Addressing Wellbeing in Novice Nurse Practitioners: A DNP Project Report

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Abstract

Nurse practitioners (NPs) provide care for more complex patients than ever, and novice nurse practitioners are at increased risk of burnout. NP residency programs are increasing in popularity for new graduate nurse practitioners to ease the transition in to full professional practice and address provider wellbeing. This quality improvement project aimed to understand how participation in a NP residency program related to wellbeing. The scores from a Mini Z 2.0 survey conducted at a Federally Qualified Health Center in the Southwestern United States were compared between NPs, Certified Nurse Midwives, and Psychiatric NPs, with less than five years of experience who completed a residency (n= 12) and those who did not (n= 9). Neither the residency group nor the no-residency group met the Joyful Workplace standard, but the residency group had a mean score of 31.7 and the non-residency group had a mean score of 29.1. Neither group met the Supportive Work Environment standard or the Reasonable Work Pace and Manageable EHR Stress standard. However, a greater difference in means between the two groups was noted with the residency group scoring 2.5 points higher in Supportive Work Environment. Themes from both groups in the open-ended question on the Mini Z survey included concerns about workload demands, charting difficulties, and interprofessional difficulties. There appears to be an advantage in participating in a NP residency, especially in having a supportive work environment, but there are common struggles for novice NPs regardless of residency completion, such as workload and charting demands.

Keywords: nurse practitioner residency, nurse practitioner wellbeing, nurse practitioner burnout

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Addressing Wellbeing in Novice Nurse Practitioners: A DNP Project Report

Nurse practitioners (NPs) are providing care for increasing numbers of complex patients. The growing demands and stresses on NPs can negatively impact their wellbeing. In recent years, NP residencies have been developed to provide new graduates with the skills they need to prevent stress from impairing their wellbeing. The relationship between participation in an NP residency and wellbeing is explored in this Doctor of Nursing Practice (DNP) report.

Background and Significance

The United States continues to face a growing need for primary care providers, which can be addressed by employing NPs. The National Academy of Medicine's The Future of Nursing 2020-2030 report (2021) emphasizes the critical role that NPs play in meeting the increasing needs of primary care providers, especially in rural and underserved populations. NPs can help fill the need for the growing shortage of physicians that leaves many individuals without access to essential care (Government Accountability Office, 2019). However, NPs are under increased demand as they fill in the gaps and see more complex patients than ever. New NPs are at risk of decreased wellbeing due to increased workplace stress related to the many difficulties of transitioning to independent practice (Cheng et al., 2022; Sargent & Olmedo, 2013). This stress can lead to burnout and even cause NPs to leave the profession. Participation in a post-graduate residency program has been proposed as one solution to novice NP stress.

The Institute of Medicine's (IOM) Future of Nursing report from 2011 noted that more emphasis needs to be placed on easing the transition from school to practice for nurses to prevent the turnover of nurses. The IOM (2011) recommends the creation of residency programs for both registered nurses and advanced practice registered nurses (APRN) both within hospitals and outside of the acute care setting. The IOM also reaffirms the creation of NP residencies and its

benefits to new graduates in their 2016 follow-up report "Assessing Progress on the Institute of Medicine Report The Future of Nursing." There is a clear call for NP residency programs.

Purpose and Rationale

The purpose of this project is to explore how residencies impact the wellbeing of NPs. Given the critical need for primary care providers nationwide, it is essential to have providers who feel adequately prepared and supported.

Problem Description

NPs play a significant role in filling the primary care provider gaps in the United States. For many patients with complex needs NPs are their primary care providers. While residencies are not required for NP entry to practice, they have been shown to provide wellbeing support and assistance for role transition.

Nurse Practitioners

NPs play an essential role in the success of healthcare systems, filling the gaps in the shortage of primary care providers. There is also a misdistribution of providers which is heightening this shortage as most physicians work in urban settings (National Academy of Medicine, 2021). NPs help fill these gaps. (National Academy of Medicine, 2021). Having NPs who practice at the highest level according to their education and training is critical in ensuring millions of people have access to primary care (National Academy of Medicine, 2021). The Healthy People 2030 initiative AHS-R01 involves increasing the accessibility and quality of care that primary care clinicians provide (Office of Disease Prevention and Health Promotion, n.d.).

Changes in the demographics of the United States population may add challenges among providers. 21% of the US population will be 65 and older in 2030, and mental health comorbidities are on the rise (National Academy of Medicine, 2021). Aging populations present

with complex care needs and more chronic conditions. The increase in chronic conditions, mental health concerns, and an aging population are all considerations for NPs working in primary care.

Nurse Practitioner Residency Programs

NP residencies are optional for graduates from accredited programs, yet they have increased in popularity. In the Future of Nursing report and in the follow-up report, the IOM (2011, 2016) supports the development of NP residency programs to assist in the transition into practice. Studies have shown that NP residency programs allow for an easier transition into practice for new NPs (Faraz, 2019; Hart et al., 2022). Also, residencies can assist new NPs in finding career satisfaction and understanding their roles in meeting the needs of complex patients and healthcare systems (Hicks et al., 2017). Gaudio & Borenstein (2018) describe how an emergency NP residency grew from the difficulties of on-the-job learning in a fast-paced environment. There are many different reasons for the initiation of NP residencies.

NP fellowships are a comparable option but generally prepare NPs for more specialized practice. NP fellowships can help bridge the gaps in knowledge in specialty areas for NPs new to the area of focus (Alencar et al., 2018). Comola and Hande (2021) found in a small urologic NP fellowship that their sample had increased productivity levels after participating in the training program. NP residencies and fellowships allow for new NPs to have a supported entry into the profession.

No Residency Program

Currently, most NPs enter the workplace without completing a residency program. From 2020 to 2021, approximately 36,000 NPs graduated from academic programs (American Association of Nurse Practitioners [AANP], 2022). Leading organizations within the NP

profession represented in the NP Roundtable (2019) affirm that NPs are competent providers upon graduation from accredited schools and that post-graduate residency programs should remain optional. The NP Roundtable also notes that requiring post-graduate residency programs could hinder affordable care access for patients. Furthermore, NPs directly entering the profession remains standard practice, and residencies remain an optional consideration.

Provider Wellbeing

New NPs face more challenges as they transition into becoming independent providers. The National Academy of Medicine has set goals to improve clinician wellbeing and resilience (2022). They define burnout as emotional exhaustion that can adversely affect the clinician, patient, and healthcare system. This organization also recognizes that it is difficult for clinicians to provide the best care for their patients if they are not caring for themselves. They seek to improve clinician wellbeing through evidence-based strategies and have developed a national plan (National Academy of Medicine, 2022). New NPs are particularly vulnerable to burnout. A survey of new graduate nurses in Nebraska showed that they face increased acuity in patients' medical and social situations and have felt the need for more knowledge of the social services available to patients (Gonzales et al., 2021). Park et al. (2021) found that NPs who participated in residency training had increased job satisfaction and were less likely to have the desire to leave their current position. NP residencies could be essential in combating clinician burnout and promoting wellbeing.

Residencies and Wellbeing

A growing number of new NPs are interested in pursuing postgraduate residencies. Large organizational bodies have weighed in on recommendations creating NP residencies. New graduate NPs often express concern about transitioning from student to practitioner, with many

challenges faced during transition. NP residencies can help alleviate that role strain. In addition, provider wellbeing is essential for quality patient care. Easing the transition into being a NP could increase provider wellbeing and prevent new graduate NP burnout.

Internal Data

A Federally Qualified Health Center (FQHC) in the Southwestern United States has found that NPs score lower on their internal provider wellbeing surveys than other providers within their organization. Two reasons NPs score lower include their difficulties with managing a vast number of complex patients and the extensive charting, which often impedes their time away from work. The residency program at this FQHC equips new NPs with the clinical and resiliency skills to work with vulnerable populations. The population at this FQHC includes many medically underserved individuals from diverse backgrounds. This issue is important to this organization because it can help ensure that their NPs feel equipped to manage the challenges of their patient populations.

PICOT Question

The literature review guided the clinically-related PICO question: “Does participation in a nurse practitioner residency program versus no residency program increase wellbeing in nurse practitioners?”

Evidence Synthesis

The evidence uncovered from the literature review serves as the foundation for the project. The search process and evidence synthesis led to a compelling case for exploring the relationship between NP residencies and wellbeing.

