PAs. Chapter 2 will review the history of medical professions as well as current literature about the perceptions of PAs in healthcare.

Chapter 2: Literature Review

Introduction

According to the American Association of Physician Assistants (AAPA), PAs are medical providers who have at least 1,700 hours of training that allow them to diagnose and treat illnesses (AAPA, 2018). The PA profession was initially developed to address national shortages of physicians by training military corpsmen in an accelerated program (Hooker, & Cawley, 2003). PAs are trained to be versatile so they can collaborate with different healthcare professionals in a variety of settings (Hooker, & Cawley, 2003). The rapid growth and versatility of the PA profession has created the potential for misperceptions among other healthcare workers, specifically RNs (Hooker, & Cawley, 2003). Chapter 2 will outline the history of the PA and RN professions, how PAs work within current healthcare models, and relevant literature about RN and PA interactions.

History of Medical Professions

As medicine became formalized throughout the early years of history, the education of the practitioners of medicine was also formalized. Physicians became the scientists, educators, and healers for their communities (Gaeta, 2014). For many years, physicians were the only medical providers, often traveling to people's homes to provide care. In the United States, as the population grew and became consolidated in cities, physicians became overworked and in need of help (Gaeta, 2014).

Industrialization and the movement of populations into urban cities necessitated patients to be cared for in hospitals, rather than homes. Hospitals required thoughtful care of patients around the clock, leading to a creation of the nursing role ("American Nursing: An Introduction to the Past"). Nursing care for patients was quickly ubiquitously instituted in hospitals. In the

early 1800s, physicians initiated training books for people interested in nursing care ("American Nursing: An Introduction to the Past"). The need for nurses grew tremendously during the Civil War. After the war, the first few nursing educational programs were started ("American Nursing: An Introduction to the Past"). By World War II, RNs became a critical part of the success of the war for America. The healthcare system grew after the war, leading to an increase in demand for RNs and all medical professionals ("American Nursing: An Introduction to the Past").

During World War II, there were not enough army physicians and RNs to care for war injuries. Many army physicians trained army corpsmen to care for war casualties on the front lines (Hooker & Cawley, 2003). When the war came to an end, the former corpsmen struggled to find work in medicine (Hooker & Cawley, 2003). They were overqualified to enter the nursing field and were not perceived as having enough medical training and education to practice as physicians (Hooker & Cawley, 2003).

The end of World War II came with a shortage of physicians and RNs in the United States. The influx of trained medical corpsmen presented both a problem and eventual solution (Hooker & Cawley, 2003). Many young men had devoted time to the war, which discouraged them from undergoing years of medical education to become physicians once returning home (Hooker & Cawley, 2003). At the same time, Continuing Medical Education (CME) became mandatory for practicing physicians (Hooker & Cawley, 2003). Physicians were obligated to vacate their clinics to pursue CME, leaving their offices with no one to attend to patients (Hooker & Cawley, 2003).

As the American population grew, the shortage of healthcare professionals to accommodate the population was widely noted (Hooker & Cawley, 2003). In 1959, the U.S. Surgeon General addressed the shortage of medically trained personnel as a major medical issue,

requiring attention and intervention (Hooker & Cawley, 2003). In response to the growing need, Dr. Eugene Stead at Duke University proposed a solution: The Physician Assistant (Hooker & Cawley, 2003). Dr. Stead argued that medical students in their second and third years of schooling had proven capable of providing quality care under the guidance of physicians (Hooker & Cawley, 2003). An alternative medical professional would be the solution to the growing shortage of medical providers (Hooker & Cawley, 2003).

With support from medical professionals nationwide the Duke University Medical School began its inaugural PA program in October of 1965 (Hooker & Cawley, 2003). Four navy corpsmen began a 2-year intensive training program that drew from the expertise of both RNs and physicians (Hooker & Cawley, 2003). A focus on medical decision making was highlighted by the program (Hooker & Cawley, 2003). In 1967 the graduating class of corpsmen became America's first PAs (Hooker & Cawley, 2003).

While the inaugural class was small and somewhat inauspicious, national attention was drawn to the new program. On September 6, 1966, *LOOK Magazine* published an article entitled "More Than a Nurse; Less Than a Doctor" (Carter, 2008). The article advertised the concept of the PA profession and the new Duke program (Carter, 2008). At the same time, the article made RNs feel undermined as many believed that the PA program was simply a route for medical superiority (Carter, 2008). The article prompted RNs to advocate for their own advanced training, leading to the emergence of Nurse Practitioners (Carter, 2008). Since the very beginning of the PA profession, the relationship between RNs and PAs has been complicated by competition and misperceptions between the professions (Carter, 2008).

The Early Days of the PA profession

After the inception of the PA profession at Duke University, the continued shortage of physicians in America stimulated further development of the PA profession. One year after the inaugural class graduated from Duke in 1967, four national conferences were held in Durham, North Carolina (Hooker & Cawley, 2003). Medical professionals met to discuss the PA program educational standards, promotion of the profession to healthcare teams, and the future development of PAs (Hooker & Cawley, 2003).

During the time surrounding the graduation of the first class, a unified body of healthcare professionals who understood the PA profession and supported PA values and goals was vastly needed (Hooker & Cawley, 2003). Such a group would allow for advocacy for the PA profession and optimal integration of PAs into existing healthcare teams. As a result, the American Academy of Physician Assistants (AAPA) was created (Hooker & Cawley, 2003).

