Fall 2022

The Effects of an Interprofessional Education Video on Dermatologists' Understanding of the Role of the Dermatology Certified Nurse Practitioner

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THE EFFECTS OF AN INTERPROFESSIONAL EDUCATION VIDEO ON DERMATOLOGISTS' UNDERSTANDING OF THE ROLE OF THE DERMATOLOGY CERTIFIED NURSE PRACTITIONER

by

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A Doctoral Project
Submitted to the Graduate School,
the College of Nursing and Health Professions
and the School of Leadership and Advanced Nursing Practice
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Nursing Practice

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December 2022

Published by the Graduate School

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

ABSTRACT

Dermatology-certified nurse practitioners (DCNPs) have validated knowledge of a dermatology core curriculum and have at least 3,000 hours of formal or informal dermatology training (Dermatology Nurse Practitioner Certification Board [DNPCB], n.d.a). With their standardized education and training, DCNPs are meeting the benchmarks set out by dermatologists. Subsequently, DCNPs have become the new gold standard for dermatology advanced practice registered nurses (APRNs).

However, there is no mention of DCNPs by the American Academy of Dermatology (American Academy of Dermatology [AAD], 2022), and personal experience with dermatologists is that they lack knowledge about DCNPs. This lack of knowledge could create an impasse for interprofessional collaboration (IPC), as the most frequently reported barrier to meaningful collaboration between physicians and APRNs is the physician's lack of awareness of the APRN's role and scope of practice (Schadewaldt et al., 2013). One approach to promote IPC is interprofessional education (IPE). IPE has been shown to increase knowledge and skills related to collaboration as well as improve attitudes regarding collaboration (Guraya & Barr, 2018).

This project used an original IPE video on the role, scope of practice, and collaborative benefits of the DCNP as its intervention with a descriptive pretest-posttest design. The main objective of this project was to determine if the intervention would increase dermatologists' baseline knowledge about DCNPs as evidenced by a positive improvement score. Improvement is the posttest's average percent of correct answers minus the pretest's average percentage of correct answers, and this score can be positive or negative (Delucchi, 2014). Another objective of this doctoral project was to determine

if dermatologists believed that the intervention improved their understanding of the DCNPs as evidenced by survey responses.

Overall, the intervention was found to be effective with an improvement score of +8.3%. Also, all three participants strongly agreed that the IPE video improved their understanding of the role of the DCNP. In conclusion, IPE is a relatively inexpensive tool that was found to be effective in this project. As the number of DCNPs rise, IPE can be used to educate the dermatology workforce to promote meaningful IPC during a much-needed time.

ACKNOWLEDGMENTS

I would like to thank my former chair, Dr. Debra Copeland, for her guidance throughout my doctoral project—I hope you're enjoying retirement. I would also like to thank my current chair, Dr. Carolyn Coleman, for her support. Additionally, I would like to thank Dr. Lakenya Forthner, my committee member. I would be remiss if I did not also thank Dr. LaWanda Baskin, Dr. Lisa Morgan, and Jeanne Stewart, MLS, for their assistance throughout doctoral school.

Beyond university faculty members, I would like to thank all the dermatologists who participated in my doctoral research. Specifically, I'd like to thank Dr. Anna Wile for believing in me and my abilities with such unwavering confidence, that I was able to believe in myself again. You promoted self-efficacy in my ability to reach one of my greatest life goals—attending graduate school. I would also like to thank Dr. Logan Rush for his guidance and perpetual optimism. I would like to thank Dr. Katy Matthews for her support.

To my clinical preceptors—Ronda Eason-Hinton, Samantha Mayerhoff, Dr. Nicole Powe, Tiffany Dearman, and LeAnn Sullivan—thank you for all the knowledge and wisdom that you imparted to me. To Ryan Armstrong, a fellow doctoral student, thank you for the mentorship and leadership that you provided to our entire cohort. You are going to achieve great things in your career as a PMHNP.

DEDICATION

To my parents, James and Shonna Dunkerson, I am thankful that you have both been a paradigm of commitment, friendship, devotion, love, responsibility, reliability, and perseverance for my life. Mom, I will never forget how you somehow managed to scream louder than all the other parents at school awards ceremonies growing up. You have always taken pride in my achievements, and that means so much to me. Dad, having a Gunnery Sergeant in the Marine Corps as a father meant that you were always providing me with positive instruction and direction for my life. While I may have tired of hearing phrases like, "Show some initiative," then, now I am glad that you took the time to instill your values and work ethic in me. I am so lucky to have you both as my parents, and I love you both so much.

To my siblings and in-laws—Ronald and Ashley, Jessica and Lawrence, and Chelsea and Zac—thank you for standing by me during the most taxing period of my life. To my nieces and nephews, Ani, Corvin, Quinn, Cayden, Amberly, Lily, Brooke, and JoJo, being your aunt is truly the greatest joy of my life. To Amber Goodwin, thank you for your perennial friendship. You have been my foundation of social support, and I don't know what I would do without you or your family. To the rest of my family, friends, classmates, and co-workers, thank you for your continued support and encouragement. Finally, I'd like to thank my senior golden Labrador retriever, Holly, and my wild cur dog, Sherlock, for being an ever-welcome distraction from the demands of everyday life. You all keep me going.

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AAD	American Academy of Dermatology
AANP	American Association of Nurse Practitioners
APP	Advanced Practice Provider
APRN	Advanced Practice Registered Nurse
DCNP	Dermatology Certified Nurse Practitioner
DNA	Dermatology Nurses' Association
DNP	Doctor of Nursing Practice
DNPCB	Dermatology Nurse Practitioner Certification Board
DOH	Determinants of Health
ED	Emergency Department
FPA	Full Practice Authority
HRSA	Health Resources and Services Administration
IOM	Institute of Medicine
IPC	Interprofessional Collaboration
IPE	Interprofessional Education
IRB	Institutional Review Board
MC	Meaningful Collaboration
PA	Physician Assistant
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TD	Teledermatology
USM	The University of Southern Mississippi

CHAPTER I – INTRODUCTION

Currently, there is a dermatologist shortage in the United States and its territories with an average of fewer than three dermatologists per 100,000 people (Health Resources and Services Administration [HRSA], 2020). This shortage has led to long patient wait times for dermatology appointments (Zurfley & Mostow, 2017). Even patients reporting changing pigmented lesions, an indicator of melanoma, face wait times of up to 73 days (Tsang & Resneck, 2006). In addition to a dermatologist shortage, there is also a maldistribution, with dermatologists clustering in urban areas (Feng et al., 2018).

The dermatologist shortage and maldistribution has led to poor access to dermatology care for special populations like children (Ashrafzadeh et al, 2020), the elderly (Tripathi et al., 2018), ethnic minorities, and those with determinants of health (DOH). Specifically, DOH like being insured by Medicaid or Medicare, having no insurance, and rural living are all associated with worse access to dermatology care.

