Mentorship Matters: Understanding the Impact of Mentorship for Advanced Practice Providers

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Abstract

Nurse practitioners and physician assistants, collectively termed advanced practice providers (APPs), report a lack of onboarding and professional support which has been shown to lead to job dissatisfaction, high turnover rates, professional attrition, and gaps in patient care; wasting billions of healthcare dollars and falling short of the Quadruple Aim. A time-honored, integral means of support in many industries is mentorship. This is a dynamic, evolving relationship between an experienced professional and a novice professional that promotes knowledge application, systems navigation, organizational socialization and personal role integration. Unfortunately, healthcare organizations have been slow to adopt mentorship, as evidenced by the paucity of studies on mentorship programs in health care, and APP turnover rates twice that of physicians. This evidenced-based project expands on the limited existing studies regarding the associations between mentorship and organizational commitment, as well as explores the desired characteristics of quality mentors and perceived barriers to APP mentorship. A survey of multispecialty APPs at an oncology practice within a larger, multi-state integrated healthcare delivery system reveals access to mentors and time are the biggest barriers. The most desired mentorship characteristics are professional knowledge and motivational support. Career development through mentorship can increase job satisfaction and retention, as well as improve the quality of care provided by APPs. By strengthening the professional foundations, patients will benefit with continuity of care, improved quality measures, and efficient systems communication reaching the Quadruple Aim targets.

Keywords: mentor, mentorship, advanced practice provider, nurse practitioner, physician assistant, turnover, job satisfaction, organizational commitment

Mentorship Matters: Understanding the Impact of Mentorship for Advanced Practice Providers

The increased number of aging, chronically-ill, and underserved populations are challenging existing healthcare provider shortages. The use of nurse practitioners (NPs) and physician assistants (PAs) is an established means to help address those shortages (Essary et al., 2018; Ewing & Hinkley, 2013; Harrington, 2011; Hooker & Everett, 2012; Swan, Ferguson, Change, Larson, & Smaldone, 2015). Advanced practice provider (APP) is an inclusive term to describe both NPs and PAs whom are increasingly employed by healthcare organizations, yet do not receive adequate professional on-boarding support. Healthcare organizations have established orientation programs for recently hired registered nurses, including time-period adaptations for newly graduated nurses; while physicians have lengthy residency programs. Being relatively recent solutions to the provider gaps in the healthcare industry, APPs experience frequent role expectation changes with little collegial or organizational support during times of transition (Harrington, 2011; Hooker & Everett, 2012; Hill & Sawatzky, 2011). This lack of support can lead to job dissatisfaction, high organizational turn-over rates, professional attrition, and gaps in patient care, either due to unfilled APP positions or poorly integrated providers; creating additional cost burdens for the nation's already financially strained healthcare system. (DeMilt, Fitzpatrick, & McNulty, 2010; Essary et al., 2018; Faraz, 2017; Harrington, 2011; Hill & Sawatzky, 2011; MacLellan, Levett-Jones, & Higgins, 2017).

Problem Statement

Role transitions are recognized times of stress for professional identity, organizational integration, and meeting quality standards (Faraz, 2017; Harrington, 2011; Hooker, Kuilman, & Everett, 2015). The APP workforce is projected to increase between 30% and 70% within seven years (Hoff, Carabetta, & Collinson, 2017; National Commission on Certification of Physician

Assistants (NCCPA), 2017; Poghosyan, Liu, Shang, & D'Aunno, 2017). With approximately

30,000 APP graduates entering the workforce annually it is imperative that these providers

receive robust on-boarding and support if they are to meet expectations of providing high-quality

care to patients with chronic and complex health care problems and remain in their professional

role (American Association of Nurse Practitioners, 2017; NCCPA, 2017; MacLellan et al., 2015).

Frequent turn-over wastes valuable healthcare dollars, and administrative time and supplies. The

estimated cost to replace a single provider can be up to $1.3 million; lost revenue from a vacant

position and reduced revenue for up to two years must be added to the costs of recruitment,

certification/background verification, and orientation (Heil, Culhane, & Munkner, 2015;

Rosenfield, 2018). Not accounted for in that $1.3 million is the cost of patient dissatisfaction,

remaining provider "burn-out", decreased efficiency of over-burdened staff, and unnecessary or

incorrect testing that often occurs during staffing gaps. The turnover rate for APPs is 12.6%, over

twice that of physicians (Anderson, 2012; Bureau of Labor Statistics, 2016; Cejka, 2014). The

Institute for Healthcare Improvement's (IHI) Triple Aim initiative is a global framework to help

organizations decrease cost, improve quality, and increase access of healthcare services for all

populations (IHI, 2018). Expanding the Triple Aim by including clinician satisfaction

acknowledges the impact of provider needs on overall patient outcomes (Bodenhemer & Sinsky,

2014; Essary et al., 2018; IHI, 2017). To be on target with the Quadruple Aim, organizations must

address low retention rates, inadequate system integration, provider and patient dissatisfaction,

and failure to meet quality outcome standards.

Purpose and Rationale

A Japanese proverb states "better than a thousand days of diligent study is one day with a

great mentor" (Pillemer & Rheaume, 2013). While one day is certainly not equivalent to years of

study, the value of a great mentor in the socialization, knowledge application, systems

navigation, and personal role support of novice professional or employee is invaluable and as

important as didactic study (DeMilt et al., 2010; Faraz, 2017; Farnese, Bello, Livi, Barbieri, &

Gubbiotti, 2016; MacLellan et al., 2015; Manzi et al., 2017). Experienced APPs can help newly

employed peer clinicians with organizational integration, professional identity, and systems

thinking which will decrease role transition stress, increase job satisfaction and organizational

commitment, and reduce turnover, thus saving millions of healthcare dollars (Anderson, 2012;

Essary et al., 2018; Heil et al., 2015; Horner, 2017). Ensuring that the newly hired APP is

supported through mentorship also increases the likelihood the APP will value mentoring and

help on-board others, keeping the costs of healthcare turnover low. It is imperative to develop a

definition of mentorship, and how mentorship differs from orientation, preceptorship,

collaborative relationship, or physician oversight. In addition to defining mentorship, potential

benefits of mentorship for both the APP and the healthcare organization, as well as tools to

develop quality mentoring skillsets will be presented.

