Access to Healthcare in Hawai‘i: Entrepreneurship for Advanced Practice Nurses

Kelly H. Green, R.N., B.S.N., M.B.A.

University of Hawai‘i Hilo – School of Nursing

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Committee Chair:
Jeanette Ayers-Kawakami, RN, DNP

Committee Member:
Patricia Hensley, RN, DNP
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Abstract

It is undeniable that Advanced Practice Nurses (APNs) have the knowledge, skill, and leadership ability that are valuable for meeting the healthcare challenges of rural communities. They can be instrumental in solving the shortage of primary care providers in underserved areas of Hawai‘i through entrepreneurship. In 2013, over 807 Advanced Practice Nurses lived and worked in the State of Hawaii; however, only 3.6% or 308 are considered self-employed (LeVasseur, 2013; LeVasseur & Qureshi, 2015). If more APNs practiced independently in either ambulatory clinics or privately owned practice, this could alleviate the shortages seen in rural communities. The literature describes areas that prevent APNs from private practice including, legal and regulatory obstacles, ethical and personal barriers, and limited knowledge in entrepreneurship. The purpose of this project was to develop and pilot an entrepreneurial workshop to increase entrepreneurial intentions among APNs/DNP students. Through educational offerings will APNs seek out entrepreneurship to design independent practices that include, but not limited to, improving accessibility, affordability, quality, patient safety, and patient outcomes. Two independent groups were analyses and compared for their entrepreneurial intentions, the nurses’ group and the University of Hawai‘i at Hilo business students. The educational offering suggests that the entrepreneurial curriculum needs to exist at all graduate-level of nursing programs to increase more APNs working independently in rural and underserved areas. Recommendation for future project design includes incorporating a larger sample size.
Chapter 1: Statement of the Problem

Poor access to healthcare by vulnerable populations results in significantly higher rate of health disparities in rural areas versus urban settings. Therefore, rural communities need to improve the opportunities for rural patients to access quality healthcare to help manage chronic illnesses and to achieve improved health outcomes. As recently as 2003, 14.2% of the population that lived in rural and other nonurban areas were more deficient than urban and suburban, and this trend continues to exist today (Economic Research Service, 2005). There is a need to design organizational delivery systems that will produce high-quality health care services with increased efficiency and cost-effectiveness in rural areas (Kutzleb et al., 2015).

When comparing the physical environment of rural communities to urban areas, poor quality in rural healthcare facilities is typical. Rural hospitals have lower patient volume, limited skilled personnel, and limited specialized services. Compounding the issues in rural communities include older residents with higher rates of chronic disease, poor health outcomes, and unhealthy behaviors such as cigarette use, obesogenic diets, and sedentary lifestyles (McFall & Yoder, 2012). There is a need for rural communities to restructure health care to be efficient and affordable. Fortunately, advanced practice nurses (APNs) are well-positioned to help redefine healthcare in rural settings (Kutzleb et al., 2015).

Introduction to the Problem

Economically, many chronic diseases exist in the United States, and the costly implications include diagnosis and treatment to the tune of $39.2 billion (Kutzleb et al., 2015). Health care organizations need to seek ways to improve performance and patient outcomes, including paying attention to managing chronic diseases, preventing hospital readmissions, decrease costs, and improving quality of life. The financial impact on many rural health care
facilities must take into consideration decreasing insurance reimbursements, capitation, and changes in public funding. The rural health care facilities seemed burdened with being creative in providing high-quality care in the context of limited resources to an increasing number of clients, including an aging population with complex chronic disease processes (Kutzleb et al., 2015).

There are a limited number of APNs currently practicing in rural healthcare settings, despite an increase in licensed nurse practitioners (NPs) (Kippenbrock et al., 2017). This problem will negatively impact those elderly populations who reside and seek access to healthcare in rural areas, which is experiencing a shortage of qualified healthcare providers (Kippenbrock et al., 2017). Advance practice nurses (APNs) have the knowledge, skill, and leadership abilities that are valuable for meeting the healthcare challenges of rural communities.

The Institute of Medicine’s (IOM) report in “The Future of Nursing: Leading Change, Advancing Health” (2010) recommends that nurses should practice to the full extent of their education and training. They need to achieve higher levels of education and be full partners with physicians and other health care professionals in redesigning health care (LeVasseur & Qureshi, 2015). As of April 2013, 14,384 Registered Nurses, 807 advanced practice registered nurses (APRNs), and 383 advanced practice registered nurses with prescriptive authority live and work in the State of Hawai’i (PVL, 2014). Unfortunately, only 3.6% of Hawai’i APRNs (n=308) are considered self-employed (Le Vasseur, 2013). Therefore, if more APNs became entrepreneurs and practiced independently in privately-owned clinics, this will increase qualified practitioners in rural areas.
Problem Statement

There are increasing numbers of licensed APNs with the ability to provide high-quality care that is both cost-effective and efficient in a variety of health care settings (Kutzleb et al., 2015). Despite the general increase in APNs overall, there are limited numbers of practicing Advanced Practice Nurses providing care to the rural populations. APNs are projected to help fill the needs in primary healthcare as the Patient Protection and Affordable Care Act (ACA) of 2010 was implemented (Kippenbrock et al., 2017). Despite 205,000 APNs in the United States reported by the American Association of Nurse Practitioners (2015), only a small percentage of APNs overcome entry barriers to entrepreneurship (AANP, 2015; Elango, Hunter, & Winchell, 2007). Entrepreneurship is the act of starting and running your own business or a tendency to be creative and wish to work for yourself in a business venture. Study findings point to several restrictions and facilitators for initiating APNs’ private practice or entrepreneurship. The literature described three areas as overcoming entry barriers to APNs’ private practice, including legal and regulatory obstacles, ethical and personal barriers, and knowledge barriers (Elango et al., 2007).

Project Purpose

Current research suggests that APNs can receive business education through various strategies, including how to design a business plan (Mackey, 2005). Therefore, the purpose of this scholarly project is to help alleviate the shortage of primary care providers in Hawai‘i communities by encouraging entrepreneurship intentions in both APNs and Doctor of Nursing Practice (DNP) graduates/students through a business workshop. Entrepreneurship in APNs/DNP students can support the expansion of APN-owned private practice and lead to the reorganization of the healthcare milieu (Mackey, 2005).
Project Aims and Objectives

Specific Aim 1: Design an entrepreneurship workshop grounded in evidence-based research to promote APN-led private practice in primary care.

Objective 1: Identify an evidence-based entrepreneurial intention questionnaire tool to measure the effectiveness of entrepreneurship workshop pre- and post-education session.

Objective 2: Develop an APN/DNP student entrepreneurship workshop focused on business educational strategies and community resources available to them, include a live interview of three expert APNs sharing their passion for business.

Objective 3: Recruit business students from the University of Hawai‘i Hilo College of Business and Economics to complete the Entrepreneurial Intention Questionnaire (EIQ) survey as a baseline score to compare with the APN/DNP group.

Specific Aim 2: Pilot the entrepreneurship workshop.

Objective 1: Implement the entrepreneurship workshop for recruited APNs/DNP students, and film the session while interviewing the panel of APNs face-to-face, allowing a question and answer period of all participants.

Objective 2: Evaluate the effectiveness of the panel interviewees, business plan activities, and the entrepreneurial intentions of all project participants by utilizing the entrepreneurial intention questionnaire (EIQ) pre/post-workshop.

Objective 3: Based on the survey pre/post scores, determine the feasibility of an entrepreneurship workshop for potential use in graduate education.
Chapter 2: Background and Project Focus

In this chapter, the concept analysis of the term entrepreneurship is defined in a way to show its significant impact on access to health care. It includes challenges for APNs who desire to start and plan a business venture. The Adult Learning theory or Knowles theory of andragogy is a method of learning which will be used to guide the premise of the intervention for this project. A review of the literature will describe the barriers to APNs entrepreneurship, the status of APNs’ practice and regulations, and the benefits of APNs entrepreneurship. With the rising cost of healthcare, many have suggested that APNs entrepreneurship can be a potential solution to the issues facing the healthcare industry (Elango et al., 2007).

Access to Healthcare

The concept map (Appendix A) describes the value APN-led private practice can achieve in promoting access to healthcare in rural communities and the positive attributes to a shortage of primary care providers in the United States. In the 1960s, the term advanced nurse practitioner (ANP) was introduced into the United States. Advanced Nurse Practitioner had become well-established and vital within the nursing profession. The International Council of Nurses defines ANP as “a registered nurse that has the expert knowledge required, the ability to make complex decisions and clinical competence for an expanded work description, whose character is formed by the context and/or the country where he/she has the right to work” (Ljungbeck & Forss, 2017, p. 2). Many studies have supported the reality that APNs can provide a high level of patient safety, continuity of care, and access to healthcare. The term nurse practitioner was first used in 1967 and is a noun which is defined by the Merriam-Webster Dictionary (2010d) as “a registered nurse who is qualified through advanced training to assume some of the duties and responsibilities formerly assumed by a physician.”
The definition of the concept *entrepreneurship* by the Merriam-Webster Dictionary (2010b) is defined as “one who organizes, manages, and assumes the risks of a business or enterprise.” *Entrepreneurship* or *entrepreneur* is a noun that was used in the English language to describe “a kind of businessman” since the middle of the 18th century and in the 19th century was used to suggest the “go-between or a person who assumes any activity” (not just an association to business). By the early 20th century *entrepreneur* implied being “a go-getter to anyone who was known to be an independent business owner,” and that led to the phrase *entrepreneurial spirit* about the same time (Merriam-Webster Dictionary, 2010b).

The concept of *access to healthcare* was selected as a defining attribute, as well as showing its relevant aspects to the other supporting ideas. The selection of access to healthcare was identified as the essential concept to clearly define the healthcare limitations and the barriers affecting the underserved populations in rural and urban areas. Therefore, it is crucial to implement APNs and NPs into the model of care for vulnerable people. The use of the concept of *patient satisfaction* was incorporated to show the link between access to healthcare and improved patient outcomes shown when patients are satisfied with their healthcare services.

*Access* is a noun dating from the fourteenth century. It is defined in the Merriam-Webster Online Dictionary (2010a) as “permission, liberty, or ability to enter approach, or pass to and from a place or to approach or communicate with a person or thing.” *Access* is presented here as an essential concept that summarizes a set of more specific dimensions describing the fit between the patient and the APNs/NPs who provide healthcare. It can be further abridged through supporting concepts including approachability, acceptability, availability, accommodation, affordability, and appropriateness (Penchansky & Thomas, 1981).
Healthcare, a noun dating from 1940, is defined as “efforts made to maintain or restore health, especially by trained and licensed professionals (Merriam-Webster Online Dictionary, 2010c).” The term healthcare describes a concept signifying the use of available healthcare services, primarily in rural areas. Through the literature search, access to healthcare by vulnerable populations show a significantly higher rate of health disparities in rural areas and the need for quality healthcare to help manage chronic illnesses. The concept of healthcare also refers to the appropriate use of available healthcare services to improve and restore balance in personal health (McFall & Yoder, 2012).