Dermatologists have been collaborating with APRNs and physician assistants (PAs) for many years to improve patient access to dermatology care. This collaboration has mostly consisted of on-site, indirect supervision (Resneck & Kimball, 2008). While dermatologists have reported that advanced practice providers (APPs) improve patient access to care (Slade et al., 2012), one study shows otherwise. A retrospective analysis by Adamson et al. (2018) revealed that APPs cluster alongside dermatologists in urban areas, further exacerbating the existing health disparities. The current collaborative care model in dermatology may improve access to care for the lucky few, but it does not increase access for those most greatly affected by health disparities.

Combatting the health disparities in dermatology will likely require a multifaceted approach, and DCNPs represent a new element in this multifaceted approach. DCNPs have a validated knowledge of a core dermatology curriculum as well as a minimum of 3,000 hours of formal or informal training in dermatology (Dermatology Nurse Practitioner Certification Board [DNPCB], n.d.a), and, consequently, DCNPs have become the new gold standard for dermatology APRNs.

However, the lack of mention of DCNPs on the AAD's (2022) website and personal experience with dermatologists who lack knowledge about DCNPs raises concerns about *meaningful collaboration* (MC). For this project, MC is defined as an informed collaborative approach to dermatology care that strategically utilizes provider roles to their greatest capacity to increase access to dermatology care for those with the worst access. Meaningful collaboration can be dependent or independent. An example of independent collaboration is as follows: DCNPs practice independently in areas that lack dermatologists but collaborate with dermatologists and dermatologic surgeons in the greater region through referrals or consultations when a patient requires a higher level of care. One of the DCNP's core competencies is identifying when patients require a higher level of care than they can provide (Bobonich & Nolen, 2018).

Dermatologists' lack of knowledge about DCNPs is concerning because the most frequently reported barrier to MC is the physician's lack of awareness of the APRN's role and scope of practice (Schadewaldt et al., 2013). Transversely, increasing dermatologists' knowledge of the DCNP's role and scope of practice could promote meaningful IPC. Thus, the main goal of this doctoral project was to determine if an IPE video on the

DCNPs role, scope of practice, and collaborative benefits will increase dermatologists' baseline knowledge about DCNPs to foster MC during a much-needed time.

Background

In 2008, the first dermatology APRN was certified in dermatology by a certification board that existed to certify registered nurses, called the Dermatology Nursing Certification Board (Bobonich & Nolen, 2018). Soon after in 2012, dermatology APRNs with the help of dermatologists would perform a Delphi study to develop their core competencies with the hopes of establishing their own certification board (Bobonich & Cooper, 2012). In 2017, these competencies were revised and validated by a review panel to ensure that they aligned with the Dermatology Nurses' Association's (DNA's) Scopes and Standards of Practice for Nurse Practitioners (Bobonich & Nolen, 2018). In 2018, the DNPCB was created specifically for the certification of APRNs, and their board exam was based on the validated core curriculum that was developed over the course of several years. The DNPCB board was not accredited by the Accreditation Board for Specialty Nursing until November 2021 (DNPCB, n.d.b). This accreditation created a new gold standard for dermatology APRNs to obtain higher levels of education and training through a validated curriculum.

In order to qualify to sit for the DNPCB exam, dermatology APRNs must meet several prerequisites. Those prerequisites include the following: completion of a clinical graduate nursing program, current national and state licensures, 3,000 hours of formal or informal training in dermatology within three years, and must currently practice in dermatology (DNPCB, n.d.b). Meeting these prerequisites can be a task. Currently, there is only one prominent formal training opportunity for dermatology APRNs in the United

States, and that is the Lahey fellowship in Massachusetts (Beth Israel Lahey Health [BILH], 2021). However, this post-graduate APRN training program only accepts two fellows per two-year cohort. More formal training opportunities for dermatology APRNs are greatly needed. Due to this lack of formal training opportunities, most APRNs accumulate their requisite hours with informal training. This training consists of shadowing or working alongside dermatologists or DCNPs, attending professional conferences, and earning continuing education units (Bobonich & Nolen, 2018). Once their prerequisites are met, they qualify to sit for the DNPCB exam.

Passing the DNPCB exam is not an easy victory. This exam has a 19% failure rate (DNPCB, 2020). Some broad categories of the core competencies tested on the DNPCB exam include the following: assessment, diagnosis, treatment, management, ordering and interpreting diagnostic and laboratory tests, pharmacological and non-pharmacological therapies, collaboration, referrals, patient education, etc. (Bobonich & Nolen, 2018). Specific core competencies tested on the DNPCB exam include the following: morphology, differential diagnoses, interpreting dermatopathology reports, dermoscopy, microscopy, biopsies, removal or destruction of lesions and malignant neoplasms, curettage, wound closure, hyfrecation, debridement, incision and drainage, intralesional injection, esthetics, etc. These lists are not comprehensive, either.

Once APRNs pass the DNPCB exam, they receive the coveted title of DCNP as well as a sense of accomplishment. However, DCNP certification does not last forever as recertification is required every three years. This recertification process promotes a commitment to learning and knowledge retention. Additionally, certifications assure the public of an APRN's competencies and their ability to provide safe, quality care (Institute

of Medicine [IOM], 2011). In this way, certifications increase DCNPs' credibility as dermatology providers in the eyes of the public. DCNPs' certification may also assure stakeholders and collaborative dermatologists of their knowledge, training, and dedication to the field. In this way, certification could improve job marketability and upward mobility. All of the DCNP's strengths present great opportunities for the budding role of the DCNP to be utilized in innovative ways to combat the health disparities in dermatology.

For now, DCNPs mostly collaborate with dermatologists through common avenues like performing cosmetic and dermatologic procedures and managing medical patients. However, the ways in which they collaborate vary depending on the way the work is split between them and their collaborator. A 2008 survey of dermatologists revealed that their collaborative APPs spent most of their time treating medical dermatology patients while the dermatologist performed cosmetic or surgical procedures (Resneck and Kimball). Another dermatologist survey revealed that 55.9% of the participants had delegated cosmetics to an APP at least once (Austin et al., 2015). These dermatologists reported that the delegation of cosmetic procedures to APPs improves clinic efficiency, personal income, and patient care outcomes (Austin et al., 2015). Lastly, in 2015, 13.4% of all dermatologic procedures billed to Medicare were performed by APPs (Zhang et al., 2018). Despite the DCNP's strengths and collaborative opportunities, they have several weaknesses.

As already discussed, there is a lack of formal training opportunities for dermatology ARPNs in the United States. Also, DCNPs are still small in number, but that number is steadily growing. The DCNPs greatest weakness is their reduced or restricted

practice authority in 25 states, which requires them to enter a collaborative agreement with a physician in order to practice (American Association of Nurse Practitioners [AANP], 2021). Collaborative practice agreements are not inherently bad considering most APRNs prefer collaborative practice (Kraus & DuBois, 2017).