The goal of the AAPA was to advocate for both the PA profession and the patients of PAs in a trustworthy and efficient fashion (Hooker & Cawley, 2003). Led by William Stanhope and composed of PA students and alumni, the launch of the AAPA was a milestone in the PA professional establishment (Hooker & Cawley, 2003). The founding of AAPA marked the beginning of organized PA interaction with the US government and other healthcare professionals (Hooker & Cawley, 2003).

Once the inaugural class graduated from Duke and the AAPA became established, other universities expressed interest in developing PA education programs (Hooker & Cawley, 2003). University of Alabama and Alderson-Broaddus College began PA programs within two years of the first program's graduation (Hooker & Cawley, 2003). The movement to develop PA training programs was met with some skepticism by other healthcare professions. Many healthcare

professionals felt that PAs would not be prepared to perform tasks taught to them by the new programs (Hooker & Cawley, 2003).

The doubt of some physicians concerning the acceptability of PA integration into the healthcare model came to a head in 1969 (Ballenger & Estes, 1971). The assistant secretary of the Department of Health, Education, and Welfare ordered the National Institutes of Health (NIH) to conduct an extensive survey of all types of licensed healthcare workers in the United States (Ballenger & Estes, 1971). The study was compared to other research that had taken place before the PA model had been proposed. The prior research pointed to the need for healthcare professionals who could perform tasks previously executed by physicians (Ballenger & Estes, 1971). Both the previous research and the NIH concluded that PAs would be instrumental in supporting healthcare teams and caring for patients (Ballenger & Estes, 1971).

The studies were not only a turning point in advocacy for the PA profession to other healthcare professionals, but they also resulted in amendments by the American Medical Association (Dean, 1973). Upon release of the NIH's findings, the American Medical Association revised state medical practice acts to prevent PAs from being excluded from providing medical care under the oversight of a licensed physician (Dean, 1973). The amendment highlighted the ability of PAs to provide care that was within their scope of practice and required both the PA and the supervising physician take responsibility for any medical errors that could occur (Dean, 1973). The amendment served as a milestone in PA recognition not only from the government, but also from healthcare professionals who may have doubted the legitimacy of PAs (Sadler & Davis, 2017).

Research surrounding the acceptance, education, and abilities of PAs was not only conducted during the emergence of the PA profession but continued in the following years. The

1970s and 1980s was a time of growth for the PA profession (Hooker & Cawley, 2003). Educational shifts toward specialties had occurred, allowing PAs to fill roles in a greater variety of settings. Many different healthcare professionals encountered PAs (Hooker & Cawley, 2003). Educational surveys, sociological papers, and economic value reports were conducted during this time of growth (Dean, 1973; Stead, 1966; Rosinski, 1972). The papers and research consistently pointed to the economic value and medical proficiency of PAs (Dean, 1973; Stead, 1966; Rosinski, 1972). The growing evidence allowed healthcare professionals who may have been skeptical of PAs to better understand the efficacy of PA utilization (Dehn, Everett & Hooker, 2017).

The PA Profession Today

PAs have been fulfilling needs in healthcare for many years and the role of PAs has evolved and expanded over time. It was first thought that "the PA occupation was created to diagnose and treat common medical conditions in a general practice environment" (Hooker & Everett, 2011, p. 22). PAs now prescribe medications, including opioids, without a supervising physician's signature. Physician supervisory agreements are no longer required in states such as Michigan. PAs continue to work more independently in a variety of specialties in both rural and urban settings (Hooker & Everett, 2011). As PAs have become more prevalent and independent in the healthcare system, their ability to provide care has been compared to other healthcare providers. In addition, multiple studies have documented patient and physician perceptions of PAs in different settings (Hooker & Everett, 2011; Timmermans et al., 2017). However, there is only one study analyzing RNs' perceptions of PAs.

In a review study by Hooker & Everett (2011), PAs were analyzed in primary care systems. The study was conducted within the United States to analyze how PAs address

shortages in the primary care field. Most PAs worked in primary care and performed many of the services primary care physicians did (Hooker & Everett, 2011). PAs were shown to work well with other providers for coordinated care, and specialist physicians were willing to accept referrals from primary care PAs (Enns, Wynn, Muma, & Lary, 2003). PAs promoted continuity of care as overall patient satisfaction was significantly higher when patients saw the same provider at each visit (Rodriguez et al., 2007). Another study showed that PAs increased the accessibility of care for patients, and the most common patient for PAs was "more likely to be female, rural, uninsured, or publicly insured" (Grumbach et al., 2003). PAs practiced in rural and underserved populations at a greater proportion than physicians and RNs (Grumbach et al., 2003).

As is indicated in Timmermans et al. (2017), "Medical care for admitted patients is increasingly reallocated to PAs, because of an increased appreciation for continuity of care, pressure to deliver healthcare efficiency, and local shortages of MDs" (p. 2). PAs address medical shortages but for PAs to be effective, the quality of their care must be similar to the outcomes of physicians' care (Timmermans et al., 2017).

To assess PA patient care, hospitalist teams that utilize PAs were compared to teams led exclusively by physicians (Timmermans et al., 2017). In the study by Timmermans et al., two models in a hospital were analyzed - a physician only model and a mixed model with physicians and PAs (2017). By analyzing patient length of stay, secondary outcomes, and patient experiences, the study compared the two models. The results did not show any difference in the length of stay between the two models. The researchers found that patients had a significantly better experience with PA involvement (Timmermans et al., 2017). Additionally, "PAs may be a cost-effective alternative for residents and hospitalists, because PAs can be trained faster and the

cost of their training is lower" (Timmermans et al., 2017, p. 10). The study by Timmermans et al. shows that PA involvement on medical teams leads to the same quality of care, better patient satisfaction, at a lower cost to the hospital (2017).