The concept of access to healthcare is abstract because it has no pictorial representation or narrative content. The concept is not represented as a defined object that can be touched; it is impersonal and detached (Merriam-Webster Online Dictionary, 2010c). The concept map (Appendix A) will help make the relationships of the supportive concepts more concrete and be a foundation to benefit both the APNs/NPs and the consumers who seek access to healthcare services. The concepts within the map can be used to educate APNs/NPs and consumers to the many aspects of accessing healthcare and the need for satisfaction with the quality of care.

Satisfaction is defined as "the fulfillment of a need or want," and it is the quality or state of being satisfied or content and gratified (Merriam-Webster Online Dictionary, 2010f). The word patient defined from Latin patient-patiens or pati to suffer and is synonymous with forbearing, long-suffering, stoic, tolerant, and uncomplaining (Merriam-Webster Online Dictionary, 2010e).

Theoretical Framework

The Adult Learning Theory or Knowles’s theory of andragogy is a method of learning which includes facilitating adults to draw on their own experiences to create new knowledge based on previous understandings (Knowles, Holton, & Swanson, 2005; Cox, 2015). The
underpinning of Knowles’s theory states that adult readiness to learn is linked to the desire that all adults have in using their personal experiences as a resource for specific learning needs. Knowles describes six characteristics of adult learners that are suggested to influence how adults approach learning: the need to know, self-directed, prior life and work experience, desire to learn, orientation to learning, and external motivators (Knowles et al., 2005; Cox, 2015).

Knowles's theory of andragogy (adult education) is a necessary theoretical framework needed to guide and understand how APNs learn so that a clear understanding can help identify and design active learning activities for entrepreneurship. These learning activities will enhance APNs’ business knowledge and help tap into their innovative capabilities for private practice ventures. The first principle (need to know), involving APNs going into independent private practice, is essential to their career path. The potential benefits of professional autonomy may help stimulate APNs to recognize the need to learn how to accomplish this achievement. The theory also discusses that as people mature, they become more self-directed and autonomous. Adult education further states that self-direction is an attainable goal and that adults are not already self-directed learners. Knowles also implies that other adults can nurture self-direction through direct interactions (Knowles et al., 2005, p. 65; Cox, 2015).

The third characteristic of an adult learner includes the abundance of a previous life and work experience that becomes an increased resource for learning. APNs brings a wealth of knowledge and clinical skill to the table, and this will ultimately form the basis for observation and reflection during education (Knowles et al., 2005, p. 66). The fourth characteristic of an adult learner is the desire to learn when life or work situations suggest a need to understand something new (Cox, 2015). The APNs desire to learn how to formulate a business plan, which so happens to be the first step in the entrepreneurship, can facilitate the success or failure of the
business venture. The APNs must begin to make decisions about their services, finances, clientele, and space for their independent practice (Mackey, 2005).

The fifth characteristic of an adult learner is life-centered in their orientation to learning. Adult learners mainly need to see the use of what they are learning, so that the new education can be realistic in solving some task or issue. This example can be applied to the APNs gaining business knowledge in the hope of opening a private practice.

Lastly, Knowles’s theory focuses on adult learners who respond to external motivators; for example, a better job or higher wage; however, these are mostly internally motivated (Cox, 2015). An editorial by Blazek (2013) asserts that independent APNs reported being profitable in less than two years from the initial start-up of their private practice.

APNs who desire to be independent business owners and seek opportunities to be entrepreneurs can help rural and urban underserved communities by providing healthcare through greater efficiency and cost-effectiveness. The Adult Learning Theory is a helpful theoretical framework to guide the learning needs for this endeavor. APNs can be given the necessary tools in designing a business plan that is the first step in formalizing the process toward private practice. The APNs lack of business knowledge can be overcome if there is a desire to transform learning into a successful independent practice.

The key to any successful business venture is the development of a business plan. There are many free online resources to meet this critical process in a start-up business. One online template called Business-in-a-box has helped over 12 million people in over 200 countries since 2001. They provide a healthcare business plan template that can guide those unfamiliar with business through a step by step approach of designing a personal business model (Biztree Inc, 2019). A business plan is an essential strategic tool for entrepreneurs to successfully think about
their business ideas and helps to formulate both their short-term and long-term objectives. The business plan must fulfill what the entrepreneur hopes to accomplish and how they hope to get there. The business planning presentation was instrumental during the workshop to show other advanced practice nurses how easy it is to design and create one. As mentioned earlier, in Knowle’s theory, adult learners mainly need to see the use of what they are learning—offering the essentials of business planning development through a PowerPoint presentation facilitated learning that provided a realistic approach to business start-ups for the participants.

**Significance to Entrepreneurship for APNs**

In the United States, where APNs’ independent practice is more established than in other countries, only 7,680 of 128,000 total number of APNs are involved in a private practice model (Currie, Chiarella, & Buckley, 2013). In the study by Elango et al. (2007), one of the main barriers to APNs entrepreneurship was the lack of knowledge regarding legal issues surrounding new business ventures. Between state to state complex regulatory requirements, many newly graduated APNs could not grasp the applicable healthcare regulations. Furthermore, APNs experience significant anxiety over potential legal issues as one single lawsuit could end any business venture.

Other concerns for entrepreneurship are the issues regarding reimbursement policies and procedures for accounts receivables from hospitals, insurance firms, or the state (Elango et al., 2007). Hansen-Turton et al. (2013) studied managed care organizations (MCOs) across the nation. They found many do not credential APNs as primary care providers, limiting the ability of APNs to be reimbursed by private insurers. Also, the ethical and personal conflicts stemmed from APNs not knowing how to separate the perception of caring with that of making money in a
business venture. Furthermore, APNs expressed fear of competing with doctors or previous
employers, whom they felt would not be cooperative (Elango et al., 2007).

The last barrier to starting an APN-led private practice was the required financial capital
needed to start a business. The study by Elango et al. (2007), emphasized that the lack of
financial resources necessary in starting a business was another factor inhibiting APNs from
starting independent practice. Ultimately, APNs felt overwhelmed by the number of resources
they needed to start up any potential business venture.

**Challenges to Starting a Business**

As mentioned previously, the APN entrepreneurs could potentially offer a cost-effective
alternative for specific healthcare services facing underserved rural areas. However, many
challenges are specific to APNs entrepreneurship, including the higher cost of malpractice
insurance, inability to obtain hospital privileges, skepticism from other providers about the
independent role of APNs, statutory limitations, and territory issues among the healthcare
providers (Elango et al., 2007). Concerning business and finance, many APNs have no business
or marketing training (56%) or customer service training (61%) (Blazek, 2013). A well
designed and advanced business plan is an essential first step in assisting APNs’ practice that encourages
APNs’ contributions to rural communities and can lead to successful ambulatory clinics for
patients and families, APNs, and the surrounding healthcare organizations (Johnson & Garvin,
2017).

With the process model of entrepreneurship, Elango et al. (2007) extracted information
from nursing professionals through focus group methods on the barriers to starting an
independent APN practice. The first step in a business venture was to recognize a business
opportunity for APN entrepreneurship, including demographic trends, opportunities within
healthcare, and social trends. Two groups that are creating opportunities for APNs entrepreneurs are both baby boomers and senior citizens. Currently, 78 million Americans were born between 1946 and 1964 are identified as baby boomers, and they are a group APNs can focus on when preparing to design their business plan (Elango et al., 2007).

As a business opportunity to fill temporary vacant staff positions, APNs may contract with rural hospitals as coverage for medical providers. This subcontracting idea created a win-win situation for hospitals and APNs entrepreneurs. Another possibility that the focus group identified included APN entrepreneurs producing and delivering various supplementary goods and services to patients admitted to the hospitals (Elango et al., 2007).

Several social trends also helped identify APN entrepreneurs, including busy lifestyles, preventive health care, and closure of rural hospitals of which creates potential opportunities for APNs entrepreneurs. With active lifestyles, there are more opportunities for individuals willing to seek attention from APN entrepreneurs to receive more efficient and convenient health care. The closure or limited services of many hospitals in the United States because of consolidation has led to the overall reduction in the number of hospitals in specific areas. This shortage has helped create many entrepreneurial opportunities for APN-led start-up clinics in underserved areas in rural and specific urban pockets for primary health care services (Elango et al., 2007).

**Planning an APN Business Venture**

For most advanced practice nurses, the training involves focusing on clinical skills and very little to no business knowledge. Therefore, even if the APNs had the clinical expertise and desire to establish a business, it does not guarantee they have the business skills needed to start up their independent private practice (Hansen-Turton et al., 2013). Many APNs with specific qualifications are well prepared to provide wellness and preventive care services; diagnose and
manage common, uncomplicated acute illnesses; order tests and referrals; help patients manage chronic diseases; and write prescriptions (Hansen-Turton et al., 2013). Although APNs are highly skilled clinicians, they lack the necessary managerial and administrative abilities to start a business venture successfully (Mackey, 2005). Therefore, the areas that are vital for starting-up a nursing business include accounting, marketing, managing, insurance, legal issues, planning, budgeting, funding, negotiating, billing/collaboration, clinical skills, and nursing (Mackey, 2005).

Keeping accurate accounting is vital for managing financial records for yearly monitoring and submission for tax purposes toward the end of each fiscal year. APNs may be unfamiliar with budgeting, contractual agreements, negotiating a managed care contract, marketing trends, pricing and reimbursements, billing and collecting from insurance companies, hiring and firing of personnel, marketing to clients, and promotional strategies (Mackey, 2005). However, APNs desiring to be entrepreneurs can successfully gain expertise through outsourcing or hiring the knowledge and skills necessary from outside resources (Mackey, 2005).

Review of the Scholarly Literature

The systematic search of several databases helped to identify strategies leading to evidence-based research on how to promote entrepreneurship among APNs. Searches include databases from CINAHL, Ovid, ProQuest, Google Scholar, Wiley Online Library, MEDLINE, and PubMed. Key search terms included ‘nurse entrepreneur’, ‘nurse entrepreneurship’, ‘nurse practitioner entrepreneurs’, ‘private practice’, ‘privately-practicing nurse practitioners’, ‘advanced practice nurses’, ‘ambulatory clinical nurse-led practice’, ‘nursing business’, ‘nurse independent practice’, ‘entrepreneurship education’, ‘entrepreneurial intent’, ‘entrepreneurial intentions’, ‘adult learning’, and ‘business plan’. The literature was rich in ways to guide APNs to seek out entrepreneurship to provide access to healthcare for rural populations. There were
studies performed in hospital settings to educate staff on the general concepts of business to promote more entrepreneurship among APNs. Most evidence-based articles acknowledged the importance of role models to encourage entrepreneurship for APNs (Fellnhofer, 2017). Eight research articles were reviewed and synthesized for commonality among the trends in private-practicing advance practice nurses (APNs). Three common themes were utilized in summarizing the research articles: barriers to APNs entrepreneurship, status of APNs practice and regulations, and benefits to APNs entrepreneurship.