However, collaborative agreements often come with stringent mileage requirements that stipulate the mileage between an APRN and their collaborator in addition to other bureaucratic hassles. Some states allow for a collaborating physician to file for an extended mileage collaboration, but some do not. The mileage requirement is particularly difficult for DCNPs, who require a board-certified dermatologist in the midst of a dermatologist shortage and maldistribution. Collaborative agreements' mileage stipulations also stunt the DCNPs' ability to reduce rural health disparities through independent collaboration in areas without dermatologist collaborators.

Significance

The dermatologist shortage and maldistribution in the United States has led to long wait times for dermatology appointments. One study found that dermatologist-only offices had a mean wait time of 60 days for patient appointments, and dermatologist offices with APPs had a mean wait time of 48 days (Zurfley & Mostow, 2017). While long wait times seem like a minor inconvenience, they can actually lead to patient harm. There are a few different ways that long wait times for dermatology appointments lead to patient harm.

The first and most concerning way that long wait times lead to patient harm is through a delay in diagnosis. In one study, patients who called for an evaluation of a changing pigmented lesion were given appointment dates that ranged from 19.7 to 73.4

days out (Tsang & Resneck, 2006). Long wait times are concerning because changing pigmented lesions are an indicator of melanoma. Further, a diagnosis delay of melanoma is correlated with increased lesion thickness (Silfen et al., 2002). In truth, there are a multitude of dermatology diagnoses in which diagnosis delay could lead to patient harm, but a melanoma diagnosis delay could affect a patient's outlook and prognosis.

Another way that long wait times can lead to patient harm is when patients see Primary Care for skin problems because the wait for their dermatology appointment is too long. While you cannot blame them, patients who see Primary Care Providers for skin problems are often misdiagnosed, have poor treatment outcomes, and endure unnecessary skin biopsies (Xiang & Lipner, 2020). In one study, 67% of patients diagnosed with cellulitis in Primary Care were misdiagnosed and treated with unnecessary antibiotics (Arakaki et al., 2014). If wait times for dermatology appointments were more reasonable, patients would be less likely to seek a quicker appointment with Primary Care, and this could improve their chances of receiving an accurate diagnosis and treatment plan.

Patients with skin complaints should not have to wait 60 days for a dermatology appointment, because long wait times can lead to more than a simple inconvenience. Long wait times can lead to diagnosis delay (Tsang & Resneck, 2006), a worsened melanoma prognosis (Silfen et al., 2002), misdiagnosis (Xiang & Lipner, 2020), poor treatment outcomes, and unnecessary biopsies. While Zurfley and Mostow's (2017) study showed that dermatology offices with APPs have appointment wait times that are 12 days shorter on average, their average appointment wait time of 48 days is still long. The field of dermatology needs strategies to reduce long appointment wait times as well as a reevaluation of its current toolset to ensure that it is being used meaningfully.

Needs Assessment

The United States population has been expanding due to the lengthening of the average lifespan. According to U.S. Census Bureau data, the percentage of people 65 and older increased from 13% in 2010 to 16.5% in 2019. This aging demographic heralds a higher demand for dermatology care as aging increases susceptibility to skin cancer and skin infections (Chambers & Vukmanovic-Stejic, 2020).

Although the skin disease burden in the United States has risen from 29 billion (Bickers et al., 2006) to 75 billion dollars (Lim et al., 2017), dermatology resident slots have been relatively stagnant (Glazer et al., 2017). Only 500 dermatologists enter the workforce each year that 325 dermatologists retire. This net increase of 175 dermatologists is not likely to offset the dramatic rise in skin disease burden any time soon. The Journal of the American Medical Association published a research letter in 2017 that stated the following:

> Dermatologists alone have been unable to meet increasing patient demand for dermatologic services. The number of dermatology residency training positions has been relatively stagnant, suggesting that the current supply of dermatologists in training will be insufficient to fully meet growing future demand. (Glazer & Rigel, 2017, p. 472).

Consequently, there is a dermatologist shortage in the United States.

The calculated average rate of dermatologists in the United States and its territories is 2.97 per 100,000 in the population (HRSA, 2020). These rates are much lower than the rates of other physician groups like PCPs, general surgeons, internal medicine, emergency medicine, ophthalmology, pediatrics, cardiovascular, obstetrics and

gynecology, and psychiatry. Additionally, dermatologists cluster in populous states like California, Florida, and New York, creating rural health disparities. See Figure 1 for the distribution of dermatologists in the United States (HRSA, 2020).

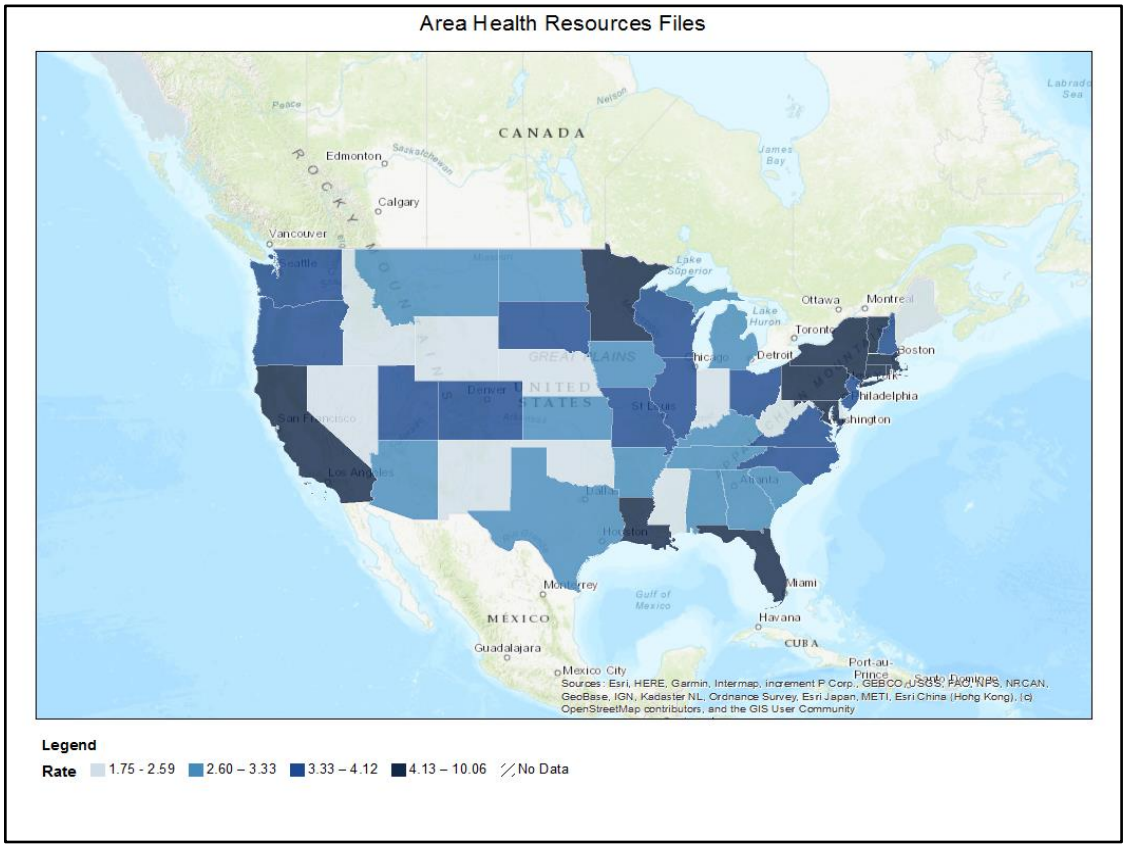

Figure 1. Dermatologist Distribution and Rates

The dermatologist shortage has been supplemented over the years by the entrance of APPs into the field of dermatology. Today, there are thousands of APRNs working in dermatology who have become essential to the field (Bobonich & Nolen, 2018). However, collaborative practice between dermatologists and APPs does little to aid the dermatologist maldistribution, as the collaborative practice often leads to more clustering of providers in urban areas (Adamson et al. in 2018). The field of dermatology is in need of strategic workforce planning to meet its growing demands and reduce the maldistribution of dermatology providers. The DCNP's strengths present great