<div align="center">**Background and Significance**</div>

Mentorship Issues and Impact

Mentorship is a dynamic, evolving relationship between an experienced professional and

a novice professional; the mentor serves as a trusted counselor, professional role model,

confidant, friend, and protector (Gerhart, 2012; Harrington, 2011; Horner, 2017; Olivero, 2014;

Race & Skees, 2010, Ragins & Kram, 2007). The mentor gains validation of clinical experience,

value to the organization, peer recognition, and leadership skills in addition to increased personal

reflection and professional growth (DeMilt et al., 2011; Horner & Eley, 2017; Olivero, 2014;

Race & Skees, 2010). Other terms are often used interchangeably, though incorrectly, to describe

a mentor/mentee relationship. One of the most common is *preceptor*, which is defined as a

teacher or trainer who also provides evaluation to superiors regarding the novice professional's

performance (Gerhart, 2012; Race & Skees, 2010). This supervisory evaluation role limits the

protector and confidant aspects of mentorship. The preceptor role is also linked to the orientation

period. Orientation is not a relationship, it is a process of training a new employee and

introducing them to the organization, while it may involve an experienced employee and new

employee, it is a task focused process as opposed to the dynamic, mutual relationship that

characterizes mentorship (Gerhart, 2012; Ragins & Kram, 2007). All PAs and some NPs practice

with an overseeing or collaborating physician. While this physician can be a good source of

information and support, it is not a mentor role; it is a regulatory, supervisory role with power

over the novice's employment (Ewing & Hinkley, 2013; Gerhart, 2012). While the roles

performed by either a preceptor or collaborating physician have benefits, they lack the robust

career-building and professional growth provided through quality mentorship.

Job Satisfaction and Staff Turnover

Turnover is costly to healthcare; reducing turnover helps organizations meet the

Quadruple Aim, thus improving population outcomes with less cost while improving patient and

provider satisfaction (Anderson, 2012; Bodenheimer & Sinksy, 2014; Essary et al., 2018; Heil et

al., 2015; Horner & Eley, 2017; IHI, 2017; IHI, 2018). Providers who have a strong professional

self-identity and feel supported by an organization are much less likely to leave (Faraz, 2016;

Gerhart, 2012; Hooker et al., 2015). While mentorship alone does not solve other factors of job

satisfaction, such as autonomy, workloads, benefits, and work environment, mentors can help

novice APPs gain the self-confidence needed for autonomy, provide practical advice on

managing workloads, and provide an avenue to the socialization needed in the work environment (Faraz, 2016; Farnese et al., 2016; Race & Skees, 2010).

Mentorship in an Urban Healthcare System

A multispecialty oncology practice that is part of a larger, multi-state integrated healthcare delivery system (IHDS) recently implemented a structured orientation specifically for APPs that is modifiable depending on an APPs prior oncology experience. It has shown initial success and is being examined for implementation in other specialties of the IHDS (Dean, 2017). Further examination of the recently implemented orientation program revealed a gap for increasing the APP workforce; currently practicing APPs feeling uncomfortable and ill-prepared to orient new APPs, especially recent graduates. The oncology clinic is expanding its patient base as well as opening new satellite clinics creating more APP job openings yet few of the current staff are willing to on-board the new personnel.

Moving from the expert registered nurse to novice NP or entering into healthcare for the first time as a PA, while navigating the nuances of independent advanced practice in a healthcare system based on the medical-model is challenging; requiring strong professional self-identity, social skills, and organizational support. These are facets that cannot be taught in a didactic fashion but must be learned and practiced under the guidance of a more experienced peer, known as a mentor (Hill & Sawatzky, 2011; Hooker et al., 2015; Horner, 2017; Manzi et al., 2017; Olivero, 2014). Recognizing the mentorship gap, an evidenced based project was designed to examine barriers to mentorship, desired mentor characteristics, and discover potential relationships between organizational commitment and various facets of mentorship and onboarding; with the ultimate goal to support and encourage a mentorship culture in the organization. This led to the following PICO question:

"For APPs (P), how does a mentorship program (I) compared to the lack of mentorship (C) affect turnover and job satisfaction (O)?"

Critical Appraisal of the Literature

Literature Review

Healthcare, particularly nursing, lags behind other industries such as teaching and business management when it comes to supporting and growing the next generation; as evidenced by the paucity of literature found. A preliminary search of PubMed, Cochrane, and CINHAL databases revealed a limited number of articles (approx. 40), few of which were research studies, on NP mentoring. Expanding the search parameters to include nurses and PAs revealed a few more results (approx. 80; Appendix A). However, in comparison to the amount of results returned when searching mentorship in the fields of teaching, engineering, and management (over 1,600; over 56,000 if thesis and dissertations are included) it is apparent there is a research gap in APP mentorship (Appendix B). Even the thesis and dissertations for APPs demonstrate a lack of research as only 9,096 papers were discovered (Appendix C). Post-graduate fellowship or residency programs, which are increasingly popular in large healthcare organizations, are another method of providing support and orientation to newly hired APPs; however, these programs lack standardization and there is no published evidence regarding their efficacy (Bush & Lowery, 2016). Adding the terms "fellowship" or "residency" to the search criteria appeared to provide several thousand additional resources (Appendix D). Interestingly, this search as well as the Cochrane Database search (Appendix A) highlights the lack of standard concrete definitions for the terms mentor, residency, and fellowship. These terms are used in patient therapy and patient support programs, as well as to describe orientation programs.

Mentorship for the APP is an understudied subject with ill-defined, inconsistent terminology and little data driven research. Many editorials, opinions, and program evaluations were found in the literature search, but few high-quality studies were discovered. Thus, studies of mentorship's contribution to professional retention and job satisfaction in other industries must be explored.