Search Strategy

To answer the PICO question, a thorough literature search of the most current evidence was completed. Three databases were selected for their relevance to the topics and were extensively searched - PubMed, CINAHL, and PsychINFO.

Keyword Selection

Many keywords and combinations were utilized in the search to answer the components of the PICO question. The main keywords included: *nurse practitioner, residency, and well-being*. Synonyms for each of these concepts were utilized in different combinations or with Boolean phrases to expand the search. Other terms for nurse practitioner included *NP, advanced practice registered nurse, and APRN.* Residency was expanded to include the terms *postgraduate training or program and fellowship*. The outcome wellbeing was expanded to include *job satisfaction, burnout,* and *transition to practice*.

Initial and Final Search Yields

Numerous searches were completed using combinations of the keywords and synonyms in PubMed, CINAHL, and PsychInfo. All searches included a limit placed for publications within the last five years. Prior to the systematic searching, extensive exploratory searches were performed in each of the three databases to determine what combinations of the keywords would reveal.

The initial search in PubMed included *"nurse practitioner or NP or advanced practice registered nurse or APRN*" and "*residency or fellowship or postgraduate training or postgraduate program" and "well-being or job satisfaction or burnout or transition to practice*" which yielded 1038 results. Finally, a similar search was conducted to narrow the results down where *"well-being*" was spelled *"wellbeing*," which yielded 123 results. It was then decided to replace wellbeing with the unhyphenated spelling for the more comprehensive search line since

it captured the outcome better. This same strategy was applied to the other two databases searched- CINAHL and PsychInfo. The comprehensive search line *"nurse practitioner or NP or advanced practice registered nurse or APRN" and "residency or fellowship or postgraduate training or postgraduate program" and "wellbeing or job satisfaction or burnout or transition to practice*" was then searched in the CINAHL database, which yielded 42 results. The same comprehensive line was used in PyschInfo and yielded just 11 results for the final search. After reading through the titles and several abstracts from these searches, ten studies were selected for review. This included one systematic review, three correlational studies, two mixed-method studies, one cross-sectional study, one descriptive-correlational study, and two descriptive studies. Relevant research studies were selected to accumulate the highest level of evidence.

Limitations, Inclusion, and Exclusion Criteria

Several criteria and limitations existed in this search. The inclusion criteria for the articles to be selected included studies in English published from 2018-2023 and were primary research studies. Studies that examined registered nurse residency programs were excluded. Numerous articles were focused on curriculum development that were also excluded from this selection as they do not answer the PICOT question effectively. Other literature types, including doctoral dissertations and government documents, were reviewed but not included in the synthesis of evidence.

Critical Appraisal and Synthesis of Evidence

Before inclusion, all articles were evaluated for validity and applicability to the PICO question and clinical practice. Each article was appraised using the concepts presented in the Rapid Critical Appraisal tools by Melnyk and Fineout-Overholt (2019). Basic article information was summarized in Table A1, and the relevant evidence was synthesized in Table A2 (see

Appendix A Tables A1 and A2). Overall, the quality and strength of the articles selected were fair for answering the PICO question. Many papers were descriptive or cohort studies, studying postgraduate NP training programs already in place in various primary care and acute care settings. The benefit of this was that it permitted direct insight into the value these participants attribute to their experiences in NP residency programs. Another strength of these studies is that they examined similar outcomes. Emphasis is placed on role transition and perception of capability and confidence during the new graduate period. In addition, career concerns like job satisfaction, the ability to perform clinical skills, and autonomous practice were assessed.

However, it should be noted that several of these articles' weakness is the lack of valid instruments. Many of the articles used author-created tools and needed to report more extensive validity and reliability of the tools. In addition, several of the studies lacked statistical rigor and reported mostly descriptive statistics. The studies were also relatively homogenous- the demographics primarily were women, Caucasian, and in their thirties. Most of the studies involved self-reported data, so there was a potential for bias in reporting. However, most authors came from academic institutions and personally claimed no bias.

Overall, the studies were valid and reliable as they were open about their findings and pointed out as appropriate their limitations. These considerations made for the best evidence to answer the PICO question.

Discussion

Evidence indicated that participation in a NP residency and its many components contributed to a person's wellbeing. While wellbeing was not explicitly studied, several components that can be thought to contribute to wellbeing were.

Most of the studies directly observed the impact of NP residencies on various outcomes related to role transition and workplace satisfaction. Some studies looked at the themes and perceptions of the new graduate NP transition period and what could be improved upon with postgraduate training. The additional training or the need for additional training would be helpful in job satisfaction and acquiring more clinical skills. In addition, postgraduate training helped improve confidence, preparedness, and gave a better understanding of the NP role and autonomy.

There is evidence that participation in NP residencies does decrease the turmoil of the new graduate period. However, additional research is needed to connect how these programs affect patient outcomes. In addition, healthcare system stakeholders must be convinced of the financial benefits of investing in postgraduate training programs for new graduate NPs. The comprehensive literature search showed there are many positive effects of participating in a NP residency. Further information can be gathered about the relationship specifically between wellbeing and residencies which created the foundation for this DNP project.

Theoretical and Implementation Frameworks

Two frameworks served to guide the development and implantation of this project. The Job Demands-Resources Theory was the theoretical framework selected, and the Plan-Do-Study-Act served as the implementation framework. These two frameworks were essential in guiding the methodology and structure of the project.

Theoretical Framework

Examining NP wellbeing was done through the theoretical framework of the Job Demands-Resources Theory (JD-R). This theory was developed by Demerouti et al. (2001). They attribute burnout to two different but connected concepts- job demands and job resources. Extensive job demands lead to worker exhaustion (Demerouti et al., 2001). A lack of job

resources leads to challenges in completing tasks and causes feelings of withdrawal (see Figure B1 in Appendix B). The authors theorize that the two factors, separately and in combination, also heighten the burnout experience.

This theory applies to NPs and wellbeing. First, it defines specific causes of burnout common across healthcare settings. Healthcare settings are seeing diminishing resources, often coupled with the increase in work demands. Also, it describes situations that NPs may experience in their practice that could contribute to feelings of burnout. Time pressure, workload, and the physical environment are several elements defined in the JD-R theory (Demerouti et al., 2001). These elements are familiar to NPs on a regular basis, for example when a patient's needs become more complex and computer work, including charting and inbox demands, also increases. The goal of examining wellbeing is to have less burnout and to identify measures that can be in place to prevent burnout. Understanding the fundamentals of burnout is essential in the prevention and resolution of burnout.

Implementation Framework

A quality improvement framework was used in this project to see if a NP residency improves wellbeing. The Associates in Process Improvement (2024) Model for Improvement, or Plan-Do-Study-Act (PDSA), was utilized to study further the concepts uncovered in the research (see Figure B2 in Appendix B). This quality improvement framework guided the development of this project. The “Plan” process entailed meeting with stakeholders to see what internal processes needed improvement. An additional step during the planning phase included completing the comprehensive literature review. The “Do” component involved the organization’s distribution of the surveys. The “Study” phase involved data analysis of the collected surveys. Lastly, the

"Act" portion involves disseminating the evidence to the stakeholders and organizational community.

Methods

The project explored the relationship between NP residencies and new NP wellbeing. Data from organization-wide wellbeing surveys was analyzed, and the information will be included with evidence-based recommendations for the project site's APRN residency program.

Ethical Considerations

The project's methodology was reviewed by faculty mentors and was granted exemption from the Arizona State University Institutional Review Board. Additionally, the project methods were reviewed and approved by the DNP project site's Quality Improvement department.

Three ethical principles guided this project: respect for persons, beneficence, and justice. Respect for persons centers on preserving an individuals' autonomy and fully disclosing a study's potential risks and benefits (Barrow et al., 2022). The project adhered to this principle by making sure participation is voluntary, time is given for participants to ask questions, and that participants may withdraw from the study at any time (Barrow et al., 2022). The organization recruited participants for voluntary participation in the survey. Beneficence ensures that participants are protected from harm or exploitation during the study and is often associated with the principle of nonmaleficence (Barrow et al., 2022). The project adhered to this principle by evaluating the benefits and risks to participants and ensuring that measures are in place to prevent any discomfort for the subjects (Barrow et al., 2022). This study has little risk for physical harm as it is a survey, but measures were taken to avoid exploitation. Justice is the final principle and ensures that all participants are treated fairly (Barrow et al., 2022). The project adhered to this principle by ensuring the privacy of the participants and keeping their identities

confidential and anonymous (Barrow et al., 2022). Specifically, the survey data was de-identified so that it cannot be traced back to an individual participant.