opportunities to be utilized in innovative ways to combat the health disparities stemming from the dermatologist shortage and maldistribution.

PICOT

The needs assessment revealed that there is a dermatologist shortage and maldistribution in the United States (Feng et al., 2018; HRSA, 2020) which has led to tremendous health disparities. Many patients face poor access to dermatology care (Feng et al., 2018), long wait times for appointments (Tsang & Resneck, 2006; Zurfley & Mostow, 2017), and the potential for misdiagnosis by Primary Care (Arakaki et al., 2014; Xiang & Lipner, 2020). While DCNP collaboration is a promising new approach to combat health disparities and improve patient access in dermatology, there is no mention of DCNPs on the AAD website and personal experience with dermatologists is that they lack knowledge about DCNPs. This lack of knowledge could create an impasse for meaningful IPC during a much-needed time. One approach to promote IPC is through IPE. For this doctoral project, the problem statement is as follows: Among sampled dermatologists, will an IPE video with a pretest-posttest design regarding the role, scope of practice, and collaborative benefits of the DCNP increase dermatologists' baseline knowledge about the role of the DCNP?

Synthesis of Evidence

Evidence-Based Practice Search

An electronic search of Medline, Academic Search Premier, and Health Source: Nursing Academic Edition databases was performed. The following research search terms were used: nurse practitioner, advanced practice nurse, APRN, advanced practice registered nurse, dermatology, workforce, United States, America, USA, U.S., United

States of America, delivery of health care, dermatology, skin diseases, health services accessibility, dermatologist, supply and distribution. Utilized filters included peer-reviewed articles dated between 2011 and 2022 in the English language. A total of 643 articles were found and reviewed. The literature synthesis includes 18 articles. Not included in this number are 2 articles that were used as supporting evidence about Quadruple Aim and U.S. Census Bureau data.

All articles were scored using Mosby's level of evidence. Most articles in the synthesis are non-experimental observational studies, analytical cross-sectional studies, and retrospective analyses. These articles fall under evidence levels 2 and 3. Also included in the literature review are Randomized Controlled Trials, surveys, editorials, case studies, and narrative reviews. While the evidence level of surveys, editorials, and case studies are low, qualitative articles were needed to evaluate the existing opinions of dermatologists regarding collaboration with APRNs.

Health Disparities in Dermatology

The shortage of dermatologists in the United States has led to health disparities related to DOH, and health disparities affecting those in rural areas will be discussed first. Feng et al.'s (2018) longitudinal analysis found that dermatologists are more likely to be geographically distributed in wealthy, urban communities. Further, Hopkins et al.'s (2019) retrospective analysis showed that the more dermatologists in an area, the higher the melanoma survival rate. Essentially, people who live in urban areas where dermatologists tend to cluster likely have better access and outcomes compared to those who live in rural areas.

Tripathi et al.'s (2018) retrospective analysis found that people in the rural Midwestern United States are the least likely to receive outpatient dermatology care. Further, Wu et al.'s cross-sectional study revealed that the Midwestern states have higher emergency department (ED) utilization rates for atopic dermatitis compared to other parts of the country (2021). This research demonstrates how the dermatologist shortage and maldistribution have led to poor access to dermatology care for those in rural areas.

Another large disparity in dermatology relates to dermatologic care for pediatric patients. A cross-sectional study by Ashrafzadeh et al. (2020) revealed that there are only approximately 317 Pediatric dermatologists in the United States. Further, pediatric dermatologists are also maldistributed throughout the United States. For example, 9 of the 50 United States do not have a single pediatric dermatologist. When broken down by counties, only 142 of the 3228 counties in the United States have a pediatric dermatologist. This disparity is slightly mitigated by the fact that most general dermatologists treat children. However, a "secret shopper" study by Chaudhry et al. (2013) found that less than 64% of general dermatologists accept patients with Medicaid, and Medicaid insures approximately 35% of children in the United States (U.S. Census Bureau, 2021). It is no surprise that Siegfried et al.'s (2020) retrospective cohort analysis found that children insured by Medicaid see fewer specialists than commercially insured children and are greater utilizers of the ED for atopic dermatitis. Those are just a few examples of how the dermatologist shortage and maldistribution have led to pediatric health disparities.

However, insurance disparities in dermatology are not unique to children. Adults with Medicaid, Medicare, or those with no insurance are less likely to receive outpatient

dermatology care than those with private insurance (Tripathi et al., 2018). Additionally, a spatial analysis study by Hu et al. (2014) revealed that Medicaid coverage is associated with higher odds of late-stage melanoma. Also, a retrospective cohort study by Lott et al. (2015) showed that approximately one in five Medicare beneficiaries experiences a delay of surgery for melanoma longer than 1.5 months. Insurance disparities in dermatology are prevalent and affect children as well as adults in the United States.

There are many other health disparities in dermatology related to DOH like poverty, old age, ethnicity, and education level. For instance, the poverty level is a strong predictor of late-stage melanoma clustering (Hu et al., 2014). In fact, there is a two percent increase in late-stage melanoma clustering for every one percent increase in population poverty. The DOH of old age is correlated with poor access to outpatient dermatology care (Tripathi et al., 2018). Also, ethnicity is correlated with poor access to outpatient dermatology care with ethnic minorities having worse access to care than whites (Tripathi et al., 2018). Lastly, having less education is associated with worse skin cancer outcomes, while having more education is associated with an increased chance of receiving outpatient dermatology care (Tripathi et al., 2018). Overall, there are several DOH correlated with having less patient access and worse outcomes in dermatology.

Alternative Solutions to the Dermatology Shortage

Throughout the literature, numerous solutions to the dermatologist shortage are suggested. The most frequently suggested solution to minimize the effects of the dermatologist shortage is the use of teledermatology (TD) (Coustasse et al., 2019). While TD has the advantage of improving access to rural communities, “the success of this technology is contingent upon the commitment and willingness of the dermatologist in

utilizing it (Coustasse et al., 2019, p. 1022). Another factor affecting the success of TD is the patient's ability to take clear, high-quality images because dermatologists' ability to accurately diagnose patients through TD increases as the quality of pictures increases. One of the main drawbacks of TD is erroneous diagnoses (Coustasse et al., 2019). While TD has the benefit of promoting access to a wider range of patients, it also has several drawbacks.