Search Strategies

PubMed, CINHAL, MEDLINE, and PsycINFO were searched for evidence-based data limited to peer-reviewed articles published between January 2010 and December 2018. Only two results were found that encompassed mentor or mentorship, job satisfaction, turnover, and APPs. Since APP is not common industry term, search terms included *APRN, advanced practice registered nurse*, *nurse practitioner*, and *physician assistant.* Depending on the healthcare database, searching for *mentor* or *mentorship, job satisfaction* and *turnover* yielded 21 to 36 results which focused on healthcare leadership and registered nurses (Appendix E). Given the similar working environment of these roles to the APP, high quality studies from this search can provide insight into mentorship's role in turnover and APP job satisfaction.

While PsycINFO covers some of the behavioral aspects of business, ABI/INFORM is a comprehensive business, management, and trade journals database that was used to search for research regarding *mentor* or *mentorship, job satisfaction* and *turnover* in other disciplines. With over 1,700 per reviewed articles published since 2010, it was necessary to further refine this search. Review of the types of articles initially retrieved led to including research, statistical analysis, studies, or new employees, while excluding supervisors, training, workplace diversity, expatriate employees, and students; resulting in a manageable 79 articles to examine for evidence that might be applicable across industries (Appendix F).

The ERIC Database was searched for studies of mentorship in academia. Depending on the combination of terms, 4 to 33 peer–reviewed studies published since 2010 were returned (Appendix F). The APP/patient/healthcare organization relationship aligns with the teacher/student/school relationship, potentially making results from these studies applicable to the APP.

Ten high-quality research studies from four different industries, were chosen for evaluation of mentorship's effect on job satisfaction and turnover; five from healthcare, two from business management, two from education and one from corrections (Appendix G). While corrections or the penal branch of the justice system may seem very unrelated to healthcare, both industries have high-stress roles, rapidly changing micro and macro environments, and involve multiple confidentiality regulations (Farnese et al., 2016).

Synthesis

Research on mentorship began to flourish after Kram's 1983 in-depth qualitative study of 18 mentor-protégé pairs; however, 35 years later there are still no significant experimental or longitudinal studies (Allen & Eby, 2010). This was reflected in the 10 studies compiled, all were rated as level VI evidence with quality design and data interpretation (Appendix G).

Organizational Commitment. Eight of the nine quantitative studies used survey tools which have been determined to be reliable and valid for examining the variables of job satisfaction, organizational commitment, and turnover intent. Meyer and Allen's (1991) Three Component Model of Employee Commitment Scale (MATCMEC) is the dominant tool to measure organizational commitment to predict turnover (Jaros, 2007). The instrument uses a 7-point Likert scale to measure three domains: affective or desire/emotional, normative or moral/obligatory, and continuance or cost/benefit aspects of organizational commitment and was

used across three industries in the studies examined. Additionally, the Misner Nurse Practitioner Job Satisfaction Scale created in 2001 specifically to examine NP's job satisfaction using a 6-point Likert scale for 44 items regarding a working environment, including benefits, training, policies, advancement, and interdisciplinary relationships (Horner, 2017). The Misner scale was used in three of the five healthcare studies. All studies consistently demonstrate an inverse relationship between job satisfaction and organizational commitment to turnover intention.

Mentorship Measures. When examining mentorship, the tools used were less standardized, but the questions were similar across instruments. Six of the studies also included areas for comment, which adds to the richness of construct themes. The most commonly used mentorship measurement tool was Scandura and Ragin's (1993) Mentorship Functions Questionnaire (MFQ9) and its lengthier original 15 item version, the Multidimensional Mentoring Measure (Castro, Scandura, & Williams, 2004). Using a 5-point Likert scale the mentorship relationship is evaluated in the domains of role modeling, career support, and psychosocial support. Cronbach's α of 0.96 was replicated in the studies using MFQ9. One study used Noe's (1998) Mentoring Function Scale (MFS), which is designed specifically for assigned mentors, has an equally high reliability, and has been tested in multiple languages (Noe, 1988; Ho, Kwon, Park, Yoon & Kim, 2017). Two of the three studies directly measuring mentorship and job satisfaction found a significantly positive relationship, and a third study showed a positive association although it did not reach level of significance (Appendix H). Six of the studies found that mentorship increased organizational commitment and decreased turnover intention.

Limitations of existing research. Despite high validity and reliability of the tools used, they are based on recall and self-reporting which can create biased results. In four of the five

healthcare studies, some of the participants were recalling information from three to 25 years prior. While the recalled information may be accurate, it can also be influenced by the process of experience. The healthcare related surveys were comprised of 91% females, which is consistent with the general population of NPs, but approximately one third of PAs are male (NCCPA, 2017). This disparity could make the studies less generalizable to men; however, Pathak and Srivastava's (2017) study, and Ragins and Cotton's (1991) Perceived Barriers to Mentorship (PBM), as well as many studies in the general literature, found no difference in gender with regards to mentorship experiences and expectations.

Discussion

Collectively, these studies show that mentorship can increase job satisfaction and organizational commitment, which in turn will reduce turnover, regardless of the industry. The majority of the studies showed that the type of mentorship program did not differ significantly on the outcomes of turnover or job satisfaction; however, two studies found that structured mentorship programs provided significantly more benefit than informal mentoring arrangements. The challenges of mentorship, either formal or informal, were discussed by three of the studies although no data analysis of these concepts was performed.

Current literature was unable to define the highest quality forms of mentorship, what specific skills produce optimal outcomes, and how these factors impact organizational commitment. However, the overall evidence, regardless of discipline, demonstrates that mentorship is effective at improving job satisfaction and organizational commitment, reducing role ambiguity, richly socializing the novice, and promoting career growth of both the mentor and mentee, which in turn creates stronger organizations and reduces unnecessary turnover costs. One study was able to associate mentorship for rural providers with improved population

outcomes and reduced healthcare costs, supporting the idea that mentorship is a protentional method to aid in meeting the Quadruple Aim.