Setting and Stakeholders

The project occurred in a Federally Qualified Health Center (FQHC) in the southwestern United States. It is an organization that has many locations strategically located in medically underserved areas. Many specialties are offered to give patients comprehensive care in one setting. They offer many educational opportunities, including a Family Nurse Practitioner (FNP) residency program for new graduate NPs.

The stakeholders in this project included several administrators of the FNP residency and the organization. The first significant stakeholder was the Chief Wellness Officer for the organization, who oversees wellness initiatives for the organization. They could use the information from the project to learn how the NPs in the organization are faring and how to inform wellness policies better. The next stakeholder was the former program director for the FNP residency program. They are interested in the residency program's impact on provider wellbeing, and they are now training the current program director. They are also interested in learning if there is anything that can be improved upon in the current program curriculum. These key stakeholders also proved instrumental in the success of the project.

Another group of stakeholders was future and current FNP residency members. The information gathered in this project could potentially improve the FNP residency initiatives for provider wellbeing. Additionally, it could uncover the strengths or weaknesses of the current FNP residency program at the FQHC.

Participants and Recruitment

The participants of this project were APRNs currently working at the FQHC. The sample included: nurse practitioners, certified nurse midwives, and psychiatric nurse practitioners with five or less years of experience. The demographic question on the survey asking about profession does not specify family nurse practitioner, pediatric nurse practitioner, or adult-gerontology nurse practitioner within the nurse practitioner answer option. Participants from any residency were included; the specific APRN residency program was not asked about to protect participant privacy.

Participation in the project was voluntary, and the organization completed the recruitment. Participants consented to participation through agreeing to the survey terms and conditions which was designed by the American Medical Association (AMA) who hosted the survey. The terms and conditions included statutes that allowed for the use of de-identified information for research purposes by the AMA and authorized individuals.

Project Description: Planning and Timeline

The question evaluated was: Do NPs with five or less years of experience who complete a residency program have greater wellbeing scores than those who do not complete a residency?

An initial needs assessment of the organization revealed that NPs had been scoring lower on the annual provider wellbeing surveys. This need and the literature review led to a project to understand if participation in an APRN residency can affect wellbeing scores. The data collected to answer the evaluation question was the organization-wide survey which included demographics and Mini Z scores.

The project took place from spring 2023 to spring 2024. The project site collected participant consent and survey data in spring 2023. The wellbeing surveys were administered through the AMA website. The survey includes the Mini Z 2.0 tool (see Appendix C) and several

demographic questions. The organization added an additional demographic question asking if participants had completed an APRN residency that was attached to the spring 2023 survey. In summer 2023, after the survey completion window, the AMA compiled and sent the data to the organization. After IRB approval in summer 2023, the organization sent the de-identified data to be analyzed for the project. Additionally, the data was accessed through a Data Lab website hosted by the AMA to allow for more detailed filtering of data. Representatives from the AMA also sent additional statistical analysis to assist in analyzing the project data. The data sent from the AMA in the spreadsheet and in the additional statistical analysis was reviewed but not utilized for data analysis as the Data Lab had great flexibility to filter data.

The data analysis took place in fall 2023 and spring 2024. In spring 2024 the data was interpreted and compiled into a written project report. The data will be presented to various audiences in spring 2024 which includes the organization to assist in their quality improvement measures.

Data Collection Plan

The purpose of this project was to determine the impact of APRN residency participation on NP's wellbeing at an FQHC in the Southwestern US. The inputs, outputs, outcomes, and impacts of the proposed project were summarized in a Logic Model that guides design of the outcome measurement (see Appendix D). The tool used for this project was the Mini Z 2.0 survey that the organization distributes annually to its providers. The Mini Z 2.0 was included in a larger survey that asks many other demographic and other job-related satisfaction questions.

Demographic Information

Non-identifiable demographic information was collected for analysis. The demographics that were included for study in this project included: age, ethnicity, gender, profession, medical specialty, and participation in an APRN residency.

Mini Z Survey

The Mini Z survey is a tool that seeks to measure levels of provider wellbeing that was developed by Linzer et al. (2016). The survey was created to study clinician burnout among physicians, physician assistants, and nurse practitioners (Linzer et al., 2016). In addition, the authors sought to understand if there are patterns in the causes of clinician burnout (Linzer et al., 2016).

Several outcomes are measured in the Mini Z survey. Three significant outcomes studied include stress, burnout, and satisfaction (Linzer et al., 2020). The survey also looks at various aspects of the workplace environment, including the pace of work, home documentation time, proficiency of electronic medical record (EMR) use, sense of control at work, alignment of values with organizational supervisors, and time pressure during documentation (Linzer et al., 2016). Lastly, the survey asks an open-ended question asking participants to describe their stressors and if they can come up with potential solutions (Linzer et al., 2016). The Mini Z survey also has updated iterations, with the most recent survey being the Mini Z 2.0. This version updates the domain from EMR proficiency to EMR frustration (Linzer et al., 2021).

The survey features three scored outcomes including an overall Joyful Workplace experience and two subscales Supportive Work Environment and Reasonable Work Pace and Manageable EHR Stress (Linzer et al., 2020). A score of greater than 40 on the survey, out of 50 total points, indicates a Joyful Workplace (Linzer et al., 2020). Supportive Work Environment, the first subscale of the Mini Z survey, is indicated by a score of greater than 20 in the first five

of the questions of the Mini Z survey (Linzer et al., 2020). Reasonable Work Pace and Manageable EHR Stress, the second subscale of the Mini Z survey, is indicated by a score of 20 in question numbers 6-10 (Linzer et al., 2020).

The validity and reliability of the Mini Z 2.0 survey have been established for assessing several outcomes in clinicians (Linzer et al., 2021). Cronbach's alpha for the measures ranged between 0.75-0.83 (Linzer et al., 2021). This demonstrates the internal consistency, therefore reliability, of the survey. The authors also report convergent validity within the survey utilizing a model fit in their supplementary figures (Linzer et al., 2021). Therefore, this instrument has established reliability and validity. This survey will be essential to better understand the provider experience surrounding burnout.

The iteration of the Mini Z 2.0 survey utilized in the organization survey has several questions and question components that are reworded. There is a feature that allows for question equivalency and slight word changes in questions. Purva Shah (personal communication, November 10, 2023) a data analyst at the AMA, stated:

> In developing the Mini-Z 2.0, we incorporated a question equivalency feature to enhance user interaction within a survey context. This functionality allows for slight variations in how questions are phrased without altering the fundamental meaning or integrity of the question. This functionality has been designed to recognize and treat survey questions as equivalent, ensuring that users receive consistent and accurate responses regardless of minor differences in wording.

Therefore, the project utilized the Mini Z 2.0 survey, with several changes in question-wording explained by a question equivalency function which is in the process of validation. The questions

were reordered in the survey for the organization but matched to the original Mini Z 2.0 for data analysis.

Data Analysis Plan

The de-identified data was accessed primarily through the AMA Data Lab. A cross tab spreadsheet was originally provided by the organization but access to the AMA Data Lab was required for more detailed data filtering. The data was filtered to include only demographics of interest to the project, including age, ethnicity, professional role, medical specialty, and APRN residency participation. The data was also filtered to include only the study sample: nurse practitioners, certified nurse midwives, and psychiatric nurse practitioners and Mini Z results. Statistical analysis was completed using Intellectus Statistics™ (2024). Descriptive statistics were run. Additional data analyses, such as T tests, were unable to be conducted due to the lack of raw total scores and no standard deviation information available. The responses to the open-ended question of the Mini Z survey were systematically analyzed for themes.

Budget

The project utilizes minimal resources, with the estimated direct costs being approximately $50 (see Appendix E for detailed budget). There was no funding received for work on the project.

Results

The data set collected included 12 participants who had completed a residency and 9 who did not. 18 participants were NPs (unspecified whether Family NP verses Pediatric NP etc.), 1 was a psychiatric NP, and 2 were certified nurse midwives. The medical specialties of participants included 17 in family medicine, 2 obstetrics and gynecology, and 2 with a specialty

in psychiatry. See Table F1 in Appendix F for a table summarizing the descriptive statistics of the included surveys.