As PAs continue to meet patient needs in primary care and hospital care, their level of knowledge and autonomy has further developed. In a comparison of rural and urban emergency departments by Sawyer and Ginde, the rural PAs had a greater scope of practice than urban PAs (2014). PAs in rural settings are more likely to work without an onsite physician supervision. Sawyer & Ginde indicated that as the decline of physicians in practice continues, PAs are given more responsibilities and autonomy (2014). Further studies will be needed to assess the progress in quality of care and patient safety as PA responsibilities continue to increase (Sawyer & Ginde, 2014).

Perceptions of RNs

RNs make up one of the largest percentages of healthcare workers in hospital settings (Wanzer et al., 2009). RNs care directly for patients and work in all medical specialties. RN perceptions of other healthcare professionals has been proven to impact patient care. In one study, RNs completed surveys about their most recent interaction with physicians (Wanzer et al., 2009). RNs reported better job satisfaction when they viewed communication to be positive between themselves and the physician (Wanzer et al., 2009). Communication practices that provided positive perceptions included use of clarity, humor, immediateness, listening, and empathy during RN-physician interactions (Wanzer et al., 2009). Physicians who interacted positively with RNs were perceived by RNs to provide better communication to patients, which correlated with higher patient satisfaction (Wanzer et al., 2009). Patients receive better care when interactions on healthcare teams are positive.

With increasing prevalence of PAs in healthcare, RNs interact with PAs instead of physicians more frequently. Since the introduction of the PA profession is recent compared to other health professions, there are limited studies analyzing RN perceptions of PAs. The only known study, which was conducted in 1985, delivered a survey to RNs in two different hospitals. One of the hospitals employed PAs and one did not (Erkert, 1985). The survey analyzed RNs' attitudes towards PAs. The results indicated that RNs who had experience working with PAs had a better understanding of the PA role and a more positive attitude towards PAs (Erkert, 1985). Although this is an older study, the results are similar to more recent research about RN and physician dynamics (Wanzer et al., 2009). RN perceptions of providers has a direct influence on the unity of the healthcare team and the quality of care for patients.

Conclusion

Since the development of the PA profession over 50 years ago, the role of PAs has continued to grow and develop. PAs have consistently addressed the nation's need for healthcare providers by working across different specialties with many different healthcare team members (Timmermans et al., 2017). There is very little research about the perception of the PA profession by other healthcare team members, especially RNs. RNs are essential members of healthcare teams as they work directly with patients, physicians, and PAs. RNs' viewpoints are paramount in team unity and patient care (Wanzer et al., 2009). Chapter 3 will introduce the design, population, validity of the study, data collection methodology, and statistical analysis of the study.

Chapter 3: Methods

Introduction

The purpose of the research project was to evaluate RN perceptions of PAs. The survey analyzed RNs' factual knowledge about the PA profession, as well as their perceptions of PA technical and interpersonal skills. RN perceptions and factual knowledge were then analyzed for correlation. The data provided insight about healthcare team dynamics and demonstrated if RNs' factual knowledge about PAs correlated with RNs' perceptions of PAs.

The research project achieved the purpose by addressing the following research questions:

1. How accurate are RNs' understanding of the scope of practice of PAs?
2. What are RNs' overall perception of PA technical and interpersonal skills?
3. What relationship, if any, exists between RNs' factual knowledge and perceptions of PAs?

The remainder of Chapter 3 will address the study design, sample population, study procedures, and data collection.

Study Design

The research design was a quantitative, retrospective, cohort survey. The experiment was designed to quantify a cohort of RNs' perceptions of PAs based on their past experiences with PAs. The independent variables present in the study included the number of years that an RN had worked with PAs and the specialty in which the majority of the years occurred (i.e primary care, surgery, etc.). The variables that were dependent on these factors included the factual knowledge that the RNs had about the PA profession, along with RN perception of PA technical and interpersonal skills. The variables were analyzed to determine if a correlation existed between the RNs' factual knowledge and perception of PAs.

Participants

The participants of the study included RNs with any type of experience in any specialty. RNs who were aged 18 or older, male or female, and of any race, ethnicity, or religion were able to participate. RNs who work full time, part time, or are retired were included. RNs who did not speak English were excluded from the study. In order to gain statistically significant results, 45 RN surveys were obtained from RNs living throughout the United States.

Experimental Procedure

The study initially involved surveying RNs who were pursuing a Master's in Nurse-Midwifery at Bethel University. The use of both graduate and undergraduate nursing students for the study was approved by the Bethel University Faculty Student Scholarship and Advocacy Committee (Appendix C). The undergraduate students were utilized as the expert panel to make corrections to the survey before it was distributed to the participants. Five undergraduates read through the survey agreeing that the questions were clear. There were no recommendations made in regard to changes to the survey. The graduate students were RNs who had healthcare experience and had returned to school to pursue a masters of Nurse-Midwifery.

Following approval by the Institutional Review Board (IRB) at Bethel University (Appendix D), the survey was distributed to RNs who were enrolled in Bethel University graduate studies in Nurse-Midwifery. A professor of nursing at Bethel University sent the survey via email to the nursing students. Each survey included a statement of informed consent informing the participants of the purpose of the study (Appendix A). Participation was completely voluntary. Each participant was informed that completion of the survey would not disclose the RNs' place of work or affect their relationship with Bethel University. For security purposes, no questions on the survey addressed identifiable information that would lead back to

the participants. After the surveys were sent by email to the graduate student RNs, a reminder email was sent two weeks later. Four weeks after the initial email the survey was closed, and the completed surveys will be analyzed.