**Barriers to APNs Entrepreneurship.** Two journal articles noted the gap in knowledge for APNs regarding skill set or awareness of the regulatory, financial, and general workings in business, which is essential for independent private practice (Johnson & Garvin, 2017; Mackey, 2005). Also, APNs lack of familiarity on how to develop a business plan and the abilities to secure resources to start a business venture was essential to success (Elango et al., 2007). Blazek (2013) also described APNs’ limited knowledge in the successful use of marketing strategies, customer service training, and the use of social media to enhance business ventures.

A focus group study by Elango et al. (2007) reported that the lack of knowledge regarding legal issues, state regulatory requirements, and fear of lawsuits were barriers to APNs starting-up a business. Other obstacles were lack of management skills by APNs, the public’s perception that healthcare services were only in hospitals or physician’s offices, and minimum institutional support from other nurses (Elango et al., 2007).

In a Delphi study by Wilson et al. (2003) of 54 self-employed APNs in Australia, 76.9% of APNs noted a sense of feeling disadvantaged because of the reduced and variable income experienced while in private practice. When the same study of 54 self-employed APNs participants was asked again about possible, increasing revenue in the future, only 49% agreed
versus 51% who disagreed of potentially increasing their income if they continued in private practice. However, an area they agreed (96%) was the lack of reimbursement from both public, and private health insurance, which was by far the most significant barrier to being in private practice (Wilson et al., 2003).

There are 258 total Health Maintenance Organizations (HMOs) in the United States, operated by 98 distinctive managed care organizations (MCOs). Unfortunately, only 74% of these HMOs have credentialed APNs as primary care providers (Hansen-Turton et al., 2013). Hansen-Turton et al. (2013) studied the effects of MCOs who did not allow APNs to be credentialed as primary care providers. Thus, this reduced the potential for many independent APNs seeking reimbursement from private insurers. Even when MCOs would credential, APNs were compensated at lower rates than their physician counterparts (Hansen-Turton et al., 2013).

**Status of APNs Practice and Regulations.** By 1990, the National Alliance of Nurse Practitioners standardized NPs educational requirements at the master's or postmaster's level, reimbursement for NPs, and prescriptive authority for all NPs was accomplished. Also, standards of care had been established, and the NPs scope of practice was expanded to include consistency within specialties (Towers, 2003). Unfortunately, many variations exist in the range of practice of prescribing controlled drugs and the type of NP to physician relationship that is being required by statutes or regulations. In the State of Hawaii, all NP regulations are monitored by the Hawaii State Board of Nursing, NPs can prescribe most medications and are recognized as primary care providers (Towers, 2003).

In 45 states, APNs can prescribe medications, yet 16 states have not approved APNs permission to practice independently without any supervision or collaboration from a physician (Johnson & Garvin, 2017). In 2016, the Veterans Affairs Administration allowed NPs, certified
nurse-midwives, and clinical nurse specialists to practice to the full scope of their training and education (Johnson & Gavin, 2017). According to the American Association of Nurse Practitioners (2013) National Conference, top barriers to NP entrepreneurship included protocols related to physician oversight and an inability for NPs to order home health services and regulations on statutes regarding prescribing controlled substances (Dubois et al., 2013; Blazek, 2013).

**Benefits to APNs Entrepreneurship.** The Association of American Medical Colleges (2013) announced that in 2025 there would be a shortage of 65,800 primary care physicians. Therefore, since APNs have the same specialized training and abilities in delivering primary care services equal to physicians, APNs can fill the gap in providing cost-effective care equivalent to that of primary-care physicians (Hansen-Turton et al., 2013). Further benefits for APNs include the contribution to the field of nursing through independent clinical practice that will provide evidence-based care that includes safe, quality, patient-centered, accessible, and affordable healthcare for all (Johnson & Garvin, 2017).

The study by Wilson et al. (2003) in Australia noted several advantages of being in private practice, including autonomy, increased personal and worked flexibility, and the opportunity to contribute to improved health for underserved communities. Interestingly, the same study noted that 34.6% did not feel that prior business knowledge was essential in launching a private practice. However, a need to have strong customer service skills agreed-upon 100% among the 54 APNs who participated in the study (Wilson et al., 2003). Lastly, APNs who were able to practice independently reported profitability within two years of start-up (Elango et al., 2007).
Summary of Literature Review

The overwhelming evidence throughout the literature review highlighted the need for APNs to utilize their clinical skills and leadership innovation, to consider opportunities regarding entrepreneurship. The time is now that APNs can fill in the gap for providing greater efficiency and cost-effectiveness in redesigning the healthcare infrastructure through the pursuit of business opportunities, including APN-led private primary care practices. The literature has a significant amount of resources to help facilitate and guide APNs in fulfilling their desire for entrepreneurship. From learning how to successfully formulate a business plan, to possibly needing to outsource areas that may be difficult, entrepreneurship is undoubtedly within reach for all APNs.

The research does elude too many barriers to successful APNs entrepreneurship, including limited business knowledge, finance, marketing, and customer service training (Blazek, 2013). However, the literature also states that these specific skills can be taught if the APNs have a strong desire to learn and transform their ideas into business ventures. Unfortunately, other barriers such as lack of reimbursement fees from private and public health entities limited perceived support from colleagues for APNs practicing independently, and the viewpoints of other healthcare professionals toward APNs entrepreneurship can deter any chance of successful implementation (Elango et al., 2007). Fortunately, the benefits to APNs entrepreneurship counteract the various obstacles to hinder the development of independent private practices for APNs.

Entrepreneurship can provide autonomy, flexible personal and work scheduling, which ultimately results in a positive work-life balance. Also, an entrepreneur can control provided services, increase patient satisfaction, and improve the quality of care for clients (Elango et al.,
2007). This project will aim to target APNs into becoming change agents and seek out business opportunities that involve entrepreneurship to alleviate the gaps in our healthcare infrastructure.
Chapter 3: Project Design and Evaluation Plan

The purpose of this Practice Inquiry Project (PIP) is to increase the number of Advanced Practice Nurses (APNs) and DNP students who desire to pursue entrepreneurship to provide access to healthcare that is both cost-efficient and of high quality for rural communities. Specific aims were developed to guide this process to achieve the PIP goals. In this section, methods for obtaining the project’s specific aims are clearly articulated for each objective. The PIP could not proceed with first obtaining protection of human subjects, and this process will be addressed, along with the results of the project’s intervention.

Human Subjects Protection and Ethical Assurance

The proposal for the project was approved by the University of Hawai‘i Hilo’s (UHH) Scientific Review Committee. Several Collaborative Institutional Training Initiatives (CITI) program courses were completed (i.e., Human Subjects Research, Exempt Research and Key Personnel, and Information Privacy Security) before receiving exemption status approval by the Institutional Review Board (IRB) from the University of Hawai‘i. The recruitment of the project subjects was through convenient sampling for both independent groups. The investigator had no financial or commercial interest in implementing the PIP. This project was supervised by the nursing faculty at the University of Hawai‘i Hilo, Doctor of Nursing Program.

Recruitment of Study Participants and Confidentiality Protection

As mentioned previously, a convenience sampling of the two independent groups (e.g., APNs and DNP graduates/students, and the University of Hawai‘i Hilo Business students) were recruited as subjects in the project. The nurses’ group was recruited through various means, including the Hawaii Nurse Practitioner Connect Facebook page, UHH email recruitment, and posting of fliers at the University of Hawai‘i at Manoa. Four hours were allotted for the
Entrepreneurial workshop for the APNs/DNP graduates/students. The APNs and DNP graduate/students consisted of 3 APNs, 2 DNP Graduates, and 3 DNP students ranging in ages from 34 to 62 years of age, with all being women. The UHH business students were recruited through IRB approved “scripted” in-person presentation (see Appendix B). The UHH business students consisted of 10 seniors and five juniors ranging in age from 20 to 34 years of age, with 12 women and three men. The UHH business students were not part of the entrepreneurial workshop but instead completed the online Entrepreneurial Intention Questionnaire (EIQ) in order to obtain a baseline score for which to compare with the nurses’ group. The business students were currently enrolled in a course titled Business Planning for New Ventures, and approval to recruit the business students was approved by the course instructor and the IRB as a modification to the PIP.

Confidential standards were strictly enforced throughout the PIP. The nurses’ group was informed that the purpose of the entrepreneurial workshop was to pilot the educational program and to evaluate their entrepreneurial intentions pre-and post-workshop through an online SurveyMonkey data collection method, which was completely voluntary. They could withdraw from the project at any time (see Appendix C). The business students were also informed about the EIQ being expressly used to collect quantitative data between the business students and the nurses’ group to compare test scores between the two independent groups. Their participation was strictly voluntary, and they could opt out of the EIQ survey at any time; therefore, this PIP did not foresee any ethical concerns (see Appendix C).

During data collection, each nurse participant’s response was given a number for identification purposes of matching the pre and post-test results. Gender, age, educational experience, work experience, and personal characteristics/qualities were collected for data
analysis purposes. EIQ data scores were compiled and then locked in a file that was only accessible to the investigator. EIQ data will be destroyed six months from the workshop intervention. The business students were also given a number to identify test results of initial EIQ scores. Gender, age, educational experience, work experience, and personal characteristics/qualities were collected for data analysis purposes. EIQ data scores were compiled and locked in a file that was only accessible to the investigator. Their personal information and questionnaire responses were consistently stored through online SurveyMonkey, so no one was able to link their questionnaire answers to their identity; thus, confidentiality was consistently maintained. EIQ data will be destroyed six months from the workshop intervention.

**Data Collection and Instruments**

To evaluate the effectiveness the entrepreneurial workshop had on the nurses’ group to increase their intentions for business ventures and ultimately provide access to health care, entrepreneurial intentions were measured before and after the project workshop. The Entrepreneurial Intention Questionnaire (EIQ) tool was designed by Linan & Chen (2009) and is based on an integration of psychology and entrepreneurship literature, as well as empirical research to develop a standardized measurement instrument for entrepreneurial intention and its antecedents (see Appendix D). Permission to utilize the Entrepreneurial Intentions Questionnaire (EIQ) was received via email by author, Francisco Linan (see Appendix E).