Neither the residency group nor the non-residency group met the metrics for a Joyful Workplace, Supportive Work Environment, or Reasonable Work Pace and Manageable EHR Stress (Linzer et al., 2020). For the residency group, the overall mean score was 31.7, and for the non-residency group, it was 29.1. The mean score in the Supportive Work Environment subscale was 18.4 for the residency group and 15.9 for the non-residency group. The mean score in the Reasonable Work Pace and Manageable EHR Stress was 13.3 for the residency group and 13.2 for the non-residency group.

The final open-ended question from the Mini Z survey revealed several themes. Statements about workload demands, documentation/electronic health record (EHR)/in-basket management, and interprofessional or staffing concerns were mentioned in several responses in both the residency and non-residency groups. The residency group mentioned a few concepts that were unique to this group, including concerns about compensation and benefits and barriers in the physical work environment. The residency group also mentioned concerns about how demands affect the quality of care provided, which was also mentioned by one non-residency participant. A final theme mentioned in both groups' responses was concerns about taking work home or performing outside of regularly scheduled hours.

Clinical Significance and Project Impact

The clinical significance of the results of this project is that providers can feel like they work in a more supportive environment if they have completed an APRN residency. On the patient level, the project could impact patients since patient care improves when NPs have support and are not feeling burned out (Poghosyan et al., 2023). On the provider level and

system level, providers could feel more supported, which could prevent provider turnover as burnout is a significant contributor to primary care provider turnover (Willard-Grace et al., 2019). On the policy level, this could provide evidence for the need for additional resources for APRN residencies or provide opportunities to create new APRN residencies. This DNP project closely aligns with local and national surrounding workplace wellbeing especially for healthcare providers.

Sustainability

As a quality improvement initiative, this project seeks to leave the organization with sustainable changes. The project exists in an already established wellbeing initiative at the organization, which will help significantly with the project's sustainability. This project aims to leave the organization with information about how their NPs are scoring on their wellbeing surveys and if participation in a residency affects the scores. This will have potential effects on the direction of the APRN residency. The project site champion, the former director of the APRN residency, will be critical to the project's sustainability. They are invested in improving the curriculum of the APRN residency and training the next director to be successful in leading the residency program. They also could advocate for future projects to learn more about how the APRN residency affects the wellbeing of NPs. Additionally, the site champion could use the information to continue to advocate for the development of more accredited APRN residencies throughout the Southwest and the entire United States.

The organization already recognizes that increasing the wellbeing of providers helps the organization's overall health. The organization can use the information from this project to assist in continued improvement of their residency. They also could continue studying the connection between APRN residency and wellbeing in future annual surveys, which would be done by

keeping the added demographic question for this project. The project's sustainability is embedded in the wellness initiative, which continues to prove necessary for the benefit of providers and the organization.

Discussion

The two groups examined in this DNP project had both similarities and differences. While neither group met the Joyful workplace standard, the residency group had the higher score overall. However, determining whether the difference between the groups overall is statistically significant is not possible with the available data set. It has been demonstrated that participation in postgraduate training has been shown to lead to greater job satisfaction (Auffermann et al., 2021; Park et al., 2022; Bryant & Parker, 2020; Cartwright, 2021). The greater difference between the groups was noted in the Supportive Work Environment subscale, where the residency group had a higher mean score by 2.5 points. This could indicate some advantages in completing a residency, including a supportive work environment. Mounayar and Cox (2021) found in their review that residencies can counter the difficult transition that new NPs face as they transition through support from preceptors.

The results also indicate that there are common experiences among new NPs, regardless of whether they completed a residency. Both groups have similar scores in the Workplace and Manageable EHR Stress subscale with a difference of only 0.1 points between the two means. Both the residency and non-residency group indicated that the work pace and EHR stress are demanding. A major stressor for novice NPs is the abrupt increase in autonomy after graduation (Pleshkan & Hussey, 2020). Many themes from the free response question of the survey appeared in both groups, such as concerns about workload, EHR demands, interprofessional concerns, taking work home, and concerns about the quality of care provided given the workload

demands. Cheng et al. (2022) found that novice NPs experience significant increases in workload and benefited from gaining new coping skills like the ability to find support and resources. From the open-ended responses, it was found that only the residency group mentioned concerns about compensation or benefits and the physical work environment.

Limitations and Barriers

A significant limitation faced in this project was the available data for statistical analysis. Statistical analysis is limited to individual question analysis because the overall total raw scores were unable to be obtained through the AMA Data Lab because of an agreement signed by the participants. The lack of additional statistical analysis makes generalizability difficult. Ideally a more rigorous comparison of the two groups overall scores could have been completed if the raw scores were available. To reiterate the main challenge encountered while conducting the project was determining what could be statistically analyzed. The AMA sent over a spreadsheet with information that was going to be additional statistical information such as standard deviation, however, it was only able to give information that was able to be obtained already by the Data Lab so the document was not utilized. It is challenging to give strong statistically significant conclusions about the true differences between the two groups, however there was a lot of other valuable information learned.

Future Research

This project can lead to ideas for further research regarding NPs and wellbeing. One could examine how a NP residency impacts individuals with different levels of experience. Hart et al. (2022) examined the lasting impacts of a NP residency, this approach could also be utilized in this partner organization after more cohorts have completed the residency program. Additional areas of research could include examining other locations that have residencies.

Conclusion

The wellbeing of novice NPs is an important consideration as they transition into full practice, and NP residencies exist to try and make the transition more successful. Participation in an APRN residency program showed to have a higher mean score on the Mini Z survey, with the score difference being more apparent in the Supportive Work Environment subscale. The similar scores in the Reasonable Work Pace and Manageable EHR Stress subscales, and the comparable themes from the open-ended responses from the survey indicate that there are similar concerns among novice NPs. Given the limitations of the statistical analysis, strong generalizability claims are unable to be made, but valuable lessons were learned about the experiences of the NPs at the FQHC. The organization will hopefully value this information in assisting to maintain the best NP workforce possible.

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Appendix A

Evaluation and Synthesis Tables

Table A1

Evaluation Table for Quantitative Studies

Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to Practice; Generalization
Park et al., (2022), Effects of completing a postgraduate residency or fellowship program on primary care nurse practitioners' transition to practice **Country**: USA **Funding**: Bureau of Health Workforce, National Center for Health Workforce Analysis, Health Resources and Services	None explicitly states. Inferred theoretical framework is an Kolb's theory of experiential learning	**Design:** Analyzed responses to the 2018 National Sample Survey of Registered Nurses (NSSRN) **Purpose:** Examine postgraduate RY and role perception, collaboration, JS, turnover, autonomy	**N=** 8400 **Demographics:** Mostly female, white. Individuals who had completed RY were more often male and non-white **Setting:** Primary care nurse practitioners **Exclusion:** Non-primary care nurse practitioners **Attrition:** None reported	**IV1:** NP postgraduate training program **DV1:** role perception **DV2:** practice autonomy **DV3:** team collaboration **DV4:** JS **DV5:** intent to leave **Definitions:** none given	**Tools:** 2018 NSSRN **Validity/ Reliability:** Not reported	**Statistical Tests Used:** t-tests chi-square tests multivariate logistic regression ordered logistic regression	**DV1:** no SSD (P 0.33, 0.34) **DV2:** NP's who completed RY had own panel and bill under NPI (P <.001, .04); no SSD in admitting privileges or prescriptive authority (P 0.07, 0.33) **DV3:** NPs who did RY participated more in team-based care (P 0.03, <.001) **DV4:** Increased JS in RY (P 0.02) **DV5:** NPs who completed residency were less likely to leave their position (p value <.001)	**Level of Evidence**: 4 Cohort study **Strengths**: Transparent-data is able to view; showed benefits of NP RY and reinforced prior research **Weakness**: Since study was cross sectional no causal inferences can be made; did not control for differences between programs; possible reporting bias when using self-report; no mention of impact on patient outcomes/efficiency of care **Feasibility**: Might be difficult to fully implement NP RY because of funding/resources **Application**: This information could be used by individuals who run NP