Another potential solution is collaboration with APRNs and PAs. However, a retrospective analysis by Adamson et al. in 2018 revealed a potential pitfall in this solution. Adamson et al. found that collaborative practice between dermatologists and APRNs or PAs often leads to more clustering of providers in urban areas. For this solution to be effective in combatting health disparities, a change in the dermatology workforce and delivery model would need to occur. The author Barton (2012) has suggested the creation of a rural dermatology APRN-run clinic. This solution would address the dermatology provider shortage in rural areas. However, Barton points out that dermatology APRNs starting rural clinics face professional isolation, stress related to caring for such a large patient volume, longer hours, less pay, and the overhead costs of running their clinic (Barton, 2012). More research is needed to determine the prevalence, outcomes, economic viability, and organizational structuring of rural dermatology APRN-run clinics.

There does not seem to be a singular solution to remedy the dermatologist shortage and its resulting health disparities. One study by Feng et al. (2018) suggests using a more multifaceted approach They state, "Careful workforce planning will be needed to consider alternative healthcare delivery models, dermatologist recruitment

strategies, and the role of nonphysician practitioners and telemedicine, especially in nonmetropolitan or rural areas" (Feng et al., 2018, p. 12). Therefore, utilizing a combination of solutions may be the best way to combat the dermatologist shortage and its resulting health disparities because each individual solution has its own set of shortcomings.

Dermatologists' Perceptions about Collaboration

Dermatologists' perceptions about collaboration with DCNPs are not known. DCNP research, in general, does not exist at this point, as the DNPCB was just accredited in November of 2021 and DCNPs are still small in number. Research regarding DCNPs, including patient outcomes research, is greatly needed.

However, dermatologists' perspectives about collaboration with APRNs are known, and those perspectives tend to be mixed. For instance, one group of dermatologist authors endorse APRN collaboration, yet present the caveat that APPs need a more standardized education and more formal training opportunities (Ferris et al., 2021). Another group of dermatologist authors believe that APRNs improve patient care and patient access, but they also express concerns about role clarity and truth in advertising (Slade et al., 2012). While many dermatologists have expressed positive perceptions about collaboration with APRNs, they also have reservations related to standardized education, formal training, role clarity, and truth in advertising.

Benefits of Collaboration

The Quadruple Aim is a set of four aims or goals in healthcare to improve the overall experience for all healthcare stakeholders. The following are the four aims of the Quadruple Aim: to improve patients' health, to improve patients' experiences, to improve

the healthcare team's experience, and to reduce costs (Bodenheimer & Sinsky, 2014). APRNs have been shown to improve all four of these aims in dermatology.

APRNs were found to improve patient experience and reduce costs, two of the aims in the Quadruple Aim, in a randomized controlled trial by Schuttelaar et al. (2011). Specifically, APRNs were found to reduce the costs of eczema treatment compared to dermatologists. They were also found to increase patient satisfaction compared to dermatologists.

APRNs have been reported to improve the healthcare team's experience, another aim in the Quadruple Aim, by many dermatologists. For instance, an editorial by Aldredge et al. (2016) stated that APRNs reduce dermatologists' chronic skin disease burden. Further, dermatologists Englert and Berger (2011) wrote in their editorial that APRNs help to counter changes in healthcare. Then, dermatologists reported in a study by Austin et al. (2015) that APRNs improve clinic efficiency, personal income, and patient care outcomes. This study by Austin et al. (2015) also touches on the last Quadruple Aim, which is improving patients' health.

Overall, the existing research shows that APRNs help to achieve Quadruple Aim in dermatology. APRNs have been shown to improve patients' experiences and reduce costs. APRNs have been reported to improve the healthcare team's experience. Lastly, Dermatologists report that APRNs improve patient outcomes. However, more inferential research on dermatology APRNs is needed. For example, there is only one randomized controlled trial that provides dermatology APRN outcomes in this synthesis. Many of the articles about dermatology APRNs are qualitative.

Rationale

Theoretical Framework

Kurt Lewin's force field analysis, a strategic theory about change, provided the theoretical framework for this study (Lewin, 1951, as cited in White et al., 2021). This analysis posits that there are forces that drive change and forces that oppose change. When these forces exist together, a stalemate can occur which prevents change. To overcome this stalemate, a thorough assessment of all forces is required. This assessment allows the identified driving forces to be increased or the identified opposing forces to be decreased. Lewin termed this part of the change process *unfreezing.* The change that is allowed to occur after the unfreezing process is termed *moving.* After the change takes place, the last step of the change process is *refreezing*, which is the solidification of the changed state as the new status quo.

Lewin's theory can be applied to this project because new approaches to care that utilize DCNPs are needed in the field of dermatology to combat the health disparities stemming from the dermatologist shortage. The driving factors include poor patient access, long appointment wait times, poor utilization of emergency resources, and health disparities. The opposing forces include the disengagement of stakeholders, lack of knowledge about DCNPs, and possibly even feeling threatened by DCNPs. Change cannot occur until the driving forces overcome the opposing forces. This doctoral project seeks to engage dermatologists, increase their knowledge of DCNPs, and discuss their collaborative role to decrease the identified opposing forces to change in dermatology.

Aims and Objectives

The first objective of this doctoral project is to determine if an IPE video with a pretest posttest design will increase dermatologists' baseline knowledge of the role of the DCNP as evidenced by a positive improvement score. Improvement, a descriptive statistic, is the posttest's average percent of correct answers minus the pretest's average percentage of correct answers, and this score can be positive or negative (Delucchi, 2014). Another objective of this doctoral project is to determine if dermatologists believed that the intervention improved their understanding of the DCNPs as evidenced by their posttest survey responses. This outcome utilizes a Likert scale, and the responses will be measured with descriptive statistics including count and percentages. The last objective of this doctoral project is to ask two critical thinking questions about innovative ways that DCNPs could be used to decrease health disparities in dermatology and about support for APRN full practice authority (FPA). These critical thinking questions will promote knowledge retention and provide insight into dermatologists' perspectives. Participants' open-ended responses to these two critical thinking questions will be grouped by common themes, and these themes will be analyzed with descriptive statistics including count and percentages.

Doctor of Nursing Practice Essentials

All eight of the Doctor of Nursing Practice (DNP) Essentials were utilized in this project (AACN, 2006). Notably, DNP Essential VI on IPC underscores the most prominent theme of this project, as the intervention was an IPE video about IPC. DNP Essential II was also a prominent theme for this project with the evaluation of the care delivery approach in dermatology. Additionally, DNP Essential III is also very pertinent

to this project as it covers the acts of performing research, appraising research, and disseminating research results. See Table 1 which delineates how each essential was specifically utilized in this project.