The premises of this project were to collect quantitative data of two independent groups and analyze their entrepreneurial intentions through the evidence-based questionnaire. The workshop was the educational intervention to see if the nurses’ group would increase their intentions toward entrepreneurship after the educational offering. The business students who completed the EIQ survey provided a baseline of what business curriculum could potentially
have on the impact of the nurse's group entrepreneurial intentions. Therefore, surmising that after the nurses’ group received business or entrepreneurial education their EIQ scores increased to the level of the business students.

The entrepreneurial intention tool measures the effort that an individual makes in carrying out entrepreneurial behavior, thus utilizing three motivational factors, or antecedents, influencing behavior throughout the instrument (Ajzen, 1991; Linan, 2004).

- **Attitude toward start-up (personal attitude, PA)** refers to the degree to which the individual holds a positive or negative personal valuation about being an entrepreneur (Ajzen, 2001; Autio et al., 2001; Kolvereid, 1996).

- **Subjective norm (SN)** measures the perceived social pressure to carry out- or not to carry out- entrepreneurial behaviors. Ajzen (2001) referred to the perception that referenced individuals that would approve of the decision to become an entrepreneur or not.

- **Perceived behavioral control (PBC)** is the perception of the ease or difficulty of becoming an entrepreneur. It is like self-efficacy (SE) (Bandura, 1997) and to perceived feasibility (Shapero & Sokol, 1982).

The use of these three motivational factors (i.e., PA, SN, and PBC) was used to capture the central elements of entrepreneurial intention into the EIQ tool (see Appendix D). The EIQ instrument was divided into sections that incorporated demographic data, education and experience, personal characteristics and qualities, employment status, entrepreneurial activity, entrepreneurial knowledge, entrepreneurial objectives, and personal data. Within them, the EIQ contains all the constructs in Likert-type scales (Linan & Chen, 2009). The EIQ was developed to precisely measure the intention of individuals becoming entrepreneurs and is based on existing
theoretical and empirical literature about the application of the theory of planned behavior (Ajzen, 1991) to entrepreneurship (Linan & Chen, 2009). The education and experience, entrepreneurial knowledge, and personal data sections of the EIQ require human capital and demographic information that was described as not directly impacting intentions, but was useful in identifying their effect on PA, SN, and PBC. The entrepreneurial objective section was to analyze participants’ concept of “success” and the importance they attached to business development and growth (Linan & Chen, 2009).

**Workshop Implementation**

The workshop educational offering first included the live interview of three APNs entrepreneurial panel experts, who shared their personal experiences on overcoming barriers to entrepreneurship and successfully opening their private independent practices. Informed consent to be videotaped/interviewed (see Appendix F) was obtained months before the scheduling of the workshop. The session was videotaped and may be used as a teaching tool for future entrepreneurial educational opportunities at the University of Hawaii-Hilo, School of Nursing. The nurses’ group participants had all taken the pre-test via SurveyMonkey before attending the educational workshop. Each participant received a folder at the workshop that contained community resources gathered from the Small Business Administration (SBA), including a resource Hawai’i guide 2019. Additional SBA resources also provided ways to build better credit to assist in obtaining a loan for future business ventures.

The workshop was over a four-hour period, which only allowed videotaping of the panel while participants observed. The purpose of the interview panel was to share valuable expertise and experiences through the power of passion and motivation for entrepreneurship. Prior research has shown that opinions and behaviors communicated by others can influence an
individual’s (potential) entrepreneurial decisions (Ajzen, 1991; Akerlof & Kranton, 2000). The live panel of entrepreneurial experts were the role models that significantly stimulated participant’s career ambitions and helped inspire, stimulate, and encourage other APNs/DNP graduate/students to engage in entrepreneurship (Shapiro, 1987; Wright, Wong, & Newill, 1997). Evidence shows that 35-70% of entrepreneurs were influenced by entrepreneurial role models when starting their business ventures (Scherer, Adams, & Wiebe, 1989).

After a brief introduction from all three APNs entrepreneurs, the interview session with the three expert panel got underway. The queries of the expert panel focused on open-ended questions that included, “How did you get started in the business?” “What made you think about starting your own business?” “What business planning did you use?” “Did you use any small business websites?” “If so, which ones?” “How long before you started making a profit?” “Are you a limited liability corporation?” “How many employees do you have now?” “How many initially?” “Who does your job descriptions?” “Who does your payroll?” “Who does your recruitment and hiring process?” “Do you have an orientation process for all new hires?” “Are you accredited with CMS and The Joint Commission?” “What services do you provide at your practice?” “How do you market your clinic?” “How do you store patient data?” “How do you keep all patient information secured?” “Do you have electronic medical records (EMR)?” “How did you first acquire your clientele?” “How many clients do you see monthly?” Or daily on the average?” “What is your fixed cost?” Labor cost?” “Supplies?” “Equipment needs?” “Do you utilize any leased services?” “How is billing from government entities accomplished?” “How do you determine customer satisfaction for your clientele?” “Anything we have not mentioned that you want to discuss?” “Any lessons learned you want to share?” After the interview and videotaping commenced, project participants, engaged with the three-panel experts for 30
minutes questions and answer session.

After a short break and panel experts departed, a PowerPoint presentation on “The Essentials of Business Planning” was conducted by the investigator. The content of the presentation included business planning. It focused on the specifics of an executive summary, which detailed several topics. These topics included general company description, locations, industry and market analysis (e.g., clientele, competitors), management and personnel (e.g., recruit efforts), operations (e.g., place of business, facilities, management information systems and IT), development and exit plans, financial forecasts and data (e.g., cash flow projections, profit and loss accounts, balance sheets, and break-even analysis) and the use of loan capital. All project subjects were sent the post-EIQ via SurveyMonkey to measure the effectiveness of the entrepreneurial workshop (e.g., community resources, expert APN panel, and business planning presentation). A codebook was utilized to facilitate organizing the data obtained from the nurses’ group’s pre/post EIQ and the UHH business students EIQ scores (see Appendix G, Appendix H).

**Data Analysis**

The survey results were analyzed using the JASP Version 0.11.1 (2019), software. The EIQ survey results for the pre and post nurses’ group was compared against the business students EIQ survey score using descriptive statistics. The second analysis performed to compare the pre and post scores of the nurses was the use of the Paired Samples t-test, a parametric test. The equivalent non-parametric test is known as the Wilcoxon Signed-Ranks test. Neither test showed a statistical significance; however, the data is approaching significance. The last analysis was the use of the Independent Samples t-test to compare the nurses with the business students' scores. The Independent Samples Student's t-test is another parametric test, and the Mann-Whitney is the non-parametric equivalent, the difference is higher for the pre-test. The post-test for the
nurses is essentially the same as the business students, which indicates the nurses' group learned enough to be equivalent to that of the business students after the entrepreneurial workshop.
Chapter 4: Results

Project Implementation and Results

The goals of this project are to inspire APNs to utilize entrepreneurial intentions to fill the gap in primary care providers in underserved rural and urban areas. By using other APNs as role models for providing passion, inspiration, and motivation for entrepreneurship, more APNs will seek out entrepreneurship as a means for offering high-quality health care for rural populations. As previously mentioned, the first aim was to design an entrepreneurship workshop grounded in evidence-based research to promote APN-led private practice in primary care. The first objective was therefore to identify an evidence-based entrepreneurial intention questionnaire tool to measure the effectiveness of the workshop before and after education session. The Entrepreneurial Intention Questionnaire (EIQ) tool, designed by Linan & Chen (2009), was based on an integration of psychology and entrepreneurship literature, as well as empirical research to appropriately measure entrepreneurial intention among project subjects.

The second objective involved developing an APN/DNP student entrepreneurship workshop focused on business educational strategies and community resources available to them, include a live interview of three expert APNs sharing their passion for business. Research has shown that opinions and behaviors communicated by others can influence an individual’s (potential) entrepreneurial decisions (Ajzen, 1991; Akerlof & Kranton, 2000). The live panel of entrepreneurial experts were role models that stimulated the participant's career ambitions and helped inspire and encourage entrepreneurship (Shapiro, 1987; Wright, Wong, & Newill, 1997). The evidence based EIQ tool that was designed by Linan and Chen (2009), which is the premise of the theory of planned behavior, confirm the positive impact of entrepreneurial role models on entrepreneurship (Fellnhofer, 2017).
The third objective included recruiting business students from the University of Hawai‘i Hilo College of Business and Economics to complete the Entrepreneurial Intention Questionnaire (EIQ) survey as a baseline score to compare with the APN/DNP group. Literature shows that a sample made up of university students is very common in entrepreneurial intention research. Linan and Chen (2009) mention that the advantage of similar age and qualifications, make it more homogeneous (see Characteristics of UHH business students who participated in EIQ survey, Table 1).

Table 1

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N participants</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>80</td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Age range (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-22</td>
<td>11</td>
<td>73</td>
</tr>
<tr>
<td>23-25</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>25-27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28-30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34-36</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Highest Level of School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School/GED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some college (working towards degree)</td>
<td>10</td>
<td>67</td>
</tr>
<tr>
<td>Associated degree</td>
<td>5</td>
<td>33</td>
</tr>
<tr>
<td>Baccalaureate degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed for wages</td>
<td>10</td>
<td>67</td>
</tr>
<tr>
<td>Self-employed</td>
<td>2</td>
<td>13</td>
</tr>
</tbody>
</table>
The second specific aim of this project looked at piloting the entrepreneurship workshop. The first objective was to implement the entrepreneurship workshop for recruited APNs/DNP students and film the session while interviewing the panel of APNs face-to-face, allowing a question and answer period of all participants. A convenience sampling of 8 APNs/DNP graduates and students volunteered to participate in the intervention (see Characteristics of the sample, Table 2).

Three APNs entrepreneurial experts consented to be video/taped and interviewed during the first half of the workshop, while participants observe the interactions. Donnellon et al. (2014) mention that verbal interaction and collaboration during entrepreneurial education initiatives facilitate the development of an entrepreneurial identity. The APNs experts’ work and educational experience included a master’s prepared male Psychiatric Nurse Practitioner and two DNP prepared female Family Nurse Practitioners (FNPs). The two female DNP/FNPs have very different practices, including one who focuses on Aesthetics and the other who provides Primary Care. All three APNs own and manage their own private practices and they individually shared the uniqueness of each of their journeys to successful business ventures.
Table 2

*Characteristics of APNs/DNP graduate/students who participated in the Entrepreneurial workshop*

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N participants</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Age range (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31-40</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>41-50</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>51-60</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>61-70</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Highest Level of School (completed degree)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baccalaureate Degree</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Graduate Degree</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Doctorate Degree</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Length of Working as an RN (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>6-10</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>11-15</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>16-20</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>21-25</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>26-30</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>30+</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed for wages</td>
<td>6</td>
<td>75</td>
</tr>
<tr>
<td>Self-employed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Out of work for more than one year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A student</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>Homemaker</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The second objective was to evaluate the effectiveness of the panel interviewees, business plan activities, and the entrepreneurial intentions for all project participants by utilizing the entrepreneurial intention questionnaire (EIQ) pre- and post-workshop. Compare the APNs/DNP entrepreneurial intention scores to that of the UHH College of Business student’s scores. The survey results were analyzed using the JASP Version 0.11.1 (2019), software. The cumulative EIQ scores from the pre/post nursing group compared against the business students' scores through descriptive statistics (see Descriptive statistics for cumulative EIQ scores for nursing pre/post and UHH business students, Table 3).