<div style="text-align:center">Theoretical Framework and Evidence-Based Practice Model</div>

Theoretical frameworks are groups of concepts designed to explain or predict an aspect of human or organizational behavior or activity (Melnyk & Fineout-Overholt, 2015). The Theory of Organizational Socialization is a gold-standard of social theory and uses six tactical dimensions to predict and ultimately manage a new employee's acclimation into the organization (Saks, Uggerslev, & Fassina, 2007). Each tactic falls along a continuum between a custodial role response and an innovative role response which can determine how an employee relates to the organization throughout a career (Tuttle, 2002; Saks et al., 2007). Content tactics range from sequential to random and fixed to variable and cover such concepts as timetables, sequential steps, and process schedules. Context tactics are distributed along a collective to individual and formal to informal continuum and include the concepts of grouping, experiences, segregation, and recognition. Social tactics apply to concepts of role modeling, individualism, and conformity; and range from serial to disjunctive and investiture to divestiture (Saks et al., 2007). A mentor uses role modeling, and career and psychosocial support techniques to help the mentee successfully navigate the bipolar continuums of each tactic to understand the content, context, and social aspect of the new position to become an integrated team member (Ragins & Kram, 2007). Van Maanen & Schein's (1979) Theory of Organizational Socialization's six tactics of socialization parallel the concepts in the MATCMEC, MFQ9, and Multidimensional Mentoring Measure, providing congruity in collection and evaluation of data and outcomes (See Appendix I for representative diagrams).

An evidence-based practice (EBP) model guides the application of a theoretical framework and evidence synthesis into practice settings. The Stevens Star Model of Knowledge Transfer is designed to cope with limited volumes and types of research, the mismatch of knowing and doing, and the challenges of sustaining innovative changes (Melnyk & Fineout-Overholt, 2015). The limited amount of APP mentorship research requires knowledge from other industries be adapted to healthcare. As many authors have stated, people acknowledge the value of mentorship, businesses recognize its ability to increase job satisfaction, and employees desire this type of support, yet very few organizations have mentorship programs in place; a definite mismatch of knowledge and action (Ragins & Kram, 2007; Allen & Eby, 2010; Harrington, 2011; & Gerhart, 2012). The Stevens Star Model is circular in nature allowing fluid movement among the five components of discovery, evidence summary, translation to guidelines, practice integration, and outcome evaluation. Mentorship is a conceptual construct that remains broad, complex, yet vague despite the scrutiny, debate, and critique of various industry experts and scholars (Allen & Eby, 2010). These conceptual challenges are intensified when transferring the construct to healthcare; necessitating a non-structured model that incorporates various types of knowledge needed to understand mentorship's impact on job satisfaction and turnover when developing a program to promote mentoring among APPs.

Project Design

Purpose

As the literature search revealed, there is a gap in understanding the qualities of strong mentors in healthcare and how mentorship impacts job satisfaction, organizational commitment, and turnover. This gap also fails to fully answer, but hints at the possibility that mentorship could help meet the Quadruple Aim goals to decrease cost, improve quality, increase access of

healthcare services for all populations, and enhance providers' work experience. Based on the

results of the literature review and the needs of the IHDS the original PICO question was

modified to create the design of the evidenced-based project. The following three questions were

formulated to analyze the gaps experienced during on-boarding of APPs:

1. What do experienced APPs perceive as barriers to serving as a mentor?

2. What attributes create a quality, effective mentoring relationship?

3. Does mentorship support improve the organizational commitment of the APPs?

A survey to answer these questions was developed and results were analyzed for

correlations, themes, and gaps in current practice. The results of the gap analysis and mentorship

evidence will be combined to create mentorship tools or courses to improve the on-boarding and

long-term organizational commitment of APPs employed by the IHDS. If APP mentorship

effects mirror that seen in other disciplines it is expected that productivity will increase, and

costs will decrease.

Project Methods

Survey Design. Two standardized instruments discussed in the literature review and synthesis

were included in the gap analysis. The MATCMEC was used to gain insight into the APPs

perspectives of the affective, normative, and continuance aspects of organizational commitment.

The MATCMEC, available free of charge for academic users, was obtained from the University

of Western Ontario (https://www.employeecommitment.com/) on April 11, 2018. The MFQ9 was

used to obtain data regarding the APPs perspectives of the mentoring domains of role modeling,

career support, and psychosocial support. Permission to use was obtain from Dr. Teresa Anne

Scandura on July 16, 2018.

A third validated mentorship instrument, the PBM, was also included in the project survey. The PBM uses a 7-point Likert scale to determine perceived barriers across five factors: 1. Access to mentors, 2. Fear of initiating, 3. Willingness of mentors, 4. Approval of others, and 5. Misinterpretation. The PBM was validated using a principal components factor analysis with varimax ration. Results of that analysis reveals a Cronbach's α ranging from 0.83 to 0.93 depending on the specific factor (Ragins & Cotton, 1991). Permission to use the PBM was obtained from Dr. Bella Rose Ragins on July 16, 2018. Permission letters can be viewed in Appendix J.

The survey tool also included demographics such age, gender, profession, employment history, and professional, educational, and mentoring experience (Appendix K, pp. 1-5). Four open-ended questions were placed throughout the survey to allow the respondents to share descriptive information regarding mentorship. Custom ranking questions based on the MFQ9 domains of role modeling, career support, and psychosocial support sought to determine the most valued characteristic of each domain (Appendix K, p. 12). Five custom Likert-scale questions were included regarding barriers of productivity requirement, role expectations, and teaching experience that were mentioned in the healthcare literature (Appendix K, p.18). Two custom Likert-scale questions were included to gauge the APPs interest in potential mentoring programs (Appendix K, p. 19.).

The above described questions and validated instruments were combined into one on-line survey to be administered through *SurveyMonkey* (Appendix K). Due to the length of the survey, the ability to stop and restart the survey was established using email addresses which were encrypted into *SurveyMonkey* and blinded to all project investigators. This encryption method also allowed *SurveyMonkey* to send automatic reminders at established intervals.

Ethics and Recruitment. The survey, project timeline, consent, IHDS support letters, and project presentation were submitted to the Arizona State University Institutional Review Board. The project was determined to be exempt on 9/24/18 (Appendix L). A brief presentation explaining the project and providing instructions on survey completion was given to the APPs within the multispecialty oncology practice at the IHDS on November 12, 2018. The presentation was an agenda item on the regular bi-monthly APP meeting. The APPs were given the opportunity to ask questions regarding the project or survey instructions. The following day all APPs employed by the practice (n=54) were emailed a link to the secure, anonymous on-line *SurveyMonkey* survey. The link remained active for six weeks, with two reminder emails automatically generated by *SurveyMonkey* for non-initiated or incomplete surveys.