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to Practice; Generalization
Administration of the US Department of Health and Human Services **Bias**: No COI								RY or are looking to start them.
Bryant et al., (2020), Participation in a nurse practitioner fellowship to instill greater confidence, job satisfaction, and increased job retention. **Country**: USA **Funding**: None listed **Bias**: No COI	Inferred theoretical framework is Kolb's theory of experiential learning	**Design:** Compare scores on the MNPJSS between NPs who had gone to RY and no RY **Purpose:** To identify if those who completed an NP RY had greater confidence and increased JS	**N=** 258 **Demographics:** 19% had completed an NP residency; majority women, white, ages 30-39; between 1-5 years experience **Setting:** Convenience sampling from Emory Healthcare, MD Anderson Cancer Center, DNP discussion groups, and "Show Me Your Stethoscope" **Exclusion:** None listed **Attrition:** None listed	**IV1:** NP RY **IV2:** No NP RY **DV1:** MNPJSS domains **Definitions:** none given	**Tools:** MNPJSS **Validity/ Reliability:** Internal consistency of DVs was 0.94, 0.89, 0.84, 0.86, 0.83, and 0.79; Cronbach alpha of entire scale was 0.96	**Statistical Tests Used:** Independent-samplet tests between variables Levene's tests for equality of variance Post hoc power analysis	**DV:** SS found in "measure of a sense of value of what is done" $P < .05$**;** SS found in bonus opportunity reporting $p < .01$**;** SS found in "compensation for services outside normal duties" $p < .05$**;** Low statistical power reported for all domains suggestive of too small a sample	**Level of Evidence**: 4 Correlational study **Strengths**: Showed that NP RY participants had a higher sense of value for job, awareness of bonuses and compensation for work outside normal duties **Weakness**: Convenience sampling used, 30% of the sample knew researcher or a subordinate to the researcher; SS not well established for many of the domains because of sample size **Feasibility**: Could be potentially repeatable with a greater/ more randomized sample since it utilizes an already-established tool. **Application**: This study provides some case for the benefit of NP RY, shows that it increases the NP's own sense of value in their

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to Practice; Generalization
								work. Many barriers exist to the initiation of these programs so there may need to be stronger evidence.
Cartwright et al., (2021), Job satisfaction and retention of an advanced practice registered nurse fellowship program. **Country**: USA **Funding**: None disclosed **Bias**: No COI	No framework explicitly stated but Kolb's theory of experiential learning implied	**Design:** MNPJSS distributed to fellowship participants 2-6 months ago; retention data collected 3 years prior to program, retention data from 2018-2019 cohorts **Purpose:** Identify if participation in an APRN Fellowship had effect on JS and retention	**N=** 9 **Demographics:** 3 males, 6 females; 4 ages 25-30; 3 ages 31-35; 2 ages 36-40; 6 DNP **Setting:** Midwestern children's hospital **Exclusion:** APRNs who did not complete the fellowship program **Attrition:** 0%	**IV1:** Fellowship program participation **DV1:** MNPJSS domains **DV2:** 1 year retention rates **Definitions:** None given	**Tools:** MNPJSS **Validity/ Reliability:** Authors report that it has strong reliability/validity	**Statistical Tests Used:** Descriptive statistics	**DV1:** Domains of MNPJSS- Intrapractice partnership, congeniality mean 4.58, SD 1.21 Challenge/autonomy mean 4.92, SD 0.72 Professional, social, and community interaction mean 5.18 SD 0.68 Professional growth mean 5.07, SD 0.54 Time 4.81, SD 0.88 Benefit mean 5.25, SD 0.52 **DV2:** 2015- 95.84% 2016- 94.74% 2017- 88.47% 2018- 100%	**Level of Evidence**: 4 Correlational study **Strengths**: The article describes in detail not only the study but how their program was set up, showed slight improvement in retention **Weakness**: Only descriptive statistics provided, generalizability is not clear **Feasibility**: Could be replicated with other cohorts using the same tool **Application**: Shows what components were beneficial for new APRNs including mindfulness, debriefing time, and preceptors
Hart et al., (2022), Sustained	None listed, inferred framework is	**Design:** mixed-methods;	**N=** 65 for initial survey; 10 for interviews	**IV1:** NP Residency	**Tools:** Researcher created survey	**Statistical Tests Used:**	**DV1:** 89% said to a great or to a considerable degree	**Level of Evidence**: 4 cohort study

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impact of a postgraduate residency training program on nurse practitioners' careers. **Country**: USA **Funding**: Reported no financial support received **Bias**: Reported no conflict of interest	an Innovation model	survey with demographic and questions on current role satisfaction, open ended questions about experiences in the RY program/career impact. **Purpose:** Find the lasting impacts of NP RY; most studies examine immediate impact.	**Demographics:** Most aged 35-44 then 25-34; white; female; primary care providers **Setting:** Retrospective study of previous cohorts of NPs from the Community Health Center INC postgraduate RY program **Exclusion:** non-graduates of RY program **Attrition:** 72% response initial survey, 10 interviews from staggered years	program participation **DV1:** Impact on clinical practice **DV2:** Career development **DV3:** Leadership development **Definitions:** None given --- **RQ1:** Experience after completing NP postgraduate training **RQ2:** Professional and career satisfaction **RQ3:** Impact on career	Secure zoom interview **Validity/ Reliability:** None reported	Descriptive statistics --- **Survey data:** Analyzed using thematic analysis approach	**DV2:** 74% said to a great or to a considerable degree **DV3:** 52% said to a great or to a considerable degree --- (1) Training in a excellent FQHC (2) Leadership (3) Supportive preceptors (4) Quality improvement (5) clinical skills (6) patient care (7) Burnout (8) Marketability (9) Gratitude	**Strengths**: More expansive details into findings with mixed methods study. Looked at longitudinal impact of residency program. **Weakness**: Only descriptive statistics provided and no validity/reliability provided **Feasibility**: Could be potentially replicated with surveying previous cohorts of a program of interest. Need to obtain exact survey questions **Application**: Further exemplify the lasting effects and importance of an NP postgraduate program
MacKay et al., (2018), Nurse practitioner residency programs and transition to practice	None explicitly stated, Kolb's theory of experiential learning implied	**Design:** Exploratory mixed-methods study using an author-created	**N=** 159 **Demographics:** 80% >40 years old, FNP and adult NPs, primary care **Setting:** NP members of the	**IV1:** NPs of the MCNP **DV1:** Perspectives on personal experience as novice NP	**Tools:** Author created survey with 12 Likert scale questions **Validity/ Reliability:** Pilot testing for	**Statistical Tests Used:** Descriptive statistics **Survey data:** No	**DV1:** > 50% first year difficult/ felt unprepared **DV2:** 13% RY means NPs aren't prepared; 86% think	**Level of Evidence**: 6 Descriptive study **Strengths**: Assesses the need for NP RY from current NP perspectives **Weakness**: Only 6 did RY program. Tool did not have

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Country: USA **Funding**: None disclosed **Bias**: None disclosed		Qualtrics survey **Purpose:** Identify what current NPs would have liked in a RY to help transition into working as an NP. Identify NP's thoughts on necessity of RY	Massachusetts Coalition of Nurse Practitioners **Exclusion:** non-members of Massachusetts Coalition of Nurse Practitioners **Attrition:** not reported	**DV2:** Need for NP residency program **DV3:** Gaps in knowledge and clinical skills **Definitions:** none listed _____ **RQ1:** Identify personal clinical knowledge gaps as a new NP **RQ2:** Offer suggestions on content for future residency programs	content validity performed by panel of practicing NPs	qualitative analysis method reported	RY beneficial; 80% interested in RY **DV3:** 66% said knowledge gap; 60% said clinical skills gap _____ **RQ1:** decision making, prescribing, communication, office procedures, billing coding; lack of mentoring **RQ2:** Basics of prescribing, billing, coding, minor office procedures	external validity. Only descriptive statistics reported **Feasibility**: This study would be fairly feasible to implement with a copy of the questions. It assesses large number of current NPs which could be reached through various organizations **Application**: Good to consider the results of what NPs desire from a residency program, however it is a lower level of evidence
Osborne et al., (2022), Supporting advanced practice fellowship during COVID-19 **Country**: USA **Funding**: Arthur G. James Cancer Hospital, Richard J Solove	None stated but implied theoretical framework is Resilience Theory	**Design:** Descriptive study **Purpose:** Explore the effects of an APP fellowship on resilience at various points in time.	**N=** 14 **Demographics:** APP fellows consisting of NPs and physician assistants **Setting:** Large, academic cancer center **Exclusion:** Non-APP fellows **Attrition:** 50%	**IV1:** APP fellowship **DV1:** Resilience **DV2:** Stress **DV3:** Satisfaction levels **Definitions:** None reported **RQ1**: Themes from the Claiming	**Tools:** -Connor Davidson Resilience Scale 10 -Perceived Stress Scale -Professional Quality of Life Scale **Validity/**	**Statistical Tests Used:** p-value, means/standard deviation, Wilcoxon signed-rank test. Cohen's d Thematic analysis	**DV1:** None of the tools were SS- no change and resilience stress or satisfaction levels- the authors explain these results within the context of the COVID-19 pandemic **RQ1:**	**Level of Evidence**: 6 descriptive study **Strengths**: Uses several different known tools to study the sample, specific to the oncology APP population **Weakness**: Not a lot of information given about the study sample, high attrition rate