Table 1

Doctor of Nursing Practice Essentials

Essential	Project Utilization
I. Scientific underpinning for practice	Explored theory to formulate the theoretical framework of this project
II. Organizational and systems leadership for quality improvement and systems thinking	Evaluated the care delivery approach in dermatology that is responsible for meeting the needs of patients
III. Clinical scholarship and analytical methods for evidence-based practice	Utilized technology to research, critically appraise scientific research and disseminate research findings
IV. Information systems and patient care technology for the improvement and transformation of health care	Analyzed data and created an electronic survey with computer programs and web-based platforms
V. Health care policy for advocacy in health care	Educated others regarding nursing and critically analyzed health-related issues
VI. Interprofessional collaboration for improving patient and population health outcomes	Created a presentation about the role of the DCNP to help promote IPC in dermatology
VII. Clinical prevention and population health for improving the nation's health	Synthesized concepts related to population health regarding access patterns and gaps in the care of populations
VIII. Advanced Nursing Practice	Used analytical skills to evaluate practice issues

(AACN, 2006).

Summary

The dermatologist shortage and maldistribution in the United States, which has been further exacerbated by an increased burden of skin disease, has led to tremendous health disparities. Combatting these health disparities will likely require a multifaceted approach. DCNPs, the new gold standard for dermatology APRNs, represent a new element in this multifaceted approach. However, dermatologists may lack knowledge of

the DCNPs, which could reduce MC during a much-needed time. One approach to promote IPC is with IPE. IPE has been shown to increase knowledge and skills related to collaboration as well as improve attitudes regarding collaboration (Guraya & Barr, 2018). This doctoral project seeks to determine if an IPE video on the role on the role, scope of practice, and collaborative benefits of the DCNP will increase dermatologists' baseline knowledge of DCNPs. Chapter II will cover the research methods of this project.

CHAPTER II – METHODOLOGY

Context

Dermatologists may lack knowledge about the novel role of the DCNP, who represent the highest standards of practice for dermatology APRNs. This lack of knowledge could reduce MC between dermatologists and DCNPs. One approach to promote IPC is with IPE. This descriptive project used an original IPE video with a pretest-posttest design as its intervention. This IPE video was about the DCNPs role, scope of practice, and collaborative benefits. The main objective of this doctoral project was to determine if this IPE video about DCNPs would increase board-certified dermatologists' baseline knowledge about DCNPs.

Intervention

Participants in this doctoral project were board-certified dermatologists who were recruited with general networking strategies and by cold-calling dermatology clinics. Interested dermatologists were provided with approved recruitment materials, which included an e-mail with a hyperlink to participate and a recruitment flyer with a scannable quick response code to participate. All recruitment materials were approved by USM's IRB, and they can be viewed in Appendix A and Appendix B.

Upon clicking the hyperlink or scanning the quick response code from the recruitment materials, the participants were led to the secure data collection website called *Qualtrics*. Participants were then asked to provide informed consent before continuing to the 6-item demographics questionnaire. After the demographics questionnaire, participants took an eight-item pretest with each question having four multiple-choice answer options. The pretest-posttest questions can be viewed in

Appendix C. After the pretest, participants were asked to click a hyperlink, which opened the intervention in a new browser tab to be viewed on *YouTube*.

The intervention was an original, 13-minute-long IPE video of a narrated *PowerPoint* presentation on the role, scope of practice, and collaborative benefits of the DCNP. The intervention was evidence-based with visible in-text citations. The first one to two minutes of the video was about IPE including the definition of IPE, the benefits of IPE, and IPE's role in promoting collaboration. Then, the objectives for the video were presented.

The remaining 11 minutes of the video discussed the role, scope of practice, and collaborative benefits of the DCNP. For the discussion of the DCNP's role, a timeline with all the major events contributing to the DCNP's role development as well as the benefits of certification were discussed. For the discussion of the DCNP's scope of practice, the following topics were discussed: the DCNPs level of education, the core competencies tested on the DNPCB exam, and the DNA's Scopes and Standards for Nurse Practitioners (DNA, 2022). For the discussion of the DCNP's collaborative benefits, these topics were discussed: common ways that dermatologists and DCNPs collaborate, the benefits of collaboration, and future collaborative opportunities for DCNPs to be used in innovative care models that improve patient access.

An example of an innovative care model that utilizes DCNPs in rural health termed "Independent Collaboration," was provided. With this care model, FPA DCNPs would independently practice dermatology in rural areas, and they would freely collaborate with dermatologists and dermatologic surgeons in the greater regional area when patients required a higher level of care.

Toward the end of the video, all material was summarized with a SWOT analysis of the DCNP, which is an analysis of its strengths, weaknesses, opportunities, and threats. The SWOT analysis presented reduced or restricted practice authority as the DCNP's greatest weakness, and it presented innovative care models in dermatology as the DCNP's opportunity. A slide with all references was presented after this summary, and this marked the end of the video.

After the intervention, participants returned to the *Qualtrics* browser tab to take the posttest. It was expected that posttest scores would be higher than pretest scores. Then, participants took a three-item survey with one Likert scale question and two critical thinking questions. Then, participants clicked to submit their responses. A message appeared on-screen to notify participants that their responses had been submitted, and it provided them with instructions to enter a raffle for a gift card if desired.

Population and Sample

This project's population focus was dermatologists in the United States. All participants in this doctoral project met the following inclusion criteria: they were able to speak and read English, they were 18 years of age or older, and they were board certified as a dermatologist. Participant literacy was not considered to be a potential confounding variable as all dermatologists have obtained doctorate degrees. A total of three dermatologists participated in this doctoral project. The demographics collected from these participants included their age, length of practice as a dermatologist, gender, ethnicity, type of employment (solo, small group, large group, health system owned, other), and their region of practice in the United States. Benner's Novice to Expert theory

was used to determine the time intervals for length of practice (1982). See Appendix D for the demographics questionnaire.

Recruitment and Processes

The recruitment strategy for this project was bifold, and it included cold-calling dermatology clinics and general networking strategies. For cold calling of clinics, phone numbers for dermatology clinics were found online. These clinics were called to determine the dermatologists' interest in participating in the doctoral project. A general networking strategy was used with local dermatologists in Southeast Mississippi. These dermatologists were generous enough to support my research by providing the names and email addresses of interested colleagues. Participant recruitment via networking was found to be an invaluable recruitment facilitator by the researcher Garnett and Northwood (2021). They reported, "The generosity of these professionals in connecting us to their partner professions in other geographic locals effectively doubled and sometimes even tripled the number of individuals who were able to support our study recruitment" (Garnett & Northwood, 2021, Para. 22).

Measures

A five-item demographics questionnaire was developed to analyze the broad characteristics about the participants. These characteristics include the following: age, length of practice, gender, ethnicity, type of employment, and region of practice in the United States. The purpose of the demographics questionnaire was to determine if the participants were homogenous or dissimilar. Additionally, an eight-item pretest-posttest was developed to compare dermatologists' knowledge about DCNPs before and after the intervention. The test questions were in multiple-choice format and had four answer

options. The posttest scores were expected to be higher than the pretest scores. The pretest and posttest were reviewed and approved by the project's chair and committee members.