Table 3

Descriptive statistics for cumulative EIQ scores for Nursing pre/post and UHH business students

<table>
<thead>
<tr>
<th></th>
<th>Nurse Pre</th>
<th>Nurse Post</th>
<th>Bus Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>8</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Mean</td>
<td>243.750</td>
<td>261.00</td>
<td>263.200</td>
</tr>
<tr>
<td>Median</td>
<td>246.000</td>
<td>250.000</td>
<td>264.000</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>28.212</td>
<td>37.588</td>
<td>28.897</td>
</tr>
<tr>
<td>Variance</td>
<td>795.929</td>
<td>1412.857</td>
<td>835.029</td>
</tr>
<tr>
<td>Range</td>
<td>76.000</td>
<td>105.000</td>
<td>119.000</td>
</tr>
<tr>
<td>Minimum</td>
<td>207.000</td>
<td>214.000</td>
<td>211.000</td>
</tr>
<tr>
<td>Maximum</td>
<td>283.000</td>
<td>319.000</td>
<td>330.000</td>
</tr>
</tbody>
</table>

Based on the survey pre/post scores, the objective three was to determine the feasibility of an entrepreneurship workshop for potential use in graduate education. The comparison of the statistics between nurses' pre/post cumulative EIQ scores to the business students' scores;
however, with small sample size, the findings are implied and not definitive. The differences seen in the means indicate that the post-EIQ test scores for the nurses, as a group, did increase to the point where they are comparable with the business students. The median (middle value) also increased but shows the distributions are different. The standard deviation (SD), shows the pre-EIQ scores for the nurses' group was closely resembled in their entrepreneurial knowledge, similar to the business students (see Figure 1- Nursing group pre-EIQ scores). The SD however shows increases for the nurse’s post EIQ scores, indicating that while the group scores increased as a whole, some learned more than others (see Figure 2- Nursing group post EIQ scores).

However, as a result of a small sample size for the nurse’s group (n=8), we cannot say anything about normality. Also, the difference in range between the post EIQ scores for the nursing group and business students suggest outliers among both groups.

Figure 1. Distribution of nursing group pre EIQ scores
The distribution for the EIQ scores for the business students is approaching a standard normal curve (see Figure 3).

Figure 2. Distribution of nursing group post EIQ scores

Figure 3. Distribution of business students EIQ scores
The second analysis showed that data is approaching significance between pre/post cumulative EIQ scores of the nurses' group. The use of the Paired Samples t-test, a parametric test, and the equivalent non-parametric test known as the Wilcoxon Signed-Ranks test, was used in the comparison (see Table 4) (JASP Team, 2019).

Table 4.
Paired Sample T-test comparing pre and post EIQ scores for nurses’ group

<table>
<thead>
<tr>
<th>Paired Samples T-Test</th>
<th>Test</th>
<th>Statistic</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre - Post Nurses</td>
<td>-1.782</td>
<td>7</td>
<td>0.118</td>
<td></td>
</tr>
<tr>
<td>Wilcoxon</td>
<td>7.500</td>
<td></td>
<td>0.161</td>
<td></td>
</tr>
</tbody>
</table>

The last analysis was the use of the Independent Samples t-test to compare the nurses with the business students' cumulative EIQ scores. The Independent Samples Student's t-test, a parametric test, and the Mann-Whitney is a non-parametric equivalent; the difference is higher for the pre-test (see Table 5).

Table 5.
Independent Samples T-test for pre-EIQ scores of the nurses compared to the business students

<table>
<thead>
<tr>
<th>Independent Samples T-Test</th>
<th>Test</th>
<th>Statistic</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scores</td>
<td>Student</td>
<td>1.550</td>
<td>21.000</td>
<td>0.136</td>
</tr>
<tr>
<td></td>
<td>Mann-Whitney</td>
<td>81.500</td>
<td></td>
<td>0.175</td>
</tr>
</tbody>
</table>

The independent samples t-test of the nurses' post-test cumulative EIQ scores in comparison to the business students were identical, suggesting the nurses' entrepreneurial intentions was on par with the business students (see Table 6).
Table 6.

Independent Samples T-test for post-EIQ scores of the nurses compared to the business students

**Independent Samples T-Test Post**

<table>
<thead>
<tr>
<th>Test</th>
<th>Statistic</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scores</td>
<td>Student</td>
<td>0.157</td>
<td>21.000</td>
</tr>
<tr>
<td></td>
<td>Mann-Whitney</td>
<td>66.000</td>
<td>0.728</td>
</tr>
</tbody>
</table>
Chapter 5: Discussion, Practice Implications, and Strengths/Limitations

Discussion

The purpose of this practice inquiry project was to engage more APNs to seek out entrepreneurship as a means of providing access to healthcare for rural communities. The independent samples t-test showed that the post-EIQ scores for both nurses and business students were essentially the same, even though the sample size was small. Therefore, the entrepreneurship workshop was successful in raising the nurse’s post entrepreneurial intention scores to be identical to the business students. This similarity between the entrepreneurial intentions of nurses and business students can support the fact that entrepreneurial education can be vital to all graduate-level nursing programs. The format of the panel of experts sharing their vast experience with the nurses proved to be an evidence-based supported strategy to motivate and encourage those nurses in realizing entrepreneurship can be a feasible and rewarding alternative to working in traditional settings.

The essentials for business planning presentation brought reality to the participants that it is essential to plan before diving into a business venture. Interestingly, there was only a one-panel APN expert entrepreneur who had mentioned taking the time to create a business plan before opening a practice. The evidence-based literature states that business planning education should include those APNs who have a strong desire to learn and transform ideas into successful start-ups.

Practice Implications

By facilitating entrepreneurship within Doctor of Nursing Practice programs, more APNs can utilize their knowledge for business ventures in providing cost-efficient and high quality of care to underserved rural and urban areas. The videotaped interview session created from the
workshop can be incorporated into an entrepreneurship course offered as an elective for all future DNP students. A well-designed entrepreneurship curriculum can educate future DNP students on the value entrepreneurship can have on restructuring healthcare for new and creative ways to improve accessibility and affordability.

**Strengths/Limitations**

The strength of the project was the use of the EIQ survey to gather data to analyze the entrepreneurial intentions of the sample subjects. The limitation was the small sample size of both independent groups. The scheduling of the entrepreneurial workshop from the weekday to the weekend might help alleviate the withdrawal of participants as a result of scheduling conflicts. The scheduling of the workshop was contingent on the three-panel expert and not the convenience of the project subjects.

Recruitment of the subjects was extremely challenging, possibly due to the lack of interest from many project participants who immediately became fearful of the project focus, entrepreneurship. One APN was close to retiring and therefore was an outlier in the analysis of the cumulative EIQ scores. The business students were a lot easier to recruit because they were initially 27 students and presenting live to them was a great strategy to elicit participation. All sample subjects completed the EIQ survey in its entirety, allowing robust and accurate data collection. Recommendation for future use of the EIQ needs to include a larger sample size for statistical improvement and reliability.
References


JASP Team. (2019). JASP. (Version 0.11.1)[Computer software]


https://www.merriam-webster.com/dictionary/healthcare


Access to Healthcare: Advanced Practice Nurses Entrepreneurship:

Concept Map (2017).
Appendix B
Scripted Presentation

My name is Kelly Green and I am a University of Hawaii at Hilo, Doctor of Nursing Practice student at the School of Nursing. I am doing a Practice Inquiry Project that involves recruiting both business students and Advanced Practice Registered Nurses, and DNP students to participate in my project. The project utilizes an Entrepreneurial Intention questionnaire (EIQ) designed by Francisco Linan and Yi-Wen Chen (2009). The Entrepreneurial Intention questionnaire (EIQ) is based on an integration of psychology and entrepreneurship literature, as well as previous empirical research to develop a more standardized measurement instrument for entrepreneurial intention and its antecedents. The EIQ will be expressly used to collect quantitative data between the business students and the nursing groups to compare test scores between the two independent groups.

I am here in person to recruitment business students interested in participating in my practice inquiry project. Those individuals interested in participating will be handed a Consent to Participate in Practice Inquiry Project at the end of this presentation, and therefore will have a direct link to access the EIQ through the SurveyMonkey. For your time and effort in participating in the questionnaire all participants will receive a gift card valued at $10. I simply ask that you include your full name, address, email, and contact phone number so that the mailing of your $10 gift card can be done after the end of the questionnaire period.

When I report the results of my project, I will not use your name or any personal identifying information. I will use a numbering system and report my findings in a way that protects your privacy and confidentiality to the extent allowed by law.

Is there anyone today who is interested in participating in my Practice inquiry Project?
(Hand-out consents)

Thank you for your time!
Appendix C

Consent to Participate in Practice Inquiry Project
University of Hawai‘i
Consent to Participate in Practice Inquiry Project
Jeanette Ayers-Kawakami, DNP, RN, Principal Investigator
Project title: Promoting entrepreneurship among APNs in Hawaii

Aloha! My name is Kelly Green and you are invited to take part in a Practice Inquiry Project (PIP). I am a graduate student at the University of Hawaii at Hilo in the Doctoral Nursing Program. As part of the requirement for earning my doctoral degree, I am doing a project inquiry.

What am I being asked to do?
If you participate in this project, you will be asked to fill out an initial online SurveyMonkey with 17 questions regarding your education and experience, entrepreneurial knowledge, and personal data. Based on how you respond you will then be placed in either the business student group or the non-business nursing group. After participating in the initial survey, you will be given a second online pre-questionnaire through SurveyMonkey, and those in the non-business nursing group will be asked to attend a 4-hour business workshop. After the workshop has ended, both groups will be sent the post-questionnaire of the entrepreneurial intention survey again. Workshop participants will also be asked to participate in a brief workshop evaluation.

Taking part in this project is your choice.
You can choose to take part, or you can choose not to take part in this project. You also can change your mind at any time. If you stop being in the project, there will be no penalty or loss to you. Your choice to participate or not participate will not affect your rights in the University of Hawaii Nursing/Business School programs.