Data Analysis. Upon closure of the on-line survey on December 31, 2018 the data was downloaded to IBM's SPSS program for analysis. No personal or identifying data, including IP addresses or emails, was download from *SurveyMonkey.* SPSS was used to run correlations, and descriptive statistics to examine the relationships of experience, education, and role with mentorship and organizational commitment.

Outcomes

Survey Results

Demographics. Twenty-four APPs responded to email invitation and completed at least some portion of the survey, resulting in a response rate of 40%. Six surveys had missing data in some of Likert scale questions; the missing data was accounted for using intent to treat. The responding APPs' age ranged from 26 to 63 years of age with an average of 42 years of age (*SD* = 9.37). There were three male respondents (12.5%) and 21 female respondents (87.5%). Over half of the sample had greater than 4 years of APP experience (58.3%, n = 14); leaving 41.7%

(n= 10) of the sample with less than 4 years of APP experience. Nurse practitioners comprised 70.8% (n = 17) of sample and PAs comprised 29.2% (n = 7) of the sample. NPs reported an average of 8.65 (*SD* = 7.88) years of RN experience, with years of RN experience ranging from 3 to 28 years. The majority of APPs (79.2%, n = 19) had advanced practice experience with at least one other employer; while 20.8% (n= 5) of the APPs had only worked with the IHDS since receiving their advance practice license (see Appendix M, Table 1M for additional demographic frequencies).

Mentorship Experiences. Seven APPs (29.2%) stated they had no experience with mentorship, while 66.7% (n=16) reporting having an APP mentor at some point during their career and nine (37.5%) had served as a mentor during their APP career. The vague yet complex definition of mentorship is demonstrated by the fact 1/5 of the respondents (20.8%, n=5) felt that a mentor was the same as a preceptor. There was a wide variety of types of mentorship experienced, but informal relationships (54.2%, n=13) within the same organization (41.7%, n=10) was the most common. Table 2M (Appendix M) displays the complete mentorship perception and experiences data.

The PBM includes a seven-point Likert scale that ranges from *strongly disagree to strongly agree,* giving a total score range of 19 to 133, with the lower scores corresponding to fewer perceived barriers to mentorship. The perceived barrier scores for the APPs at this organization ranged from 19 to 70, with a mean of 50.49 (*SD*=13.35). Access to mentors was scored as the greatest barrier, with the respondent range matching the total possible scores in this section, 4 to 28 and a mean of 16.05 (*SD*=6.03).

Five potential barriers specific to APP mentorship were evaluated by a seven-point Likert scale that ranged from *strongly disagree to strongly agree.* Productivity requirements (*M* =3.28,

SD= 1.35) and role expectations (*M* =3.06, *SD*= 1.23) were more slightly prominent barriers than

the mentoring (*M* =3.00, *SD*= 1.22) or teaching (*M* =2.61, *SD*= 0.89) skills of the APP (Table

5M, Appendix M).

      Mentorship Qualities. The rankings of specific characteristics within the domains of

role modeling, career development, and psychosocial support can be seen in Appendix M, Figure

1M. Clinical skills (n=8) and teaching skills (n=6) were shared the highest ranking in the role

modeling domain. In the area of career development professional knowledge (n=15) was clearly

the highest-ranking desired attribute. The psychosocial domain also had clearly favored attribute

of motivational support (n=14). Similar education (n=15) in the career development domain and

same gender (n=12) in the psychosocial domain were clearly the least valued mentorship

characteristics. The MFQ9 includes a seven-point Likert scale that ranges from *strongly disagree*

to strongly agree, providing a total score range of 9 to 63, with higher scores corresponding to

positive values in the functions of mentorship. The APPs scores ranged from 36 to 59, with a

mean of 43.32 (*SD*=6.41). The individual domains, career development, psychosocial support,

and role modeling showed nearly equal means at 14.16 (*SD*=6.41), 14.42 (*SD*=6.41), and 14.74

(*SD*=6.41), respectively. The total possible score for the domain levels are 3 to 21. Career

development's range was 9 to 21, psychosocial support showed the narrowest range at 12 to 18,

and role modeling had a range of 11 to 21.

      Organizational Commitment. Employees with strong affective organizational

commitment (OCA) scores are most often high performing employees who are committed to

organizational growth and success. The normative/moral domain (OCN) score reflects the

employee's feelings of obligation to the organization and tend to represent moderately strong

performers. A high score in the continuance/cost domain (OCC) can indicate the employee is

staying only to avoid loss of income or benefit. Research has associated high scores in this

domain with bare minimum performance. The responding APPs' OCA scores ranged from 2.50

to 6.25 on a 7-point Likert scale, with an average score of 4.86 (*SD* =0.98). OCN scores ranged

from 2.25 to 5.88 on a 7-point Likert scale, with an average score of 4.26 (*SD* =0.99). OCC

scores ranged from 2.38 to 5.50, with an average score of 3.89 (*SD* =0.93).

Data Interpretation

To answer the project questions, the statistical analyses include descriptive statistics

(Appendix M, Tables 1M and 2M), and the inferential statistics of Spearman and Pearson

correlations. The correlations table for the PBM can be found in Appendix M, Table 3M. The

correlations for the MATCMEC can be found in Appendix M, Table 4M. Qualitative data

obtained from open ended responses was analyzed for common themes.

What do experienced APPs perceive as barriers to serving as a mentor? A mean total

perceived barriers score of 50.49 out of 133 indicates the APPs in this survey perceived the

overall barriers to mentorship at the IHDS as low. Years at the IHDS (r = -.417, p = .04), total

MFQ9 (r = -.351, p = .09) and OCA (r = -.469, p = .02) demonstrate an inverse moderate

correlation to perceived barriers. Since increasing years at an organization reduces perceived

barriers to mentorship, but years of experience as an APP or RN shows no correlation, the

involvement of an organization in building a mentorship culture be a positive benefit for the

highest performing employees.

The qualitative, open-ended question, which was placed prior to any PBM Likert scale

questions: "Please share your thoughts in the box below on what barriers you feel are present

when considering mentorship for the APP," provided additional insight. Fifteen of the

respondents (62.5%) answered this question; of those 11 (73%) stated time was the major barrier.