A three-item survey was developed, which included one Likert scale question and two critical thinking questions. The Likert scale question presented the following statement: "This IPE video improved my understanding of the role of the DCNP." Participants were asked to rate how strongly they agreed with this statement. The Likert scale answer options included the following: strongly disagree, disagree, neutral, agree, and strongly agree. This was used to determine if dermatologists believed that they gained knowledge from the intervention.

The last two items of the survey were critical thinking questions that allowed for free-text responses. The first critical thinking question asked, "Can you think of any unique ways that the DCNP could be utilized in dermatology to reduce health disparities?" This question is a brainstorming question that asks learners to create new ideas with learned material (Tofade et al., 2013). The second critical thinking question asked, "Do you support full practice authority for APRNs in the United States? This question is a focal question that makes the learner choose and justify a position to enhance learning (Tofade et al., 2013). Both questions encourage analysis, evaluation, and synthesis of learned material, which are markers of high-complexity questions (Tofade et al., 2013). In addition to enhancing their learning, these critical thinking questions were also used to gain insight into dermatologists' perceptions about topics discussed in the intervention. See Appendix E for survey questions.

Analysis

The pretest, posttest, and survey were analyzed and resulted in descriptive statistics using SPSS® Statistics Version 28.0.0.0 software. Specifically, the test scores were analyzed with the following descriptive statistics: mean, standard deviation, and improvement. Improvement is the average of the percentage of correct answers on the posttest minus the average of the percentage of correct answers on the pretest (Delucchi, 2014). Improvement can be positive or negative, but it was expected to be positive. The survey and demographics survey were analyzed with descriptive statistics of count and percentages. The participants' open-ended responses to the two critical thinking questions were grouped by common theme before being analyzed.

Ethical Considerations

This project was approved by The University of Southern Mississippi's (USM's) Institutional Review Board (IRB). See Appendix F for the IRB approval letter (Protocol Number 22-876). No data collection took place before IRB approval was received. All data from tests and surveys were stored on a password-protected computer, and all data will be destroyed one year after this project has been completed. Participation in this research was not associated with any deception, coercion, or risk. All participants were provided with informed consent information, and they provided informed consent by electronically participating.

Project Timeline

The timeline for this doctoral project was as follows. The doctoral project was proposed to the committee on May 9th, 2022. Next, a human subjects research application was submitted to the USM IRB, which was approved after two revisions on

August 23rd, 2022 (Protocol Number 22-876). Implementation of the doctoral project occurred during the month of September 2022. Data analysis and completion of the doctoral project occurred during the month of September 2022. Dissemination of the doctoral project occurred on September 29th, 2022, at USM's DNP Scholarship Day.

Summary

This doctoral project used an original IPE video on the role, scope of practice, and collaborative benefits of the DCNP as its intervention with a pretest-posttest design. The main objective of this doctoral project was to determine if the intervention would increase dermatologists' baseline knowledge about DCNPs as evidenced by a positive improvement score. The test results were analyzed with descriptive statistics of mean and standard deviation. After the posttest, a three-item survey was given, which included one Likert scale question and two critical thinking questions. The Likert scale survey question was used to determine if dermatologists believed that the intervention improved their understanding of the DCNP's role. The two critical thinking questions on the survey were used to promote knowledge retention and gain insight into dermatologist perceptions about topics discussed in the IPE. All survey responses were analyzed with descriptive statistics including count and percentages. Chapter III will cover the results of this doctoral project.

CHAPTER III – RESULTS

All data collection ceased when this doctoral project commenced. Then, all collected data were analyzed with descriptive statistics. This chapter presents the results of the descriptive analysis of all data, which includes the results of the demographics questionnaire, the pretest, and posttest results, and the survey results.

Demographics

The demographic data revealed that the three participants were relatively homogenous. All participants were between 28 and 37 years old, they were all white, and they all reported practicing in the Southern United States. The homogeneity of participants decreases the generalizability of results. See Table 2 for a complete set of demographic data.

Table 2

Demographic Data

		N	Percent
Age	28-37	3	100%
Ethnicity	White	3	100%
Gender	Male	1	33.3%
	Female	2	66.6%
Length of Practice	2-3 years	1	33.3%
	3-4 years	1	33.3%
	5 years or more	1	33.3%
Employment	Private, group of 2-3 providers	1	33.3%
	Health system owned	2	66.6%
Region of the United States	South	3	100%

Test Scores

The mean pretest score was 79.2 with a standard deviation of 14.4. The mean posttest score was 87.5 with a standard deviation of 0. The improvement score, which is the average of the percentage of correct answers on the posttest minus the average of the percentage of correct answers on the pretest (Delucchi, 2014), was a positive 8.3%. See Table 3 for a summary of the descriptive analysis of pretest and posttest results and see Figure 2 for a visual of score improvement.

Table 3

Descriptive Analysis of Test Data

	Pretest		**Posttest**		
n	M	SD	M	SD	Improvement
3	79.2	14.4	87.5	0	+8.3%

Figure 2. Score Improvement

Survey Results

All participants strongly agreed that the IPE video improved their understanding of the role of the DCNP. For the two critical thinking questions, no one responded to the

first question about innovative ways that DCNPs could be utilized in dermatology. However, everyone responded to the question about FPA for APRNs. Two participants reported that yes, they support APRN FPA, and one reported yes, they support APRN FPA but only with physician collaboration.

Summary

This chapter presented the results from the descriptive analysis of the data collected in this doctoral project. There were three board-certified dermatologists who participated in this doctoral project. Demographic data revealed a rather homogenous sample of participants. The test scores revealed a positive improvement between the pretest and posttest scores. The survey revealed two participants support APRN FPA, while one participant supports APRN FPA with physician collaboration. The next chapter will interpret this data and present the limitations of this doctoral project. Additionally, the next chapter will present the conclusions and implications of this doctoral project.

CHAPTER IV – DISCUSSION

IPE is an attractive tool for educating healthcare workers about collaborative roles. IPE was effective in this doctoral project at improving dermatologists' baseline knowledge of the role of the DCNP. Further, IPE is relatively inexpensive and sustainable, so it can be used in projects with the most restrictive budgets.

Interpretation

While the improvement in test scores was positive, it was marginal at 8.3%. However, the intervention was still considered to be effective at improving participants' understanding based on participants' survey responses. The discrepancy between the marginal improvement in scores and the participants' strong agreement that the IPE improved their knowledge could be attributed to a few different factors.

For one, it is possible that the test questions were too easy as the mean pretest score was a high 79.2. If the test questions were too easy, then they lack validity to measure knowledge about DCNPs, which is what they were intended to measure. It is also possible that the participants scored high on the pretest because they had prior knowledge about DCNPs. That would indicate that my initial concern about dermatologists lacking knowledge about DCNPs could be an invalid one.