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Research Institute Innovation and Research Council, The Ohio State University Center for Clinical and Translational Science grant support **Bias**: None reported				Resilience program	**Reliability:** None reported by authors		Themes include challenges, role, fatigue, empathy, self-awareness, and self-care.	**Feasibility**: Appears to be easy to replicate however the time frame is too long **Application**: Could locate the tools and potentially utilize future research, provides an example on utilizing non parametric statistics
Speight et al., (2019), Strategies to promote the professional transition of new graduate nurse practitioners: A systematic review **Country**: USA **Funding**: No sources reported **Bias**: Authors declared no COI	Kolb's theory of experiential learning implied	**Design:** SR using PubMed ,ProQuest Nursing & Allied Health **Purpose:** Summarize current evidence on various transition opportunities for new graduate nurse practitioners.	**N=** 5 articles **Demographics:** Not applicable to SR **Setting:** VA primary care, online, FQHC **Exclusion:** Studies older than five years, transition programs not specific to new graduate NP's; articles outside of the US; studies about nurse anesthetists, nurse midwives, and	**IV1:** New graduate NPs role transition **DV1:** Interventions **DV2:** Strategies **DV3:** Outcomes assessed **Definitions:** New graduate NP: has graduated in the past 5 years	**Tools:** none used **Validity/ Reliability:** No tools used in this study	**Statistical Tests Used:** Synthesis of evidence via systematic review	**DV1:** Fellowships/RY in 4 studies; webinar in 1 study **DV2:** Mentorship, experiential learning, interprofessional training, professional socialization **DV3:** NP's perception of effectiveness of the interventions; two of the studies used tools for outcomes-	**Level of Evidence**: 5 SR of descriptive studies **Strengths**: SR that synthesizes evidence from various studies- more information can be extracted from this single study; gives information about the interventions that were attempted in various studies **Weakness**: Only 5 studies were included; no consistent trend found in measurement of outcomes **Feasibility**: Gives clear directions on their search

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to Practice; Generalization
			clinical nurse specialists **Attrition:** Not applicable to SR				one developed by Rugen et al, one used the NPRTS	strategy, could recreate their search **Application**: Serves as a fairly similar topic of SR; has useful information from multiple studies
Soco et al., (2021), Communication, leadership and organizational support facilitate successful transition into practice for nurse practitioners in the emergency department **Country**: USA **Funding**: None reported **Bias**: Declare no COI	Meleis middle range transition theory	**Design:** Descriptive, correlational, comparative study; replication of a previous study from Dillon et al., 2016 **Purpose:** What resources promote successful transition for NPs who work in the ED	**N=** 119 **Demographics:** Primarily age 30-39, female, white, with MSN degree, FNP, and 4+ years of experience **Setting:** 11 Chicago Area health care institutions **Exclusion:** Not board certified as FNP or ACNP; had to be practicing in ED between 6 months and 5 years **Attrition:** Not reported	**IV1:**Personal/ community resources **IV2:** Years of experience as an RN **DV1:** Successful transition and outcomes **DV2:** skills that are difficult to perform independently **Definitions:** None reported	**Tools:** Adapted from instruments measuring transition from RN to NP in the ICU; procedure list American Academy of Emergency NP **Validity/ Reliability:** Internal validity of 0.80 reported	**Statistical Tests Used:** Descriptive statistics Pearson r P value	**DV1:** stressors and patient safety/job satisfaction inverse relation. Positive correlation-organizational support with comfort/confidence, patient safety, professional satisfaction, and JS. Positive correlation communication/leadership and successful transition. No correlation between years RN and successful outcomes **DV2:** 8 of the 65 skills were difficult to perform	**Level of Evidence**: Level 4 correlational study **Strengths**: Showed SS relationships between organizational support and transition outcomes **Weakness**: No effect size reported; they don't mention specifically what organizational support means **Feasibility**: They don't give their actual survey they use to measure the outcomes- so immediate replicability is a bit difficult **Application**: Further supports the notion that support from the organization in some form makes the transition to NP easier
Klein et al., (2021), Perceptions of	Benner's Theoretical Framework	**Design:** Cross-	**N=** 206 **Demographics:** 122 APP= 82 NP,	**IV1:** APP role **IV2:** MD role	**Tools:** Researcher generated	**Statistical Tests Used:**	**DV1:** APPs had positive reports about having a	**Level of Evidence**: 4 Cross-sectional study

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to Practice; Generalization
role transition into practice among advanced practice providers and physicians **Country**: USA **Funding**: Declare no funding **Bias**: Declare no COI		sectional design **Purpose:** Compare APP and MD transition into provider role during their first year; MD perceptions of APP	22 CNS, 17 PA, 1 CRNA; 84 physicians; most APP had less than 3 month orientation, most age 31-40, female **Setting:** APP and physicians working in acute care and ambulatory care practices from a large healthcare network in two Midwestern states **Exclusion:** Non-APPs or physicians within the healthcare network **Attrition:** None reported	**DV1:** APP perceptions **DV2:** MD perceptions **Definitions:** APP: NP, CRNA, CNS, or PA	questioners that were specific to either APP or MD- 23 similar questions in the two surveys **Validity/ Reliability:** Face validity provided by co-investigators	Descriptive statistics**;** Independent t-test analysis	preceptor; thought that orientation lacked in simulation, preceptors, case studies, and lectures; more than half reported feelings of inadequacy in first year **DV2:** MD scores are typically lower for perception of APP competence in their first year in Xray/ECG interpretation; both groups unsatisfied with process for orientation of APP	**Strengths**: Multiple groups unsatisfied with the orientation received for APPs in this organization; authors note that findings from study validate need for fellowships **Weakness**: Author-generated questioners with only face validity provided by co-investigators **Feasibility**: It would be difficult to sample this variety of providers- maybe unnecessary. It is informative, however NPs are the main population of focus **Application**: Generally applicable despite including MD/PA population- majority of the APP group is NPs; the MD perceptions are useful information but doesn't necessarily apply to this project
Gonzales et al., (2021), Rural Midwestern primary care nurse practitioners'	None stated, implied framework is Benner's Theoretical Framework	**Design:** Nonexperimental, retrospective, purposive design	**N=** 87 **Demographics:** <1 year experience, female, 25-34 years, urban settings	**IV1:** Time in practice (baseline, 3 months) **DV1:** Role transition	**Tools:** Author-generated survey **Validity/ Reliability:** None reported	**Statistical Tests Used:** Descriptive statistics	**DV1:** SS increase in role transition perception from baseline to 3 months **DV2:** Significant increase in	**Level of Evidence**: 4 correlational study **Strengths**: There was evidence that there is increase in role transition ability and preparedness to

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Citation	Theoretical/ Conceptual Framework	Design/ Method/ Purpose	Sample/Setting	Variables	Measurement/ Instrumentation	Data Analysis	Results/ Findings	Level of Evidence; Application to Practice; Generalization
transition to practice **Country**: USA **Funding**: Health Resources and Services Administration Advanced Nursing Education Nurse Practitioner Residency Program Award **Bias**: Report no COI		**Purpose:** Describe experiences/ needs of Nebraska primary care NPs as they transitioned to practice	**Setting:** Nebraska, primary care providers **Exclusion:** Graduated >3 years, not licensed in Nebraska, not working in primary care **Attrition:** None reported	**DV2:** Preparedness to practice **DV3:** perceived challenges **DV4:** perceived supports **DV5:** interest in NP residency if available **Definitions:** None given		Paired t tests P value Cohen D Chi-square Fisher exact tests	perception of preparedness to practice **DV 3:** referrals, being a physician-extender, no committees or quality improvement opportunities **DV4:** comprehensive orientation **DV5:** 85% would have been interested in a NP RY	practice after 3 months; interest in NP residency was majority of participants **Weakness**: Utilized an author-created tool with no reported validity/reliability; bias of self-reporting; recall bias **Feasibility**: The authors include the survey they utilized in the appendix- easy to replicate **Application**: This article shows the willingness of individuals to participate in a residency because of their experiences as new graduates and their lack of opportunity for an NP residency