Comment details referenced daily schedule already too busy and lack of dedicated mentoring time. Three of the respondents stated that the organization needs to support mentorship and provide opportunities for APPs to interact outside of the daily patient schedule. Role, scope of practice differences, and location of care (inpatient vs. outpatient) were also mentioned by the APPs as barriers to mentorship.

Healthcare literature often mentions productivity requirements of providers can have negative impacts on involvement or activities outside of direct patient care. For this IHDS, most APPs slightly disagreed with the statement that productivity requirements (M = 3.28) or role expectations (M = 3.06) were barriers to their ability to mentor.

What attributes create a quality, effective mentoring relationship? Analysis of the mentor characteristics rankings shows that in the domain of role modeling, clinical skills (M =2.11, SD= 1.15) are the most desired attribute followed by teaching (M =2.42, SD= 1.43), organizational knowledge (M =3.21, SD= 1.36), bedside mannerisms (M =3.47, SD= 1.39), and time management (M =3.79, SD= 1.13). Even though the major barrier to mentorship from qualitative responses was time, time management ranked the lowest of desired role modeling characteristics; 37% (n=7) of the APPs completing the rankings put time management 5th (lowest) and no one ranked it 1st (highest).

The domain of career development had the most closely grouped responses. The desired characteristics were professional knowledge (M =1.42, SD= 0.96), goal setting (M =2.84, SD= 0.90), networking (M =3.00, SD= 1.20), providing challenges to the mentee (M =3.11, SD= 1.10), and having similar educational backgrounds (M =4.63, SD= 0.83). Although similar educational backgrounds was ranked the lowest, two qualitative responses did indicate that NPs

and PAs or acute care NPs and outpatient NPs differ in both education and scopes of practice and

therefor are not effective mentors for each other.

In the domain of psychosocial support, the ranking of desired characteristics from most

valued to least valued were motivational support (M =1.95, SD= 1.55), emotional support (M

=2.47, SD= 0.77), friendship (M =3.11, SD= 1.05), availability after work (M =3.32, SD= 1.16),

and being of the same gender (M =4.16, SD= 1.47).

Does mentorship support improve the organizational commitment of the APPs? In

this small sample, there was a weak inverse correlation of the OCA with provision of a mentor

on hire (r = -.133, p = .54), which is an unexpected finding. It is possible that more recent hires

are the only ones provided mentors and thus have not yet developed feelings of strong

organizational commitment. However, having ever had an APP mentor showed a moderate

positive association with OCA (r_s = .333, p = .11). The MFQ9 scores demonstrated a moderate

association with the OCA (r = .380, p = .07) and OCN (r = .352, p = .09) scores, indicating that

mentorship is valued by higher performing employees who are committed to the organization.

Additional observations. Two questions using a seven-point Likert scale that ranged

from *strongly disagree to strongly agree* were included in the survey to determine the APPs

interest in mentorship programs to build skills (M =5.44, SD= 1.15) or form relationships (M

=5.50, SD= 1.03). Although most APPS felt their mentoring or teaching skills were not a barrier

to mentorship, they expressed a strong desire for programs for skills and opportunities to

building mentoring relationships.

Teaching experience showed a weak moderate positive correlation with having been an

APP mentor (r_s = .367, p = .08), and OCN score (r_s = .352, p = .09). Teaching experience also

showed a weak inverse relationship with having had an APP mentor (r_s =- .296, p = .16). Perhaps

the lack of a mentor is what spurred the involvement in teaching or perhaps a prior teaching

experience gave the impression a mentor was not needed. It was assumed that teaching

experience would reflect higher MFQ9 scores and this was not seen in the project results, as only

a weak correlation (r_s = .141, p = .51) was found.

Evidence Translation to Build Mentorship

Consistent with other mentorship studies, many correlations were observed, but lacked

statistical significance. This is attributed to factors such as the recall bias of survey instruments

and the complex nature of relationships and organizational commitment; as well as the ill-

defined, various concepts of mentorship. However, valuable insight into the needs and desires of

the APP can be determined from this project.

Overcoming the barriers of access and time, and providing opportunities for mentors and

mentees to interact are key components needed to build a mentoring culture. This can be

accomplished using virtual meetings outside of the established bi-monthly APP meetings (Shaw

& Fulton, 2015). The IHDS has many educational and regulatory trainings that staff are required

to attend throughout the year; thoughtful scheduling of the mentor/mentee pairs for this training

meets multiple goals. Participation in organizational community events also offers opportunities

for mentors and mentees to interact while building professional relationship bonds (Olivero,

2014; Shaw & Fulton, 2015). Specific education or resources on mentoring can be incorporated

into the bi-monthly meetings to reinforce the organizational support of a mentorship. One APP

stated "organizations do not encourage mentorship," which highlights healthcare's lack of a

mentoring culture, as opposed to what is common in the management and education industries.

The role differences between PAs and NPs presents mentoring challenges when the IHDS

considers them interchangeable, as one respondent stated "there are no peers that do my job."

This reflects the idea that a mentor must be identical just more experienced; however, mentors can come from a variety of backgrounds and be effective. Mentors can focus on various aspects of professional development and multiple mentors enrich the systems thinking a novice is learning (Allen & Eby, 2010; Olivero, 2014).The IHDS's current practice of providing an "APP partner" for role specific knowledge and support is a viable way to address this challenge and improve the APPs understanding of the mentorship construct.

Another common assumption is that the mentor/mentee pair should be of the same gender. This could compound the NP and PA differences as most NPs are female and most PAs are male. However, the results of this project and the existing literature show that gender is not perceived barrier to developing mentoring relationships.

The results of this gap analysis indicate a mentorship program or resource that provides motivational support, professional role modeling, and clinical knowledge in such a way that it is not perceived as a time burden and is accessible by APPs across locations would be welcomed. There are existing meetings that can incorporate mentoring information as well as increase opportunities for interactions. Technology can be used for both synchronous and asynchronous meetings so the resource fits easily into busy schedules.