Lastly, the participants' support for APRN full practice could indicate a few different things. It could indicate that dermatologists trust in the APRNs' ability to provide safe and competent care in dermatology. Their support for APRN FPA could also indicate receptiveness to trying a more multifaceted approach that utilizes APRNs to their full capacity to better meet patients' needs in dermatology.

Limitations

This doctoral project had several limitations. The greatest limitation of this doctoral project was the small sample size. Another limitation of this doctoral project was the homogeneity of participants. A third limitation of this doctoral project was that it may have had low-validity questions that were not a good measure of knowledge regarding DCNPs. The last limitation of this doctoral project was not being able to perform an in-person group IPE workshop due to IRB research restrictions related to COVID-19.

Suggested Next Steps

Some suggested next steps for research include conducting a similar project with dermatology residents, as IPE is frequently used as a training model in medical education programs (Al Achkar, et al., 2018). Further, dermatology residents may benefit more from IPE than their more experienced counterparts, and their schedules may be more conducive to participating in research. If IRB restrictions allow, an in-person, group workshop would be ideal. Another suggested step is DCNP patient outcomes research.

Conclusions

The main objective of this doctoral project was to determine if an IPE intervention would improve dermatologists' baseline knowledge about DCNPs. The results of a positive improvement score as well as participants' survey responses revealed that the IPE was effective. As the number of DCNPs rise, IPE is needed to educate the dermatology workforce about this novel, dynamic role. Only when dermatologists are aware of the functionality, capability, and power of the tools in their toolset, will they be able to approach the great undertakings that currently exist in dermatology with an informed, logical, and strategic approach.

APPENDIX A – Recruitment Flyer

APPENDIX B – Recruitment Email Script

Subject Line: What is a dermatology certified nurse practitioner? You can contribute to a doctoral research project about interprofessional education.
IRB Protocol 22-876 Human Subjects Research

Date:
Dear [Recipient]:
Hello, my name is Danielle Spelich, and I am a doctoral nurse practitioner student at the University of Southern Mississippi. As part of my doctoral project, I am conducting research study to understand how interprofessional education affects dermatologists' understanding of the role of the Dermatology Certified Nurse Practitioner. This study has been approved by the University of Southern Mississippi's Institutional Review Board, so I am now recruiting board-certified dermatologists who are at least 18 years old and speak/write in English to participate. I have also attached a flyer for this research project—feel free to share it with any interested colleagues.

Participation in this study will take approximately 20-30 minutes. Participation entails the following:

1. Taking a pretest (Approximately 5 minutes)
2. Watching a video (13 minutes)
3. Taking a posttest (Approximately 5 minutes)
4. Taking a 3-question survey (Approximately 5 minutes)

Those who complete the study will be eligible to enter a raffle to win one of three $50 Wal-Mart gas cards. Participation is voluntary. There are no known risks involved in this research. Confidentiality of all participants will be maintained. Data will be kept on a secure, password-protected device.

Click here to start the study.

Any questions can be directed to me at Danielle.Spelich@usm.edu
Respectfully,
Danielle Spelich
Primary Investigator
University of Southern Mississippi

APPENDIX C – Pretest Posttest Questions

1) You introduce yourself to an NP at an educational lunch and notice that their badge says "DCNP." What does this mean to you?
   a) They have their doctorate
   b) They specialize in research
   c) Their competency regarding dermatology illnesses has been validated by a board exam
   d) A & C only
2) DCNPs have completed which of the following programs of study?
   a) Associate Degree in Nursing
   b) Bachelor's Degree in Nursing
   c) Graduate Degree in Nursing
   d) All of the Above
3) The DCNP's follow the Scopes and Standards for NPs of which professional organization?
   a) V alley Advanced Practice Nurse Association
   b) Dermatology Nurses Association
   c) The Wound Care Nursing Association
   d) None of the above
4) The DCNP's scope of practice includes which of the following:
   a) Patient education
   b) Collaboration with physicians
   c) Assessment of dermatology illnesses
   d) All of the Above
5) What are some common ways that DCNPs collaborate with dermatologists?
   a) By seeing all of the "bad" patients that the dermatologist doesn't want to see
   b) By performing cosmetic procedures delegated to them when its within their scope of practice
   c) By seeing new and follow-up medical dermatology patients
   d) B & C only
6) The DCNP's scope of practice includes which of the following:
   a) Performing full skin exam
   b) Performing focused skin exam
   c) Performing skin cancer risk assessment
   d) All of the Above
7) According to an integrative review by Schadewaldt et al. (2013), what is the most reported barrier of collaboration between MDs and NPs in primary care?
   a) The MD's lack of knowledge of the NP's role, scope of practice, and level of education
   b) When NPs view their relationship with the MD as hierarchical, causing a power struggle
   c) When there is a bad working relationship between MD and NP
   d) When there is lack of mutual trust between MD and NP
8) What of the following is a benefit of collaboration with DCNPs?
   a) DCNPs are competent in the assessment, diagnosis, treatment, and evaluation of dermatology illnesses
   b) DCNPs are committed to the field of dermatology
   c) DCNPs can perform procedures within their scope of practice
   d) All of the Above

APPENDIX D – Demographics Questionnaire

Demographics

1) What is your age?
   a) 28-37
   b) 38-47
   c) 48-57
   d) 58 or older
2) Please specify your ethnicity.
   a) White
   b) African American
   c) Hispanic
   d) Asian
   e) Other
3) What is your gender?
   a) Male
   b) Female
   c) Prefer not to say
4) How long have you been a practicing dermatologist?
   a) Less than 6 months
   b) Over 6 months but less than 2 years
   c) 2-3 years
   d) 3-4 years
   e) 5 years or more
5) Please specify your type of employment.
   a) Private, solo
   b) Private, small group (2-3 providers)
   c) Private, large group (4+)
   d) Health system owned
   e) Other
6) What region of the United States do you practice?
   a) South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia)
   b) Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin)
   c) Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont)
   d) West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming)

APPENDIX E – Survey Questions

Post-Study Survey

Select the response that most closely aligns with your belief:

1. This IPE video improved my understanding of the role of the DCNP:

Strongly Disagree Disagree Neutral Agree Strongly Agree

Please type in your answers to the questions below:

2. Can you think of any unique ways that the DCNP could be utilized in dermatology to reduce health disparities?

3. Do you support full practice authority for advanced practice registered nurses in the United States?

APPENDIX F – IRB Approval Letter

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER:	22-876
PROJECT TITLE:	The Effects of an Interprofessional Education Video on Dermatologists' Understanding of the Role of the Dermatology Certified Nurse Practitioner
SCHOOL/PROGRAM	Leadership & Advanced Nursing
RESEARCHERS:	PI: Danielle Spelich Investigators: Spelich, Danielle~Coleman, Carolyn~
IRB COMMITTEE ACTION:	Approved
CATEGORY:	Expedited Category
PERIOD OF APPROVAL:	23-Aug-2022 to 22-Aug-2023

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

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