The researchers obtained 9 surveys from the graduate students in a four-week time period. As this sample size was less than was desired, an addendum was made to the IRB in order to post the survey to Facebook (Appendix E). Facebook's rules for obtaining survey responses using the site were reviewed and adhered to. A standard Facebook post was created by the researchers and approved by the IRB (Appendix F). The post included an invitation for RNs to participate and a link to the survey. The post was uploaded to each of the researchers' Facebook pages. After two weeks of sample accumulation the post was removed from Facebook.

The electronic data, while collected and analyzed, was kept on a password-protected computer owned by the researchers. After completion of the study, the data was kept on an external storage device locked in the PA program office for a minimum of five years, per securing requirements for Bethel University's Physician Assistant Program.

Qualtrics software was utilized to survey the RNs (Appendix B). First demographic questions were collected in survey questions 1-3. Next, participants were asked questions regarding their factual knowledge about the PA profession with questions 4-13. These questions were answered using true or false responses. Finally, questions 14-22 asked about participants' perceptions of PAs. Participants responded to statements with the Likert scale. Through the Likert scale answering system, the statistical analysis was simplified to make answering questions easy for participants, while simultaneously producing accurate data.

Data Analysis

The data obtained from the survey was analyzed and grouped utilizing applications on Excel. The demographic data included information about the number of years the RNs had worked with PAs, the number of years worked as an RN, and the specialties of the RN participants. For the remaining analysis the samples were divided into three groups based on the number of years RNs had worked with PAs.

The second section of the survey was used to understand the accuracy of RN knowledge about PAs. The scoring criteria was based on the number of correct and incorrect answers. Each correct answer received 1 point while each incorrect score received zero points. The participants' scores were graded on a scale out of 10. The number of RNs that got each question right was analyzed. Then each group was analyzed for an average percentage score in their section based on years worked with PAs.

The third section of the survey included statements indicating RNs' perception of PAs. Answer choices were presented on a Likert scale ranging from 'strongly agree' to 'strongly disagree' and given number values. The number of each response (strongly agree to strongly disagree) for each question was analyzed. The average score was obtained for the section and divided into the three groups as above.

In order to analyze the third research question, the score each individual RN received in the factual knowledge section (out of 10) was compared to their score in the perception section. A Pearson correlation equation was used to analyze the data (Stangroom, 2020). The resulting Pearson correlation coefficient indicated whether the sample showed a correlation between factual knowledge and perception.

Validity and Reliability

The validity and reliability of the survey cannot be established because the survey tool has never been administered before this study. An expert panel of undergraduate nursing students enrolled in the Bethel University Nursing Program was utilized. Members of the panel reviewed the clarity and readability of the survey questions in order to increase the validity and reliability of the tool. The questions were confirmed to be readable and clear. No adjustments were made to the questions.

Conclusion

In conclusion, a survey was conducted to analyze if RN perceptions of PAs exist in correlation to RN factual knowledge about PAs. An expert panel checked readability of the survey in order to decrease any limitations in conduction of the survey. Chapter 4 will further explain the analysis of the results of the study. Following chapter four, a discussion in chapter 5 will explain the results from the study.

Chapter 4: Results

Introduction

Chapter 4 examines the data collected by the researchers through the survey given to RNs, via both the Bethel University Nurse Midwifery program and Facebook recruitment. The data was analyzed and displayed to reflect each section of the survey with regards to the research questions. The demographics of the survey participants were analyzed to demonstrate the population of RNs that were surveyed.

The demographic factors included years worked as an RN, years worked with PAs, and the medical specialty in which most of the years had been worked. Ten questions were utilized to assess the RN's knowledge of PAs. Each question was answered True or False. The section was scored and a percent correct was determined. The final section of the survey asked RNs' perception of PAs utilizing the Likert scale. If answered "strongly agree" they were scored a 5, "somewhat agree" being a 4, "neither agree or disagree" given a 3, "somewhat disagree" a 2, and "strongly disagree" a one. All perception questions had a positive connotation, with 5 being the most positive possible answer and 1 being the more negative possible answer. The Pearson's Correlation analysis was performed to see if correlation between RN knowledge and perception was present.

The survey was first sent to Bethel University Nurse Midwifery program via email. There were 9 completed surveys. In order to increase the sample size, a Facebook post was created. There were 45 surveys obtained by this method, 9 of the surveys were not completed and were thrown out. There were 45 surveys analyzed in total. The data below represents the findings from the study.

Demographics

The data was collected from 45 RNs located around the United States in various specialties with various years of experience. There were 3 RNs with less than 1 year of experience (6.7%), 8 with 1 year (17.8%), 13 with 2 years (28.9%), 3 with 3 years (6.7%), 2 with 4 years (4.4%), 4 with 5 years (8.9%), 1 with 6 years (2.2%), 2 with 8 years (4.4%), 6 with 10-20 years (13.3%) and 3 with over 20 years of experience (6.7%)(Figure 1).