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Table A2

Synthesis Table

Study (Author, year)	**Park et al., (2022)**	**Bryant et al., (2020)**	**Cartwright et al., (2021)**	**Hart et al., (2022)**	**MacKay et al., (2018)**	**Osborne et al., (2022)**	**Speight et al., (2019)**	**Soco et al., (2021)**	**Klein et al., (2021)**	**Gonzales et al., (2021)**
Design **LOE**	Correl. Study Level 4	Correl. Study Level 4	Correl. Study Level 4	Mix Method Level 4	Mix Method Level 6	Desc. Level 6	SR of Desc. Level 5	Desc, Correl. Level 4	C-S Design Level 4	Desc. Level 6
Sample										
n subjects	8400	258	9	65/10	159	14	5 studies	119	206 (82 NP)	87
M-Age	45	30s	25-30	35-44	>40			30-39	31-40	
NP Years		1-5	5-8				<5	4+		<3
Setting										
Primary Care	x			x	x		x		x	x
Other specialties			x	x	x	x		x	x	
Interventions										
NP Residency/Fellowship /formal training	x	x	x	x	x	x	x		x	
Organizational Support							x	x	x	
Assessment Tool										
MNPJSS		x	x							
Researcher-created				x	x			x	x	x
Other	x					x		x		
Outcomes/ Themes										
Role Perception						x	x	x	x	x
Job Satisfaction	x	x	x	x				x		
Clinical Skills				x	x		x	x	x	x
Autonomy	x	x	x						x	x
Confidence		x		x	x			x	x	
Preparedness		x			x	x	x		x	x
Retention	x	x	x	x						
Collegiality	x		x	x			x			

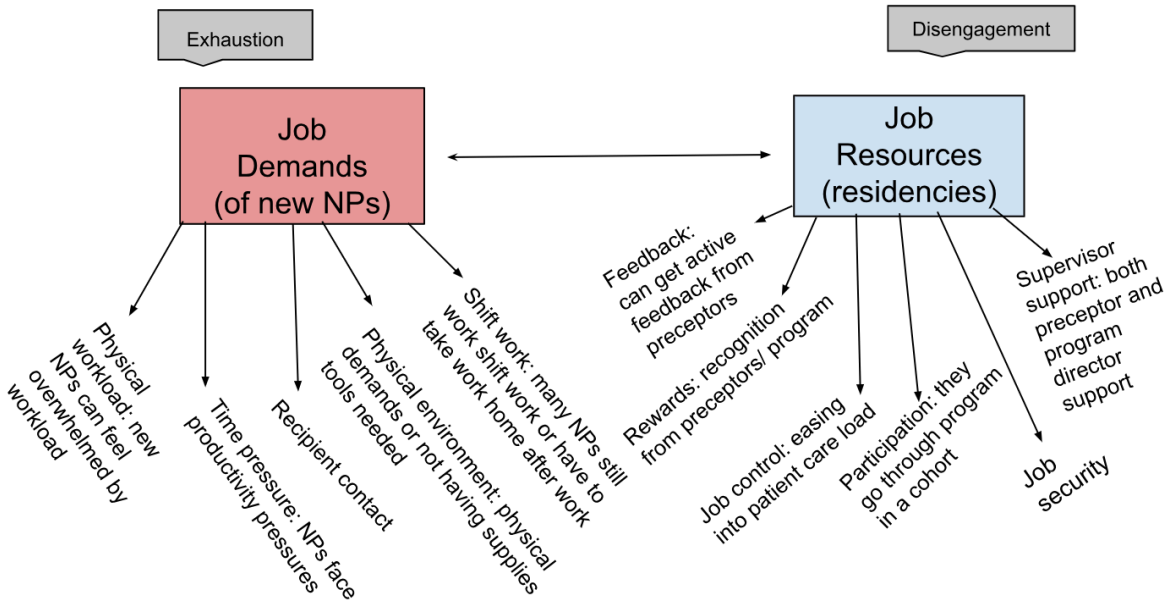
Key: **Correl.** Correlational, **C-S** Cross-Sectional, **Desc.** Descriptive Study, **M-Age** Mean Age, **MNPJSS** Misener Nurse Practitioner Job Satisfaction Scale, **NP** Nurse Practitioner, **NP Years** Majority Nurse Practitioner Years Range, **NSSRN** National Sample Survey of Registered Nurses, **SR** Systematic Review

Appendix B

Models and Frameworks

Figure B1

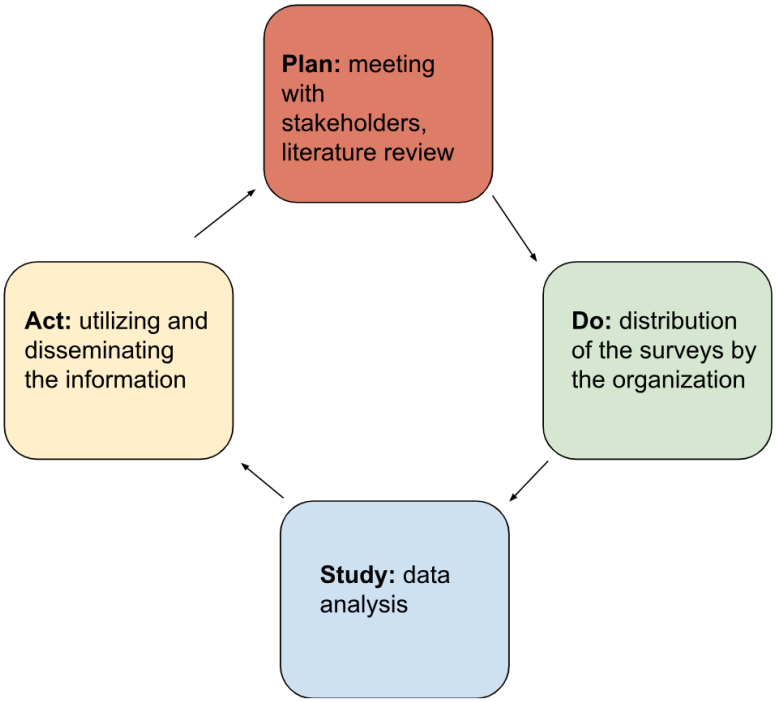
The Job Demands-Resources Theory by Demerouti et al. Applied to Project



Note. Adapted from "The Job Demands-Resources Model of Burnout," by E. Demerouti, A. B. Bakker, F. Nachreiner, and W. B. Schaufeli, 2001, *Journal of Applied Psychology, 86*(3), p. 502 (https://doi.org/10.1037/0021-9010.86.3.499). Copyright 2001 by the American Psychological Association, Inc. Adapted with permission.

Figure B2

Implementation Framework PDSA Applied to Project



Note. Adapted from *Model for Improvement,* by Associates in Process Improvement, 2024 (https://www.apiweb.org/). Copyright 2024 by Associates in Process Improvement.