Why is this project being done?
The purpose of my project is to promote entrepreneurship among advanced practice nurses through business education to help fill the primary care gap in Hawaii. The long-term goal is to also implement the same educational curriculum into the UH Hilo School of Nursing to promote entrepreneurship for future Bachelor of Nursing and doctoral nursing students. I am asking you to participate because we want to learn from undergraduate and graduate business and nursing students who are interested in being entrepreneurs.

What will happen if I decide to take part in this project?
If you decide to participate in this project, you will be asked to do the following: take an 80 question SurveyMonkey online that takes about 17 minutes. Based on your respond you will either be placed in the business student group (20 people) or nursing student group (20 people). The next step is for the nursing student group to attend a 4-hour business workshop held on Oahu at the Oahu Veterans Center. After the workshop has ended, both business students and nursing students will be asked to participate in a post-questionnaire again, through SurveyMonkey. For your time and effort in participating in a post-questionnaire all participants will receive a gift card valued at $10.

What are the risks and benefits of taking part in this project?
I believe there is little risk to you for participating in this project. You may become stressed or uncomfortable answering any of the entrepreneurial intention questions. If you do become stressed or uncomfortable, you can skip the questions or take a break. You can always withdraw from the project altogether if needed.

There will be no direct benefit to you for participating in this project. The results of this project may help motivate other nurses to think about entrepreneurship to provide quality of health care to Hawaii communities and promote business education to benefit future nursing students.

**Results of the project:**
The results of this project will be shared with all participants through direct email and/or a contact method of participants’ choosing.

**Privacy and Confidentiality:**
Any information that is obtained in connection with this project including any personally identifiable information remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of keeping all data secured in a password protected computer. Only my UH-Hilo advisor and I will have access to the information. Other agencies that have legal permission have the right to review research records. The UH Human Studies Program has the right to review research records for this project.

Information collected during the online SurveyMonkey will include your full name, company, address, email, and contact phone number. This personal information is being asked so that invitation to participate in this project can be determined, as well as mailing your $10 gift card upon the end of this practice inquiry project.

When I report the results of my project, I will not use your name or any other personal identifying information. I will use a numbering system and report my findings in a way that protects your privacy and confidentiality to the extent allowed by law.

**Future Research Studies:**
Even after removing identifiers, the data from this project will not be used or distributed for future research studies.

**Compensation:**
You will receive a $10 gift certificate to either Starbucks or Jamba Juice for your time and effort in participating in this project.

**Questions:**
If you have any questions about this project, please call or email Kelly Green at 619-672-2335 or kgreen2@hawaii.edu. You may also contact my advisor, Dr. Jeanette Ayers-Kawakami, at ayersjea@hawaii.edu. You may contact the UH Human Studies Program at 808.956.5007 or uhirb@hawaii.edu, to discuss problems, concerns and questions; obtain information; or offer input with an informed individual who is unaffiliated with this specific project. Please visit [http://go.hawaii.edu/jRd](http://go.hawaii.edu/jRd) for more information on your rights as a project participant.
If you agree to participate in this project, your submission of all surveys via the SurveyMonkey link will be considered as your consent to participate in this project. Please click on the following SurveyMonkey link below and it will then direct you to how to complete the initial and subsequent project surveys.
https://www.surveymonkey.com/r/NT2TDJM
Appendix D

Entrepreneurial Intention Questionnaire (EIQ)/SurveyMonkey: Increasing Entrepreneurship Among Advanced Practice Nurses
Version 3.1

Section 1: This first section is to gather specific demographic information about those participating in this survey. All information will be kept confidential.

1. What is your gender? (Place a check next to your gender)
   - [ ] Female
   - [ ] Male
   - [ ] Other (please specify)

2. What is your age? (Years)

3. What is the highest level of school you have completed or the highest degree you have received? (Check the box that applies to you)
   - [ ] Less than high school degree
   - [ ] High school degree or equivalent (e.g. GED)
   - [ ] Some college but no degree
   - [ ] Associated degree
   - [ ] Bachelor’s degree
   - [ ] Graduate degree
   - [ ] Other (please specify)

4. What is the highest level of education that your father achieved?
   - [ ] Primary (elementary school)
   - [ ] Secondary (intermediate to high school)
   - [ ] Vocational training
   - [ ] College/University
   - [ ] Other (please specify)

5. What is the highest level of education that your mother achieved?
   - [ ] Primary (elementary school)
   - [ ] Secondary (Intermediate to high school)
| Vocational training | College/University | Other (please specify) |

6. What is your father’s present occupation?

- Private sector employee
- Public sector employee
- Self-employed or entrepreneur
- Retired
- Unemployed
- Other (please specify)

7. What is your mother’s present occupation?

- Private sector employee
- Public sector employee
- Self-employed or entrepreneur
- Retired
- Unemployed
- Other (please specify)

8. If you are a registered nurse, how long have you worked as a registered nurse? (Check the box that applies to you). If you are not a nurse skip this question.

- 0-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 21-25 years
- 26-30 years
- 30 years +

9. Which of the following personal characteristics and qualities applies to you? (Select all that apply)

- Strong self-image and self-confidence, need for achievement
- A risk taker
- Creative, show initiative
- Visionary
- Self-disciplined
Independent, goal oriented
Able to deal with failure, ambiguity and uncertainty
Displays integrity, reliability, patience, enthusiasm
Good organizer, planner
Proactive
None of the above
Other (please specify)

10. Select the areas you are interested in learning more information about? (Select all that apply)

Accounting/General bookkeeping
Marketing
Managing
Insurance
Legal issues
Business planning
Budgeting
Funding/Loans
Billing/Collecting
Computer skills
Contractual agreements
Other (please specify)

11. If you had the opportunity to participate in a workshop designed to educate you on how to be an entrepreneur, would you attend? (Check your response)

Most likely not
Maybe
Absolutely, sign me up

12. What is your employment status, are you currently…? (Check the box that applies to you)

Employed for wages
Self-employed
Out of work for more than 1 year
Out of work for less than 1 year
A student
A homemaker
Retired
Unable to work
Prefer not to answer
Other (please specify)
13. Would you be interested in participating in an entrepreneurship project that particularly aims to help nurses in their professional career choices and support their development into future entrepreneurs? (Check the box that applies to you).

☐ Yes
☐ No

If you answered yes to the question above, please write your contact information below and proceed to the next section. If you wish not to participate in this project, feel free to stop at this point. Thank you for your participation in this project inquiry.

Name
Company
Address
Address 2
City/Town
State/Province
ZIP/Postal Code
Country
Email Address
Phone Number

Section 2: Entrepreneurial Intention Questionnaire (EIQ)

Thank you for consenting to participate in this project. My intentions are to use this information to place you into a business group or non-business nursing group for this practice inquiry project. For this reason, you were asked to provide your contact data. If you prefer not to participate, please exit out of this survey. If you would like to participate, please continue through the survey. In the questionnaire value-scales below, some statements are positive while others are negative. For each statement, you are asked to indicate your level of agreement with it, (1) representing strongly disagree, and (7) representing strongly agree. Please respond to the items by marking what you consider to be the appropriate answer or filling in the blanks. Choose only one answer to each question. Thank you very much for your cooperation.

A. Indicate your level of agreement with the following statements about the Entrepreneurial Activity from 1 (Strongly disagree) to 7 (Strongly agree).

A01.- Starting a firm and keeping it viable would be easy for me

A02.- A career as an entrepreneur is totally unattractive to me

A03.- My friends would approve of my decision to start a business

A04.- I am ready to do anything to be an entrepreneur

A05.- I believe I would be completely unable to start a business
A06. - I will make every effort to start and run my own business
A07. - I am able to control the creation process of a new business
A08. - My immediate family would approve of my decision to start a business
A09. - I have **serious doubts** about ever starting my own business
A10. - If I had the opportunity and resources, I would love to start a business
A11. - My colleagues would approve of my decision to start a business
A12. - Amongst various options, I would rather be anything **but** an entrepreneur
A13. - I am determined to create a business venture in the future
A14. - If I tried to start a business, I would have a high chance of being successful
A15. - Being an entrepreneur would give me great satisfaction
A16. - It would be **very difficult** for me to develop a business idea
A17. - My professional goal is to be an entrepreneur
A18. - Being an entrepreneur implies more advantages than disadvantages to me
A19. - I have a **very low** intention of ever starting a business
A20. - I know all about the practical details needed to start a business

B. Considering all advantages and disadvantages (economic, personal, social recognition, job stability, etc.), indicate your level of **attraction towards** each of the following work options from 1 (Not at all desirable) to 5 (Extremely desirable).

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<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
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<tbody>
<tr>
<td>B1</td>
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<td>B2</td>
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</tbody>
</table>

C. Indicate your level of agreement with the following sentences about the values society **put on entrepreneurship** from 1 (Strongly disagree) to 7 (Strongly agree).

<table>
<thead>
<tr>
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<th>1</th>
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<th>4</th>
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<tr>
<td>C1</td>
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<tr>
<td>C2</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>C3</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
C4.- My friends’ value entrepreneurial activity above other activities and careers
C5.- Most people in my country consider it unacceptable to be an entrepreneur
C6.- In my country, entrepreneurial activity is considered to be worthwhile, despite the risks
C7.- My colleagues’ value entrepreneurial activity above other activities and careers
C8.- It is commonly thought in my country that entrepreneurs take advantage of others

D. How do you rate yourself on the following entrepreneurial abilities/skill sets? Indicate from 1 (very difficult) to 7 (very easy).

D1.- Recognition of opportunity
D2.- Creativity
D3.- Problem solving skills
D4.- Leadership and communication skills

How do you rate yourself on the following entrepreneurial abilities/skill sets? Indicate from 1 (strongly disagree) to 7 (strongly agree).

D5.- Development of new products and services

How do you rate yourself on the following entrepreneurial abilities/skill sets? Indicate from 1 (very difficult) to 7 (very easy).

D6.- Networking skills, and making professional contacts

E. Have you ever seriously considered becoming an entrepreneur? □ Yes □ No

Entrepreneurial knowledge
5. Do you personally know an entrepreneur or entrepreneurs? □ Yes □ No

5.a. If you answered yes to the previous question, indicate the relationship to them.

□ A family member
□ A friend
□ Employer / Manager
□ (Other). Please specify:

5.a.1. In regard to the entrepreneur(s) that you know indicate to what extent do you know about
his/her activity as entrepreneur? Evaluate from 1 (none at all) to 5 (a great deal).

- To what extent do you know about his/her activity as entrepreneur?  
- To what extent may he/she be considered a ‘good entrepreneur’?

6. - Indicate your level of knowledge about business associations, support bodies and other sources of assistance for entrepreneurs from 1 (none at all) to 5 (a great deal).