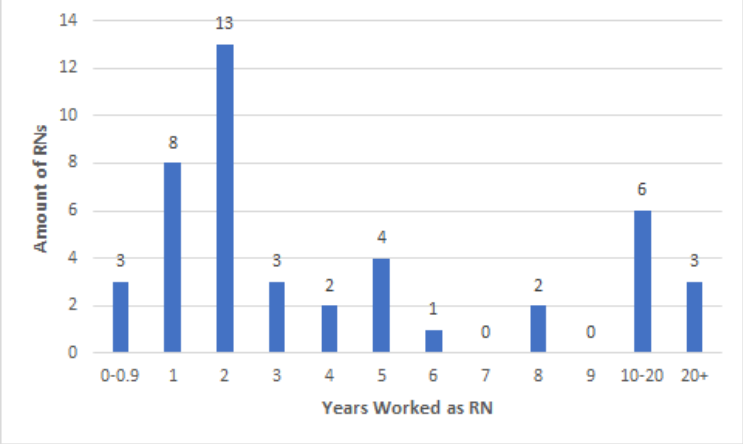

Figure 1: Sample participants divided by years of experience as an RN.

The RNs were asked how many years of experience they had with PAs. There were 2 RNs that had no experience with PAs (4.4%), 2 with less than 1 year (4.4%), 14 with 1 year (31.1%), 13 with 2 years (28.9%), 3 with 3 years (6.7%), 3 with 4 years (6.7%), 1 with 6 years (2.2%), 1 with 7 years (2.2%), 2 with 8 years (4.4%), 3 with 10 years (6.7%), and 1 with greater than 10 years (2.2%) (Figure 2).

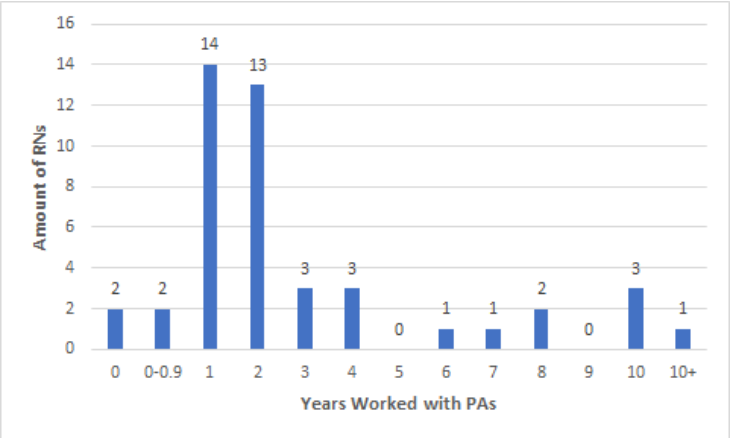

Figure 2: Sample of participants divided by years of experience working with PAs.

The RNs were asked which specialty they had spent most of their time working in. Three reported Cardiology (6.7%), 1 reported Education (2.2%), 5 reported Emergency Medicine (11.1%), 1 reported Gastrointestinal (2.2%), 10 reported Intensive Care Unit (22.2%), 8 reported Inpatient Medical/Surgical Floor (17.7%), 2 reported NICU (4.4%), 4 reported Obstetrics (8.9%), 3 reported Oncology (6.7%), 3 reported Orthopedics (6.7%), 2 reported Pediatrics (4.4%), 2 reported Pulmonary (4.4%), and 1 reported Inpatient Rehabilitation. (2.2.%) (Figure 3).

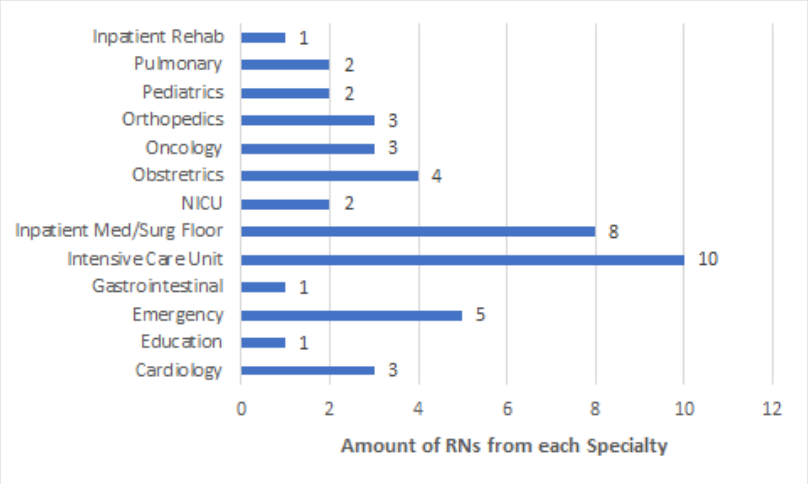

Figure 3: Sample of participants divided by specialty worked.

Knowledge Analysis

The second section of the survey was utilized to assess RN factual knowledge about the PA scope of practice. For Question 4, which stated "PAs can take a history and do a physical exam", there were 43 (95.5%) RNs who were correct by answering true. For Question 5, "PAs can diagnose a variety of medical conditions", there were 42 (93.3%) RNs that answered correctly. Question 6 said, "PAs can prescribe medications", and there were 41 (91.1%) RNs that answered correctly. For Question 7, "PAs can order imaging (X-ray, MRI, CT) tests", there were 44 (97.8%) RNs that answered correctly. For Question 8, "PAs can order and interpret lab

results", there were 43 (95.5%) RNs that answered correct. Question 9 had 37 (82.2%) RNs respond correctly when asked "PAs can assist in surgery". Question 10, "PAs can do procedures" and Question 11, " PAs can work in most specialties" both received 44 (97.8%) correct responses. Question 12 said "PAs can provide a treatment plan to patients" receiving 42 (93.3%) correct answers. Question 13 said "PAs can educate patients on their condition" which had 43 (95.5%) RNs respond correctly (Table 1).