Appendix C

Mini Z 2.0 Survey

Figure. Mini Z 2.0 Survey[a]

1. Overall, I am satisfied with my current job.
   5. Agree strongly 4. Agree 3. Neither agree nor disagree 2. Disagree 1. Strongly disagree
2. Using your own definition of burnout, please choose one of the numbers below:
   5. I enjoy my work. I have no symptoms of burnout.
   4. I am under stress, and don't always have as much energy as I did, but I don't feel burned out.
   3. I am beginning to burn out and have one or more symptoms of burnout, eg, emotional exhaustion.
   2. The symptoms of burnout that I'm experiencing won't go away. I think about work frustrations a lot.[b]
   1. I feel completely burned out. I am at the point where I may need to seek help.[b]
3. My professional values are well aligned with those of my clinical leaders.
   5. Agree strongly 4. Agree 3. Neither agree nor disagree 2. Disagree 1. Strongly disagree
4. The degree to which my care team works efficiently together is:
   1. Poor 2. Marginal 3. Satisfactory 4. Good 5. Optimal
5. My control over my workload is:
   1. Poor 2. Marginal 3. Satisfactory 4. Good 5. Optimal
6. I feel a great deal of stress because of my job.
   1. Agree strongly 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree
7. Sufficiency of time for documentation is:
   1. Poor 2. Marginal 3. Satisfactory 4. Good 5. Optimal
8. The amount of time I spend on the electronic medical record (EMR) at home is:
   1. Excessive 2. Moderately high 3. Satisfactory 4. Modest 5. Minimal/none
9. The EMR adds to the frustration of my day.
   1. Agree strongly 2. Agree 3. Neither agree nor disagree 4. Disagree 5. Strongly disagree
10. Which number best describes the atmosphere in your primary work area?

Calm		Busy, but reasonable		Hectic, chaotic
5	4	3	2	1

11. Tell us more about your stresses and what we can do to minimize them:

[a] The Mini Z was developed by Mark Linzer, MD and a team at Hennepin Healthcare, Minneapolis, Minnesota. The Mini Z survey tool can be used for research, program evaluation and education capacities without restriction. Permission for commercial or revenue-generating applications of the Mini Z must be obtained from Mark Linzer, MD, or the Hennepin Healthcare Institute for Professional Worklife prior to use (www.professionalworklife.com).

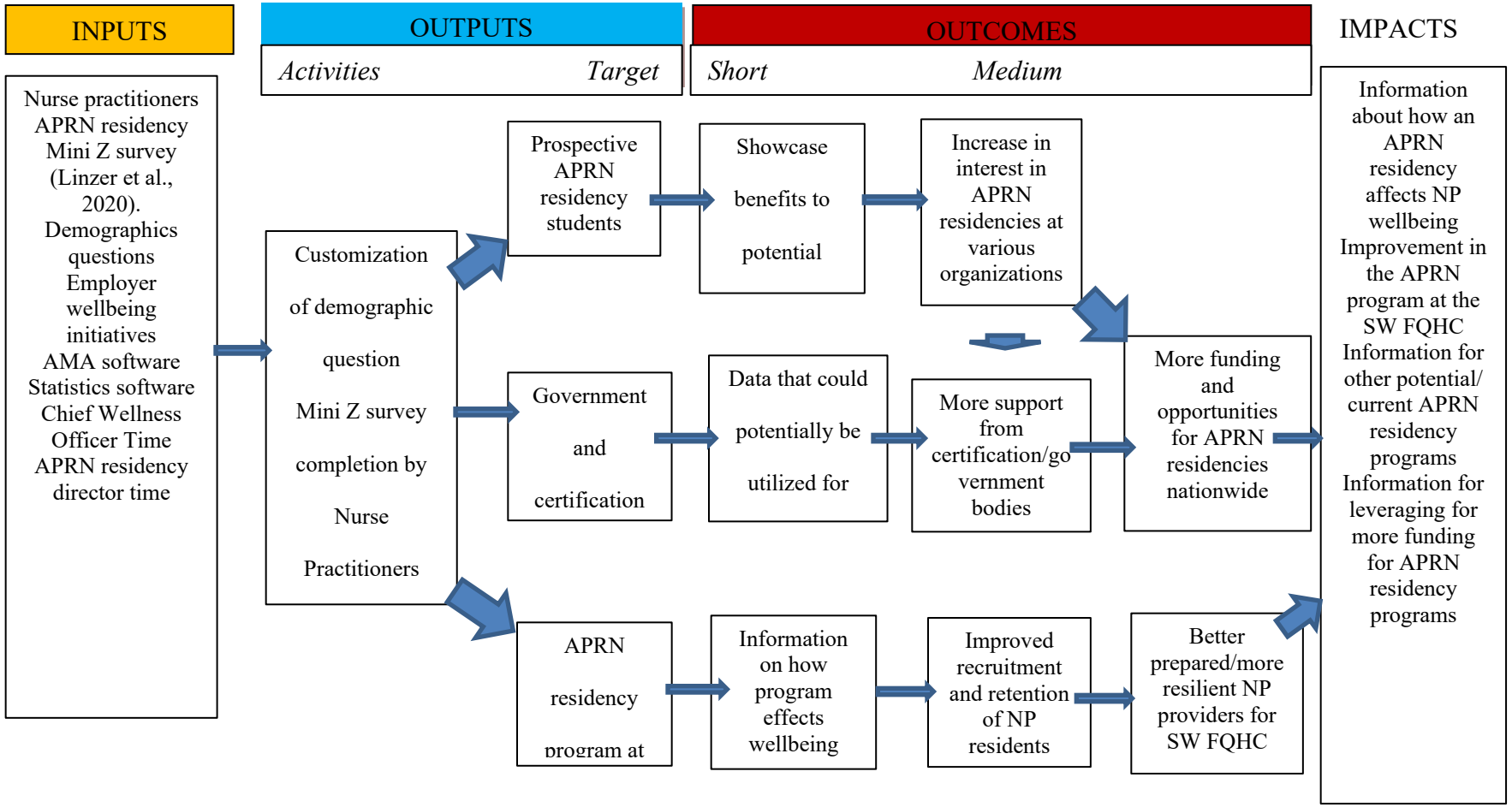
[b] If you select option 1 or 2, please consider seeking assistance; call your insurance provider or employee assistance plan.

Note. From "Evaluation of Work Satisfaction, Stress, and Burnout Among US Internal Medicine Physicians and Trainees" by M. Linzer, C. Smith, S. Hingle, S. Poplau, R. Miranda, R. Freese, and K. Palamara, 2020, *JAMA Network Open, 3*(10), p. 2 (https://doi.org/:10.1001/jamanetworkopen.2020.18758). CC-BY.

Appendix D

Nurse Practitioner Residencies and Wellbeing Logic Model

Goals: The purpose of this project is to determine the impact of APRN residency participation on nurse practitioner's wellbeing at an FQHC in the Southwestern US. This will inform the APRN program of any improvements needed and potentially provide impetus for more interest and funding in APRN residency programs.



Assumptions: APRN residencies have been shown to have lasting impacts on NP's careers (Hart et al., 2022). The strategies in place to study wellbeing will work because the mini-Z survey is already being studied at the FQHC. The APRN residency is also already in place and is very interested in data on the impacts of their program.

Appendix E

APRN Residency and Wellbeing Budget

Category	Cost	Justification
Direct costs		
American Medical Association account	0	AMA hosts survey for organization, free of cost
Intellectus statistics software subscription	50	Software needed for completion of data analysis (included in ASU fees)
Indirect costs		
Provider time to complete survey	1000	Estimated 15 minutes of time to complete survey, cost $20 per provider for 50 providers
Project site champion meeting time	300	Several meetings needed with project site champion, approximately 6 meetings at $50 a meeting
Chief wellness officer meeting time	150	Several meetings needed with project site champion, approximately 3 meetings at $50 a meeting
Student time for data analysis	250	About $25 an hour for 10 hours
Total Cost= $2500		
Potential Funding		
GPSA grant for conference travel	1650	Various travel and research grants exist through GPSA that could potentially cover any travel costs if travel is needed to go to Tucson, or to any conferences
Potential Revenue		
Savings of retention of 1 provider	85,000	Better employee wellbeing could provide major savings for the organization. The cost of turnover for nurse practitioners is estimated to be between 85,832-114,919 (Hartsell & Noecker, 2020).

Appendix F

Demographic Data

Variable	*n*	*%*
Age		
18-30	2	9.52
31-40	14	66.67
41-50	4	19.05
51-64	1	4.76
Gender Identity		
Male	2	9.52
Female	19	90.48
Racial or Ethnic Group		
Black or African American	1	4.76
Latinx/Latino/Latina or Hispanic	4	19.05
White	15	71.43
Prefer not to answer	1	4.76
Profession		
Nurse Practitioner	18	85.71
Psychiatric Nurse Practitioner	1	4.76
Certified Nurse Midwife	2	9.52
Medical Specialty		
Family Medicine	17	80.95
Obstetrics/Gynecology	2	9.52
Psychiatry	2	9.51
Residency Participation		
Yes	12	57.14
No	9	42.86