- Private associations  
- Public support bodies (e.g. Business Link, etc.)  
- Specific training for young entrepreneurs  
- Loans in especially favourable terms  
- Technical aid for business start-ups  
- Business centres

Entrepreneurial objectives

7. If you ever started a business, what size would you like it to ultimately achieve (number of employees)?

- Self-employed (No employees)  
- Micro-enterprise (Up to 10 employees)  
- Small enterprise (10 to 50 employees)  
- Medium Enterprise (50 to 250 employees)  
- Large enterprise (250 employees +)

8. For the following questions to what extent do you consider the following factors to contribute to entrepreneurial success? Indicate from 1 (none at all) to 5 (a great deal).

- Competing effectively in world markets  
- Reaching a high level of income  
- Doing the kind of job, I really enjoy  
- Achieving social recognition  
- Helping to solve the problems of my community  
- Keeping the business alive  
- Keeping a path of positive growth

9. How important would it be for you to continuously develop and grow your business?
10. For the following questions to what extent would you use the following strategies to expand your business? Indicate from 1 (none at all) to 5 (a great deal).

- Regularly introduce new services for my clients
- Regularly introduce new processes or systems into the business
- Developing research and development projects
- Planning the different areas of the business in detail
- Reaching cooperative agreements or partnerships with other businesses
- Offering specialized training for employees
- Growing your business (personnel, premises, etc.)

This is the end of the survey. Thank you so much for agreeing to participate in this project inquiry. The second step in this project is your attendance at a business workshop. Please indicate below if you are interested in the second phase of this project. If you select yes and you meet the project criteria, you will be contacted on date, time and location of the business workshop. Again, thank you for your time and agreeing to participate.

☑ Yes
☑ No
☐ Other (please specify)

Please complete the information below so that I may contact you for your participation in the business workshop. Your cooperation is greatly appreciated. Mahalo!

Name
Company
Address
Address 2
City/Town
State/Province
ZIP/Postal Code
Country
Email Address
Phone Number
Appendix E

Dear Kelly,
Thank you for your interest in our work.
Please find attached 3 versions of the EIQ and the papers in which they were used.
The first versions (EIQ2 and EIQ3) are designed as aggregated scales. The papers in which they were used are Liñán & Chen (2009) and Liñán, Urbano & Guerrero (2011), respectively.
More recently, within the VIE Project (http://institucional.us.es/vie), we have developed a newer and more refined questionnaire. In it, Personal Attitude and Subjective Norm has been measured by pondering personal beliefs with the relevance attached to each belief.
I attached this newer version of the questionnaire (Original in Spanish, the translation made by ourselves), and one of the papers in which it was used (Liñán, Moriano & Jaén, 2016).
You can use them as you feel is best, but do please acknowledge your source.
Best regards,

Francisco Liñán
Professor in Entrepreneurship and Innovation
francisco.linan@anglia.ac.uk
Universidad de Sevilla. Depto. Economia Aplicada I. Sevilla. flinan@us.es
https://www.researchgate.net/profile/Francisco_Linan
https://es.linkedin.com/in/franciscolinan
Appendix F

Consent to be Videotaped/Interviewed

University of Hawai'i
Consent to Participate in a Practice Inquiry Project
Jeanette Ayers-Kawakami, DNP, RN, Principal Investigator
Project title: Promoting entrepreneurship among APNs in Hawaii

Aloha! My name is Kelly Green and you are invited to take part in a Practice Inquiry Project (PIP). I am a graduate student at the University of Hawai'i at Hilo in the Doctoral of Nursing Program. As part of the requirements for earning my doctoral degree, I am doing a project inquiry.

What am I being asked to do?
If you agree to participate in this project, I would like to invite you to participate on a panel of APNs entrepreneurial experts and interview you. During the interview you will be videotaped and following the session will participate in a question and answer opportunity. This will allow those in attendance at the workshop to gain valuable information from you to inspire them about entrepreneurial opportunities.

Taking part in this project is your choice.
Your participation in this project is entirely voluntary. You may stop participating at any time. If you stop being in the project, there will be no penalty or loss to you. Your choice to participate or not participate will not affect your rights in the UH Nursing Programs.

Why is this project being done?
The purpose of my project is to promote entrepreneurship among advanced practice nurses through business education to help fill the primary care gap in underserved rural and urban areas. The long-term goal is to also implement the same educational curriculum into the UH Hilo School of Nursing to promote entrepreneurship for future undergraduate and graduate nursing students. I am asking you to participate because as an entrepreneur you can be a role model for others and inspire future nurses to be entrepreneurs in the future.

What will happen if I decide to take part in this project?
The interview will consist of 30 open-ended questions. It will take 45 minutes to an hour. The interview questions will include questions like, “How did you get started in business?” “What made you think about starting your own business?” “What business planning did you use?” “Did you use any small business websites?” “If so, which ones?” “How long before you started making a profit?” “Are you a limited liability corporation?” “How many employees do you have now?” “How many initially?” “Who does your job descriptions?” “Who does your payroll?” “Who does your recruitment and hiring process?” “Do you have an orientation process for all new hires?” “Are you accredited with CMS and The Joint Commission?” “What services do you provide at your practice?” “How do you market your clinic?” “How do you store patient data?” “How do you keep all patient information secured?” “Do you have electronic medical records (EMR)?” “How did you first acquire your clientele?” “How many clients do you see monthly?” Or daily on the average?” “What is your fixed cost?” “Labor cost?” “Supplies?”
“Equipment needs?” "Do you utilize any leased services?” "How is billing from government entities accomplished?” "How do you determine customer satisfaction for your clientele?” "Anything we have not mentioned that you want to discuss?” "Any lessons learned you want to share?”

Only those (20) participating in the workshop, you, two other panel experts, myself and the person videotaping the interview will be present. With your permission, I would like to interview you and the other panel experts while videotaping. The final videotaping will be utilized as a training tool for further educational opportunities to be used at the University of Hawaii at Hilo, School of Nursing. You will be one of three on the panel of experts.

**What are the risks and benefits of taking part in this project?**
I believe there is little risk to you for participating in this project. You may become stressed or uncomfortable answering any of the interview questions or discussing topics with me during the interview. If you do become stressed or uncomfortable, you can skip the question or take a break. You can also stop the interview, or you can withdraw from the project altogether.

There will be no direct benefit to you for participating in this interview. The results of this project may help motivate other nurses to think about entrepreneurship to provide quality of health care to Hawaii communities and promote business education to benefit future nursing students.

**Privacy and Confidentiality:**
If after the videotaping, you would like to remain confidential we could hide your true-identity and keep your identity anonymous. Any part of the videotape that you wish not to be made public can be edited and revised to suit your wishes. Once the video is edited and made final, it may be used as a training tool to be utilized in future educational opportunities.

After the workshop is completed the video may be used as an educational tool at the University of Hawaii at Hilo and will be used by the University of Hawaii at Hilo School of Nursing. Other agencies that have legal permission have the right to review the video. The University of Hawai‘i Human Studies Program has the right to review videotaping for this project inquiry.

**Compensation:**
You will receive a $20 gift certificate to either Starbucks or Jamba Juice for your time and effort in participating in this practice inquiry project.

**Future Research Studies:**
The data from the videotaping will not be used or distributed for future studies.

**Questions:**
If you have any questions about this study, please call or email me at 619-672-2335 or kgreen@hawaii.edu. You may also contact my advisor, Dr. Jeanette Ayers-Kawakami, at ayersjea@hawaii.edu. You may contact the UH Human Studies Program at 808.956.5007 or uhirb@hawaii.edu, to discuss problems, concerns and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research protocol. Please
visit http://go.hawaii.edu/jRd for more information on your rights as a participant.

If you agree to participate in this project, please sign and date this signature page and return it to: Kelly Green at kgreen2@hawaii.edu.

Keep a copy of the informed consent for your records and reference.

**Signature(s) for Consent:**

I give permission to join the project entitled, “Promoting Entrepreneurship among APNs in Hawaii.”

Please initial next to either “Yes” or “No” to the following:

- [ ] Yes  - [ ] No  I consent to being videotaped for the educational portion of this project inquiry.

**Name of Participant (Print):** __________________________________________________

**Participant’s Signature:** _____________________________________________________

**Signature of the Person Obtaining Consent:** ________________________________

**Date:** __________________________  Mahalo!
### Appendix G

**Codebook: Demographic Data**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Variable</th>
<th>Type</th>
<th>Format (Permissible values)</th>
<th>Recodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 What is your gender</td>
<td>sex</td>
<td>nominal and dichotomous</td>
<td>Female-1 Male-2 Other-3</td>
<td></td>
</tr>
<tr>
<td>2.1 What is your age</td>
<td>age</td>
<td>ordinal</td>
<td>Actual age in years</td>
<td></td>
</tr>
<tr>
<td>3.1 What is the highest level of school</td>
<td>educa</td>
<td>ordinal</td>
<td>Less than high school degree=1, GED=2, Some college but no degree =3, Associated degree=4, Baccalaureate degree=5, Grad degree=6, Other=7</td>
<td></td>
</tr>
<tr>
<td>4.1 How long have you worked as a RN?</td>
<td>Rnyrs</td>
<td>ordinal</td>
<td>0-5=1, 6-10=2, 11-15=3, 16-20=4, 21-25=5, 26-30=6, 30 and over=7</td>
<td></td>
</tr>
<tr>
<td>5.1 Which of the following personal characteristics/qualities applies to you?</td>
<td>charac</td>
<td>ordinal</td>
<td>self-image=1, risk taker=2, creative=3, visionary=4, self-discipline=5, Indep/goal oriented=6, deal with failure/ambiguity=7, integrity, patience, enthu=8, organized/planner=9, proactive=10, other=11, None of the above=99</td>
<td></td>
</tr>
<tr>
<td>6.1 Select the areas you are interested in learning more information about?</td>
<td>bus</td>
<td>ordinal</td>
<td>Acct=1, Market=2, MGT=3, Insurance=4, Legal=5, Business plan=6, Budget=7, Funding=8, Billing=9, Computer=10, Contractual=11, Other=12</td>
<td></td>
</tr>
<tr>
<td>7.1 If you had the opportunity to participate in a workshop designed to educate you on how to be an entrepreneur, would you attend?</td>
<td>shop</td>
<td>ordinal</td>
<td>Most likely no=0, Maybe=1, Absolutely=2</td>
<td></td>
</tr>
<tr>
<td>8.1 What is your employment status, are you currently?</td>
<td>employ</td>
<td>ordinal</td>
<td>Employed for wages=1, Self-employed=2, Out of work for more than 1 year=3, Out of work for less than 1 year =4, A student=5, A homemaker=6, Retired=7, unable to work=8, Refused=99</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------</td>
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<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>9.1 Would you be interested in participating in an entrepreneurship research project?</td>
<td>proj</td>
<td>nominal</td>
<td>Yes=2 No=1</td>
<td></td>
</tr>
</tbody>
</table>
Appendix H