Years worked with PAs	N	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Score of 10
<1	16	15	14	14	16	15	12	16	16	14	15	9
1-3	17	17	17	17	17	17	16	17	17	17	17	16
>3	12	12	12	11	12	12	10	12	12	12	12	10
All	45	43	42	41	44	43	37	44	44	42	43	35

Table 1: Number of RNs correct responses to each question regarding PAs scope of practice.

Overall, the average percent correct in the group of RNs with less than 1 year of working with PAs was 91.9% with 9 (56.2%) RNs receiving 100%. Those with 1-3 years of experience had an average of 99.4% with 16 (94.1%) RNs receiving 100% correct. RNs reporting greater than 3 years of working with PAs, received 97.5% average correct, with 10 (83.3%) RNs getting 100% correct. Of all the samples collected, the average score was 96.2% with 35 (78.8%) RNs receiving 100% correct (Table 2).

Years worked with PAs	N	Avg Years	Average Percent Correct	Standard Deviation
<1	16	0.79	91.9	7.4
1-3	17	2.09	99.4	1.8
>3	12	7.79	97.5	5.3
All	45	3.15	96.2	4.4

Table 2: Average percent correct to knowledge questions.

Perception

Questions 14-21 were asked using the Likert Scale. Of the entire sample, the amount of each response was recorded for each question. For Question 14, which stated, "PAs are enjoyable to work with", there were 26 (57.8%) RNs that responded with strongly agree (score of 5). There were 16 (35.5%) RNs that responded somewhat agree (score of 4). Three (6.7%) RNs responded neither agree nor disagree (score of 3).

For Question 15, which stated, "PAs work well with nurses", there were 21 (46.7%) RNs responded with strongly agree, 18 (40%) responded somewhat agree, 4 (8.9%) that responded neither agree nor disagree and 2 (4.4%) that responded with somewhat disagree.

For Question 16, "PAs compassionately care for patients", there were 28 (62.2%) RNs that responded strongly agree, 15 (33.3%) that responded somewhat agree, and 2 (4.4%) that responded neither agree nor disagree.

Question 17 stated "PAs have good communication skills with other healthcare professionals." There were 23 (51.1%) RNs that responded strongly agree, 18 (40%) responded somewhat agree, 3 (6.7%) that responded neither agree nor disagree and 1 (2.2%) that responded somewhat disagree.

Question 18, which stated, “PAs are medically competent”, had 32 (71.1%) RNs respond with strongly agree, 12 (26.7%) that responded somewhat agree, and 1 (2.2%) that responded somewhat disagree. For Question 19, which stated, “PAs have adequate training for their role in healthcare”, there were 27 (60%) RNs that responded with strongly agree, 14 (31.1%) responded somewhat agree, 2 (4.4%) responded neither agree nor disagree and 2 (4.4%) that somewhat disagreed.

Question 20 stated, “PAs are confident in their ability to provide care to patients.” There were 21 (46.7%) RNs that responded with strongly agree, 21 (46.7%) said somewhat agree, and 3 (6.7%) that neither agreed nor disagreed. For Question 21, which stated, “PAs provide valuable contributions to healthcare teams”, there were 32 (71.1%) RNs that responded strongly agree, 12 (26.7%) that said somewhat agree, and 1 (2.2%) that somewhat disagree (Table 3).

#	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Total
5 (strongly agree)	26	21	28	23	32	27	21	32	210
4 (somewhat agree)	16	18	15	18	12	14	21	12	126
3 (neither)	3	4	2	3	0	2	3	0	17
2 (somewhat disagree)	0	2	0	1	1	2	0	1	7
1 (strongly disagree)	0	0	0	0	0	0	0	0	0

Table 3: Responses to each perception question.

When broken up into groups, RNs with less than 1 year experience had an average score of 4.45 on the perception questions. Those with 1-3 years of working with PAs, had an average

score of 4.51. The RNs with greater than 3 years of working with PAs had an average score of 4.55. For the entire sample size, the average response came to 4.50 (Table 4).

Years worked with PAs	N	Avg Years	Average Score	Standard Deviation
<1	16	0.79	4.45	0.18
1-3	17	2.09	4.51	0.16
>3	12	7.79	4.55	0.15
All	45	3.15	4.50	0.13

Table 4: Average score on Q14-21 using Likert scale.

Correlation

The Pearson's Correlation equation was then utilized to perform a correlation study between the scores on the knowledge test (out of 10) and the score of the perception questions (up to 40). The R squared value came to 0.0049, which shows there is no correlation between the data sets.

Conclusion

Upon review, the 45 RN respondents from various specialties with various years of experience showed an overall knowledge score of 96.2% correct responses. Their response to the perception questions averaged 4.50, with a 5 being strongly agree for all questions. The Pearson's correlation was performed and showed there was no correlation between the RNs' knowledge of PAs and RNs' perceptions of PAs.

Chapter 5: Discussion

Summary of Results

The purpose of the study was to assess if a relationship existed between RNs' perception of PAs and RNs' factual knowledge about PAs. RNs' factual knowledge about PAs and RNs' perception of PAs were scored separately, then analyzed together to discover if a correlation existed. Researchers hypothesized that high factual knowledge about PAs would correlate to more positive perceptions of PAs. The researchers believed that RNs' with lower understanding of PA's function on medical teams would have a negative perception of PAs. Previous research indicated this correlation to be true (Erkert, 1985). A study done by Erkert found that RNs who understood the roles of PAs had a more positive perception of PAs (1985). Similarly, a study conducted by Kvarnström showed that understanding of the roles of members of interprofessional medical teams was the biggest factor influencing the team's perception of collaboration (2008).