Just as the IDHS's recent formal orientation has expanded from oncology to other specialties, this resource could be adaptable to other departments within the IDHS. Given the variety of practice settings at the IDHS, this resource could also be used large hospitals with multiple resources, small practices with only a few providers, and healthcare academia. To improve integration of mentorship into healthcare, the APP mentees should have the opportunity to understand the didactic concept of mentorship, experience mentoring relationships, and practice the skills of quality mentoring during the basic educational process. The project data is

not be limited to use by APPs; it can be used by various stakeholders in healthcare. Human resources personnel can use the information on organizational commitment, expectations, and turnover to support the value of robust on-boarding programs that include mentorship. Quality improvement departments can expand the data review to look at billing corrections, ordering errors, and patient satisfaction scores between groups of novice APPs before the mentor program and after implementation of the mentor program. Organizations can use the study data and mentor program as a recruitment tool. Mentor recognition provides the organization with a means to increase retention of its strongest APPs.

The small sample size and unique characteristics of the organization limit the generalizability of these results to all healthcare organizations. The APPs at this IDHS do not have productivity requirements associated with their income; for organizations with productivity based salary structures the barrier results could be different. The respondents scored high in organizational commitment, indicating these employees are the high performers, who are more likely to participate in organizational activities outside the role minimums which can skew the results regarding the mentoring of needs of employees scoring high in the OCC. Additional areas for study include longitudinal career paths, patient outcomes related to a mentorship program, and patient care costs for mentored and non-mentored APPs. To meet the goals of the Quadruple Aim, healthcare organizations and providers must adapt the evidence from other professional disciplines; as well as conduct research, obtain data, and develop programs to serve as a benchmark for the growth of APP mentorship.

Conclusion

Mentorship has the potential to increase the APP's job satisfaction, which will strengthen organizational commitment and reduce turnover, potentially saving millions of healthcare dollars

spent on recruiting and training providers. Subsequently, a well-mentored APP will be a more

effective, integrated provider, further reducing healthcare costs, creating a self-propagating

mentorship culture, and improving patient outcomes. Patients will be the ultimate beneficiary of

well-mentored APPs with high levels of job satisfaction and organizational commitment, through

highly efficient teamwork, clear organizational communication, meeting (even exceeding)

quality measures, and continuity of care.

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Appendix A

Preliminary Searches of PubMed, Cochrane, and CINHAL Databases

Figure 1A. PubMed Searches

Figure 2A. Cochrane Searches

This search highlights the generalized use of the word mentor, especially when combined with satisfaction. Many of the articles retrieved were related to medication or therapy programs that paired patients who had a chronic disease with newly diagnosed patients.

Figure 3A. CINAHL Searches

Appendix B

Mentorship in Teaching or Business Management Databases

Figure 1B. ProQuest Database Searches

ProQuest

Basic Search   Advanced Search   Publications   Browse   Databases (14)

Recent Searches

To save a search, select **Save search** from the **Actions** menu. Learn more

| Combine searches: | | Search | Search tips |

Examples: 1 AND 3 or "6"
        (1 AND 3) OR (1 AND 2)
        3 NOT treatment

Items selected: 0   ☒ Delete   Save | Show all details| ⎙ Export all searches ▼

	Set ▼	Search	Databases	Results	Actions
☐	S5	⊞ novice AND (mentor OR mentorship OR coach) AND (satisfaction OR turnover OR attrition) ✓ Limits applied	16 databases	1,664*	Actions ▼
☐	S4	⊞ novice AND (mentor OR mentorship OR coach) AND (satisfaction OR turnover OR attrition)	16 databases	58,669*	Actions ▼
☐	S3	⊞ novice AND (mentor or mentorship or coach) AND (satisfaction or turnover or attrition)	55 databases	59,956*	Actions ▼
☐	S2	⊞ novice AND (mentorship or mentor or coach) AND (satisfaction or turnover or attrition)	PsycINFO	81*	Actions ▼
☐	S1	⊞ Novice AND (mentorship or mentor or coach) AND (satisfaction or turnover or attrition)	ERIC	83*	Actions ▼

* Duplicates are removed from your search, but included in your result count. ❶

* Duplicates are removed from your search and from your result count.

Appendix C

APP Mentorship in Dissertation and Thesis Database

Figure 1C. ProQuest Dissertation and Thesis Database

Appendix D

Search of CINHAL Database

Figure 1D. CINHAL Search including Residency Programs

This search also reflects the widespread and varied use of the words residency or fellowship, as

well as the popularity of registered nurse residency programs.

Appendix E

Final Search of Healthcare Databases

Figure 1E. Final PubMed search

Figure 2E. Final CINHAL search

Figure 3E. Final MEDLINE and PsycINFO search

Appendix F

Final Search of Business Management and Education Databases

Figure 1F. ABI/INFORM Database Search

Figure 2F. ERIC Database Search

Appendix G

Mentorship Research Studies Evaluation Summary

Table 1G.

Evaluation Table

Citation 1	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Horner, D. (2017). Mentoring: Positively influencing job satisfaction and retention of new hire nurse practitioners. Country: USA Funding: NS Bias: none	Watson's Caring Model (1988)	Cross-Sectional Survey- Mixed methods, Convenience Sample Purpose: Does M positively influence NP JS?	N=69 n=37 P=NS Reg Setting: PC, H Inclusion- C NP, English Speaking Exclusion – other APPs	IV$_1$-M IV$_2$ -MQ DV- JS Variables: YNP, YRN, Sp, D, G, E	MNPJSS – 2001- Cronbach's α 0.96(entire scale) 0.79 to 0.94 (subscales). NST MQ OEQ	One-way ANOVA Cross tabulation	M = +JS 4.4 vs 4.39 27% provided M at hire Of 73% w/o M, 100% would have liked M 100% rate M beneficial M themes -constructive feedback -shared knowledge -encouraged -availability	LOE: VI Demographics generalizable to NPs, not PAs. Any form or length of M perceived as valuable Weakness: Small, regional study, recall based –2/3 participants on their job over 3 years. Lots of %, $\overline{x}$, and tables, but unable to