Codebook: Entrepreneurial Intention Questionnaire

<table>
<thead>
<tr>
<th>Questions</th>
<th>Variable</th>
<th>Type</th>
<th>Format (Permissible values)</th>
<th>Recodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A01.-Starting a firm and keeping it viable would be easy for me</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A02.- A career as an entrepreneur is totally unattractive to me</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A03.- My friends would approve of my decision to start a business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A04.- I am ready to do anything to be an entrepreneur</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A05.- I believe I would be completely unable to start a business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A06.-I will make every effort to start and run my own business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A07.- I am able to control the creation process of a new business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A08.- My immediate family would approve of my decision to start a business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
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</tr>
<tr>
<td>A09.- I have serious doubts about ever starting my own business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A10.- If I had the opportunity and resources, I would love to start a business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A11.- My colleagues would approve of my decision to start a business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
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<tr>
<td>A12.- Amongst various options, I would rather be anything but an entrepreneur</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A13.- I am determined to create a business venture in the future</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A14.- If I tried to start a business, I would have a high chance of being successful</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A15.- Being an entrepreneur would give me great satisfaction</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A16.- It would be very difficult for me to develop a business idea</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A17.- My professional goal is to be an entrepreneur</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A18.- Being an entrepreneur implies more advantages than disadvantages to me</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A19.- I have a very low intention of ever starting a business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>A20.- I know all about the practical details needed to start a business</td>
<td>Entrepreneurial Activity</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>B1.- Employee</td>
<td>Attraction toward/Work Options</td>
<td>ordinal</td>
<td>1 (Not at all desirable) to 5 (Extremely desirable)</td>
<td></td>
</tr>
<tr>
<td>B2.- Entrepreneur</td>
<td>Attraction toward/Work Options</td>
<td>ordinal</td>
<td>1 (Not at all desirable) to 5 (Extremely desirable)</td>
<td></td>
</tr>
<tr>
<td>C1. My immediate family values entrepreneurial activity above other activities and careers</td>
<td>Values society put on entrepreneurship</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>C2.- The culture in my community is highly</td>
<td>Values society put on entrepreneurship</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
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<tr>
<td>favorable towards entrepreneurial activity</td>
<td></td>
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<tr>
<td>C3. – The entrepreneur’s role in the economy is generally undervalued in my community</td>
<td>Values society put on entrepreneurship</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>C4. – My friends’ value entrepreneurial activity above other activities and careers</td>
<td>Values society put on entrepreneurship</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>C5. – Most people in my community consider it unacceptable to be an entrepreneur</td>
<td>Values society put on entrepreneurship</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>C6. – In my community, entrepreneurial activity is considered to be worthwhile, despite the risks</td>
<td>Values society put on entrepreneurship</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>C7. – My colleagues’ value entrepreneurial activity above other activities and careers</td>
<td>Values society put on entrepreneurship</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>C8. – It is commonly thought in my community that entrepreneurs take advantage of others</td>
<td>Values society put on entrepreneurship</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>D1. – Recognition of opportunity</td>
<td>Entrepreneurial abilities/skill sets</td>
<td>ordinal</td>
<td>1 (very difficult) to 7 (very easy)</td>
<td></td>
</tr>
<tr>
<td>D2. – Creativity</td>
<td>Entrepreneurial abilities/skill sets</td>
<td>ordinal</td>
<td>1 (very difficult) to 7 (very easy)</td>
<td></td>
</tr>
<tr>
<td>D3. – Problem solving skills</td>
<td>Entrepreneurial abilities/skill sets</td>
<td>ordinal</td>
<td>1 (very difficult) to 7 (very easy)</td>
<td></td>
</tr>
<tr>
<td>D4. – Leadership and communication skills</td>
<td>Entrepreneurial abilities/skill sets</td>
<td>ordinal</td>
<td>1 (very difficult) to 7 (very easy)</td>
<td></td>
</tr>
<tr>
<td>D5. – Development of new products and services</td>
<td>Entrepreneurial abilities/skill sets</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>D6. – Networking skills, and making professional contacts</td>
<td>Entrepreneurial abilities/skill sets</td>
<td>ordinal</td>
<td>1 (Strongly disagree) to 7 (Strongly agree)</td>
<td></td>
</tr>
<tr>
<td>E. Have you ever seriously considered becoming an entrepreneur?</td>
<td>Entrepreneurial abilities/skill sets</td>
<td>nominal</td>
<td>2-(YES)/1-(NO)</td>
<td></td>
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<tr>
<td>5.-Do you personally know an entrepreneur or entrepreneurs?</td>
<td>Entrepreneurial knowledge</td>
<td>nominal</td>
<td>2-(YES), 1-(NO)</td>
<td></td>
</tr>
<tr>
<td>5.a.-If you answered yes to the previous question, indicate the relationship to them.</td>
<td>Entrepreneurial knowledge</td>
<td>ordinal</td>
<td>4 (A family member), 3 (A friend), 2 (Employer/Manager), 1 (Other). Please specify)</td>
<td></td>
</tr>
<tr>
<td>5.a.1.-In regard to the entrepreneur(s) that you know indicate to what extent do you know about his/her activity as an entrepreneur?</td>
<td>Entrepreneurial knowledge</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>5.b.1.-In regard to the entrepreneur(s) that you know indicate to what extent may he/she be considered a “good entrepreneur?”</td>
<td>Entrepreneurial knowledge</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>6.a.-Indicate your level of knowledge about business associations, support bodies and other sources of assistance for entrepreneurs- Private associations</td>
<td>Entrepreneurial knowledge: Sources of assistance for entrepreneurs</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>6.b.- Indicate your level of knowledge about business associations, support bodies and other sources of assistance for entrepreneurs- Public support bodies (e.g. Business Links, etc.)</td>
<td>Entrepreneurial knowledge: Sources of assistance for entrepreneurs</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>6.c.- Indicate your level of knowledge about business associations, support bodies and other sources of assistance for entrepreneurs- Specific training for young entrepreneurs</td>
<td>Entrepreneurial knowledge: Sources of assistance for entrepreneurs</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>6.d.</td>
<td>Indicate your level of knowledge about business associations, support bodies and other sources of assistance for entrepreneurs- Loans in especially favorable terms</td>
<td>Entrepreneurial knowledge: Sources of assistance for entrepreneurs</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
</tr>
<tr>
<td>6.e.</td>
<td>Indicate your level of knowledge about business associations, support bodies and other sources of assistance for entrepreneurs- Technical aid for business start-ups</td>
<td>Entrepreneurial knowledge: Sources of assistance for entrepreneurs</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
</tr>
<tr>
<td>6.f.</td>
<td>Indicate your level of knowledge about business associations, support bodies and other sources of assistance for entrepreneurs- Business centers</td>
<td>Entrepreneurial knowledge: Sources of assistance for entrepreneurs</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
</tr>
<tr>
<td>7.</td>
<td>If you ever started a business, what size would you like it to ultimately achieve (number of employees)?</td>
<td>Entrepreneurial objectives</td>
<td>ordinal</td>
<td>0-(Self-employed- no employees), 1-(Micro-enterprise- up to 10 employees), 2-(Small enterprise- 10 to 50 employees), 3- (Medium enterprise (50 to 250 employees), 4- (Large enterprise- 250 employees +)</td>
</tr>
<tr>
<td>8.a.</td>
<td>To what extent do you consider the following factors to contribute to entrepreneurial success? -Competing effectively in world markets</td>
<td>Entrepreneurial objectives</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
</tr>
<tr>
<td>8.b.</td>
<td>Reaching a high level of income</td>
<td>Entrepreneurial objectives</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
</tr>
<tr>
<td>8.c.</td>
<td>Doing the kind of job I really enjoy</td>
<td>Entrepreneurial objective</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
</tr>
<tr>
<td>8.d.- Achieving social recognition</td>
<td>Entrepreneurial objective</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
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<tr>
<td>8.e.- Helping to solve the problems of my community</td>
<td>Entrepreneurial objective</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>8.f.- Keeping the business alive</td>
<td>Entrepreneurial objective</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>8.g.- Keeping a path of positive growth</td>
<td>Entrepreneurial objective</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>9. How important would it be for you to continuously develop and grow your business?</td>
<td>Entrepreneurial objective</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>10.a.- Regularly introduce new products/services for my clients</td>
<td>Strategies to expand your business</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>10.b.- Regularly introduce new processes or systems into the business</td>
<td>Strategies to expand your business</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>10.c.- Developing research and development projects</td>
<td>Strategies to expand your business</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>10.d.- Planning the different areas of the business in detail</td>
<td>Strategies to expand your business</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>10.e.- Reaching cooperative agreements or partnerships with other businesses</td>
<td>Strategies to expand your business</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>10.f.- Offering specializing training for employees</td>
<td>Strategies to expand your business</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
</tr>
<tr>
<td>10.g.- Growing your business (personnel, premises, etc.).</td>
<td>Strategies to expand your business</td>
<td>ordinal</td>
<td>1 (None at all) 5 (A great deal)</td>
<td></td>
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<tr>
<td>11. Age:</td>
<td>Personal Data</td>
<td>continuous</td>
<td>Age (in years)</td>
<td></td>
</tr>
<tr>
<td>12. Gender:</td>
<td>Personal Data</td>
<td>nominal</td>
<td>2-(Male), 1- (Female), 3-(Other)</td>
<td></td>
</tr>
<tr>
<td>13.-What level of education have you</td>
<td>Personal Data</td>
<td>ordinal</td>
<td>1-(primary), 2-(secondary), 3-(Vocational training), 4-(University), 5-(other)</td>
<td></td>
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<tr>
<td>Question</td>
<td>Personal Data</td>
<td>Type</td>
<td>Categories</td>
<td></td>
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<tr>
<td>14. What level of education have your parents achieved? - Father</td>
<td>Personal Data</td>
<td>ordinal</td>
<td>1-(primary), 2-(secondary), 3-(Vocational training), 4-(University), 5-(other)</td>
<td></td>
</tr>
<tr>
<td>15. What are their present occupations? - Father</td>
<td>Personal Data</td>
<td>ordinal</td>
<td>5-(Private sector employee), 4-(Public sector employee), 3-(Self-employed or entrepreneur), 2-(Retired), 1-(Unemployed), 0-(Other)</td>
<td></td>
</tr>
<tr>
<td>15.a. What are their present occupations? - Mother</td>
<td>Personal Data</td>
<td>ordinal</td>
<td>5-(Private sector employee), 4-(Public sector employee), 3-(Self-employed or entrepreneur), 2-(Retired), 1-(Unemployed), 0-(Other)</td>
<td></td>
</tr>
</tbody>
</table>