The results of the study answered each of the three research questions. First, RNs' factual knowledge about PAs was high, 96.2% of factual questions about PA scope of practice were answered correctly by RNs. The lowest scored question was question 9, "PAs can assist in surgery." There were 75% of RNs with less than a year of experience answered question 9 correctly, compared to 89.7% of RNs with more than a year of experience that answered correctly.

In the second section of the survey, RN overall perception of PA technical and interpersonal skills was largely positive. The average score among questions about RN perceptions of PAs was 4.5, with 1 being the most negative possible answer and 5 being the most positive possible answer. The most negative possible answer, 'strongly disagree', was never

chosen by a participant for any perception question. The question with the most variance was question 15, “PAs work well with nurses.” Question 15 had only 46.7% of RNs select ‘strongly agree’.

Finally, the data showed no correlation between RN factual knowledge about PAs and RN perceptions of PAs. The R-squared value of the Pearson’s correlation was 0.0049, indicating no correlation. The single participant whose answers were most contrary to the hypothesis of the study got 100% of factual knowledge questions correct yet had the lowest and most negative perception score.

The findings of the study indicate that RNs have a high understanding of the scope of practice of PAs. Since factual knowledge about PAs is so ubiquitously high, correlation between RN factual knowledge and RN perception could not be determined. The lack of correlation between factual knowledge and perception is unique to previous studies outlined in the literature review (Erkert, 1985).

Limitations

A major limitation of the study was the relatively small population size. There were 9 surveys obtained directly from the Bethel University Nurse Midwife Program. In return, the Facebook post was accessible by anyone who saw it on their Facebook. There was no way to ascertain that only RNs filled it out and this fact may change the validity of the responses. The RNs that did volunteer may have felt more strongly towards PAs and had more distinct interactions with PAs that attributed to the perceptions. There were also some participants that began but did not complete the survey. Incomplete surveys were not included in the data analysis. The results of the study were limited to a few weeks that the post was up. More

accurate collection of data would allow for many months to years the survey being available for increased sample size.

Further Research

Data of the current research did not indicate a correlation between RN factual knowledge about PAs and RN perceptions of PAs. Alternative factors that influence RN perceptions of PAs are yet to be studied. According to Wanzer, Wojtaszczyk, and Kelly, PAs' communication style with RNs may correlate with positive RN perceptions of PAs (2009). Perhaps RN perceptions have less to do with factual knowledge about PAs, and more to do with the interpersonal attributes of the PA: kindness, honesty, work ethic, empathy. Further research should be conducted to analyze if correlation between RN perception of PAs technical skill is correlated to RNs' perception of PA interpersonal skills.

The methodology of the current research could also be utilized to determine if a correlation exists between patient factual knowledge about PAs and patient perceptions of PAs. The general patient population would be expected to have a lower understanding of the roles of PAs as compared to RNs. Since a greater variance in factual knowledge may exist, it would be interesting to analyze if patients with higher factual knowledge about PAs would have more positive perceptions of PAs. Other research that could be pursued include surveying a wider variety of medical professionals that interact with PAs daily.

Conclusion

Since the commencement of the PA profession over 50 years ago, PAs have become an integral part of healthcare teams (Timmermans et al., 2017). The perceptions of the interpersonal and technical skills of PAs on healthcare teams, especially the perceptions of RNs, has not been

studied thoroughly. The only known study about the interaction of RN perception and knowledge of PAs occurred in 1985, and no similar studies have been conducted since then (Erkert, 1985).

Research shows that factual understanding about the roles of healthcare team members is a major factor in team cohesiveness and patient care (Kvarnström, 2008). Ultimately, the study aimed to analyze if a correlation existed between RN factual knowledge about PAs, and RN perceptions of the interpersonal and technical skills of PAs. Unlike the previous research study by Erkert, the current results indicated that no correlation exists between RN perceptions of PAs and RN factual knowledge about PAs. The high average factual knowledge and positive average perception scores indicate that RNs understand PA scope of practice and appreciate PAs on healthcare teams.

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APPENDIX A

Informed Consent

We are physician assistant students from Bethel University's Physician Assistant Program, conducting research in partial fulfillment of the requirements for a Masters Degree in Physician Assistant Studies. Our study is investigating registered nurse perceptions of PAs. We hope to learn what nurses think about the work of PAs. You were selected as a possible participant in this study because you have experience working as a RN.

If you decide to participate, participation involves taking a survey about your perception of PAs. Attached is a survey to gather necessary information to complete the data collection of this research. The survey will take approximately 5 minutes to complete. By completing this survey, you are indicating informed consent to participate in this study.

The electronic data, while being collected and analyzed, will be kept on a password-protected computer owned by the researchers. After completion of the study, the data will be kept on an external storage device locked in the PA program office for a minimum of five years, per securing requirements for Bethel University's Physician Assistant Program.

Any information obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission. In any written reports or publications, no one will be identified or identifiable and only aggregate data will be presented.

Your decision whether or not to participate will not affect your future relations with Bethel University. If you decide to participate, you are free to discontinue participation at any time without affecting such relationships.

This research project has been reviewed and approved in accordance with Bethel University's Levels of Review for Research with Humans. If you have any questions about the research and/or research participants' rights or wish to report a research related injury, please email Erin Alpers, PA-S at erin-alpers@bethel.edu, Katy Mellesmoen, PA-S k-mellesmoen@bethel.edu, Linda Charles PA-S linda-charles@behtel.edu, or Jeanne Szarzynski PA-C j-szarzynski@bethel.edu.

You may print this page if you wish to keep a copy of this document.

We understand that you have an extremely busy schedule and your time is limited. Please realize that your participation is vital to the success of this research. The information that you provide is essential to the validity of this study. Thank you in advance for your participation in this study. If you have any questions, please feel free to contact us.

Thank you again for your help.

Sincerely,
Erin, Katy, and Linda

You are making a decision whether or not to participate. By checking the box below you are indicating that you have read the information provided above and have decided to participate. You may withdraw at any time by closing the survey without prejudice after signing this form should you choose to discontinue participation in this study.

○ I agree to participate in the survey (1)

APPENDIX B

Survey

Demographic Questions

Q1 How many years of experience do you have as a registered nurse?

_____

Q2 What area of medicine (specialty) have you worked in for the majority of this time?

_____

Q3 How many years of experience do you have working with PAs?

_____

Knowledge of PAs

This section will be asking true or false questions in order to measure your knowledge of what PAs can do in their healthcare role.

Q4 PAs can take a history and do a physical exam

- ○ True (1)
- ○ False (2)

Q5 PAs can diagnose a variety of medical conditions

- ○ True (1)
- ○ False (2)

Q6 PAs can prescribe medications

- ○ True (1)
- ○ False (2)

Q7 PAs can order imaging (X-Ray, MRI, CT) tests

- ○ True (1)
- ○ False (2)

Q8 PAs can order and interpret lab results

○ True (1)

○ False (2)

Q9 PAs can assist in surgery

○ True (1)

○ False (2)

Q10 PAs can do minor procedures (stitches, mole removal, etc.)

○ True (1)

○ False (2)

Q11 PAs can work in most specialties

○ True (1)

○ False (2)

Q12 PAs can provide a treatment plan to patients

○ True (1)

○ False (2)

Q13 PAs can educate patients on their condition

○ True (1)

○ False (2)

Perception of PAs

Q14 PAs are enjoyable to work with

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q15 PAs work well with nurses

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q16 PAs compassionately care for patients

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q17 PAs have good communication skills with other healthcare professionals

- ○ Strongly agree (1)

- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q18 PAs are medically competent

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q19 PAs have adequate training for their role in healthcare

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q20 PAs are confident in their ability to provide care to patients

- ○ Strongly agree (1)
- ○ Somewhat agree (2)

- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q21 PAs provide valuable contributions to healthcare teams

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q22 Is your general opinion of PAs positive or negative?

- ○ Positive (1)
- ○ Negative (2)

APPENDIX C

Population Approval

The committee agreed that your study looks like a valuable study and to go ahead with using the nursing students at Bethel. We meant this as all students, including the grad students. We did include a question about what level of undergrad student you would want included, as well as the other questions I sent.

Thanks,

Connie for the Faculty Student Scholarship and Advocacy committee

Connie L. Clark, PhD, RN, CNE
Professor of Nursing
Bethel University
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Office HC 221
Phone: 651-638-6525
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APPENDIX D

IRB Approval

Level 3 IRB approval letter

Inbox

Wallace Boeve <w-boeve@bethel.edu> Mon, Jul 22, 2019, 3:49 PM

to me, Linda, Erin, Jeanne, Lisa, Peter

July 22, 2019

Erin, Kaitlyn, & Linda;

As granted by the Bethel University Human Subjects committee as the program director, I write this letter to you in approval of Level 3 Bethel IRB of your project entitled: "Registered Nurse Perception of Physician Assistants." This approval is good for one year from today's date. You may proceed with data collection and analysis. Please let me know if you have any questions.

Sincerely;

Wallace Boeve, EdD, PA-C
Program Director
Physician Assistant Program
Bethel University
w-boeve@bethel.edu
651 308-1398 cell
651 635-1013 office
651 635-8039 fax
http://gs.bethel.edu/academics/masters/physician-assistant

CC: Bethel IRB Chair
Faculty Chair Advisor
PA Program Research Coordinator

APPENDIX E

IRB Addendum and Approval

Hello Wally,

We would like to submit an addendum to our IRB, as we only received 9 responses from the Masters of Nurse Midwife students. Therefore, we would like to change our methods of recruitment of participants to include a Facebook post. We will post a link to the survey on a personal Facebook page, allowing registered nurses to voluntarily take the survey. Participants will fill out the same survey as the Nurse Midwife students. The survey includes information about the study, inclusion criteria, and informed consent. All responses will be confidential, and in no way linked to the identity of the registered nurse. The Facebook post will be deleted two weeks after it was posted, and the responses analyzed in conjunction with the previously collected Nurse Midwife responses. Ultimately, we believe the Facebook post will increase both the sample size and validity of the study, as registered nurses who are not pursuing graduate education will be included in the data.

Attached is our original IRB for your reference.

Thank you,
Erin Alpers, Katy Mellesmoen, Linda Charles

Wallace Boeve <w-boeve@bethel.edu> Wed, Oct 16, 2019, 3:24 PM

to Lisa, Erin, me, Linda, Jeanne

Addendum for your project approved. I've copied Lisa Naser and your project chair, Jeanne Szarzynski, so they have record of the approved addendum for your previous IRB submission. Please be sure to keep this email trail to include as an appendix with your final project.

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APPENDIX F

Facebook Post

Attention all registered nurses! Myself and two other students from Bethel's Physician Assistant Program are conducting a research project for our master's thesis. Our research will analyze registered nurse perceptions of physician assistants. This brief, anonymous survey will only take about 5 minutes. Please only participate if you are a registered nurse. Thank you in advance!
*Link attached