Key: **A**-Autonomy; **adm**-administration; **ATS**-Anticipated Turnover Scale; **C**-certified; **CCS**-Cross Sectional Survey; **D**-Degree; **DV**-dependent variable; **FNP**-Family Nurse Practitioner; **FM**-Formal Mentoring; **G**-Gender; **H**-Hospital; **IM**-Informal Mentoring; **IV**-independent variable; **JS**-Job Satisfaction; **M**-mentor/mentorship; **m**-months of practice; **MATCMEC**-Meyers & Allen's Three Component Model of Employee Commitment; **MBI**-Maslach Burnout Inventory; **MF**-Mentoring Functions; **MFQ9**-Mentoring Functions Questionnaire; **MMM**-Multidimensional Mentoring Measure; **MNPJSS**-Misner Nurse Practitioners Job Satisfaction Survey; **MQ**-Mentorship Quality; **N**-number of sample size; **n**-number of final participants; **NP**-Nurse Practitioner; **NS**-Not Stated; **NST**-Nonstandard Tool; **Ntl**-National; **OC**-Organizational Commitment; **OEQ**-Open-Ended Questions; **OSI** -Organizational Socialization Inventory; **P**-Power; **PA**- Physician Assistant; **PC**-Primary Care; **QMRS**-Quality of Mentoring Relationship Scale; **RA**-Role Ambiguity; **RAS**-Role Ambiguity Scale; **rec**-recruitment; **Reg**-Regional; **RN**-Registered Nurse; **sig**-significant; **Sp**-Specialty; **SSQ6**-Social Support Questionnaire Short Version; **TI**-Turnover Intent; **WLC**-Work-Life Conflict; **Y**-Years of Practice;

							Reasons for Not M -productivity demands -too many residents -specialty practice	calculate correlations
Citation 2	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Faraz, A. (2016). Novice nurse practitioner workforce transition and turnover intention in primary care. Country: USA Funding: NS Bias:	NS (3-compenent model or TCM)	Descriptive CSS, online rec & adm, Convenience sample of accredited Master's programs graduates Purpose: 1. Describe individual characteristics, role acquisition & JS of NPs. 2. Identify factors of successful Y1 and TI.	N=293 n=177 80%P w/ 5% sig =131 Ntl Setting: PC, Inclusion - YNP - 3m-1y Exclusion - NS	IV-JS, A, RA DV- TI Variables: YRN, D, M, G, Sp	MNPJSS -2001- Cronbach's α 0.96(entire scale) 0.79 to 0.94 (subscales). ATS – Cronbach's α per developer 0.84, per 2010 meta analysis w/ RN 0.89 per DeMilt study 0.68 SSQ6 Cronbach's α 0.90-0.93 RAS Cronbach's α 0.84	Hierarchical multiple regression analysis	IV – A $p=.001$ IV – RA $p=.03$ R^2=0.476 MNPJSS = $\overline{x}$4.43 moderate JS M -no sig impact on TI or JS 77% desired M or residency	LOE: VI Adequate sample size. States balance of M & A needed. RA needs M. Weakness: State distribution not reported, could impact A and thus JS and TI

Citation 3	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
DeMilt, D. (2011). Nurse practitioners' job satisfaction and intent to leave current positions, the nursing profession, and the nurse practitioner role as a direct care provider. Country: USA Funding: NS Bias: self-selected participants	NS (3-compenent model or TCM)	Descriptive CSS, Convenience Sample of those who approached rec table at ntl conference Purpose: Describe NP JS effect on TI	N=35,000 n=254 P=NS Ntl Setting: PC, H Inclusion YNP->6m Excluded – nonworking, or not in direct patient care	IV-JS DV- TI Variables: YRN, YNP, D,	MNPJSS -2001- Cronbach's α 0.96(entire scale) 0.79 to 0.94 (subscales). ATS – Cronbach's α per developer 0.84, per this study 0.68, per 2010 meta analysis w/ RN 0.89	t-test	IV JS MNPJSS = $\overline{x}$ 4.05 +TI $\overline{x}$ 4.63 -TI p <.001 Reasons for leaving job 19% lack of colleague relationship 20% little practice control 22% not valuable team member	LOE: VI Sig finding of dissatisfaction increasing intent to leave. 2/3 of reasons could be helped with M Weakness – Participating NPs may have had unknown motivation to approach booth/participate

Key: **A**-Autonomy; **adm**-administration; **ATS**-Anticipated Turnover Scale; **C**-certified; **CCS**-Cross Sectional Survey; **D**-Degree; **DV**-dependent variable; **FNP**-Family Nurse Practitioner; **FM**-Formal Mentoring; **G**-Gender; **H**-Hospital; **IM**-Informal Mentoring; **IV**-independent variable; **JS**-Job Satisfaction; **M**-mentor/mentorship; **m**-months of practice; **MATCMEC**-Meyers & Allen's Three Component Model of Employee Commitment; **MBI**-Maslach Burnout Inventory; **MF**-Mentoring Functions; **MFQ9**-Mentoring Functions Questionnaire; **MMM**-Multidimensional Mentoring Measure; **MNPJSS**-Misner Nurse Practitioners Job Satisfaction Survey; **MQ**-Mentorship Quality; **N**-number of sample size; **n**-number of final participants; **NP**-Nurse Practitioner; **NS**-Not Stated; **NST**-Nonstandard Tool; **Ntl**-National; **OC**-Organizational Commitment; **OEQ**-Open-Ended Questions; **OSI** -Organizational Socialization Inventory; **P**-Power; **PA**- Physician Assistant; **PC**-Primary Care; **QMRS**-Quality of Mentoring Relationship Scale; **RA**-Role Ambiguity; **RAS**-Role Ambiguity Scale; **rec**-recruitment; **Reg**-Regional; **RN**-Registered Nurse; **sig**-significant; **Sp**-Specialty; **SSQ6**-Social Support Questionnaire Short Version; **TI**-Turnover Intent; **WLC**-Work-Life Conflict; **Y**-Years of Practice;

Citation 4	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Bartley-Daniele., P. (2014). Family nurse practitioner mentoring relationships' impact on organizational commitment. Country: USA Funding: NS Bias: none	Kram's (1985 Mentoring Theory, Meyer & Allen's (1997) Organizational Commitment Model	CSS Postal/Email survey of AANP members Purpose: Determine M, MQ, MF's effect on OC	N= 1500 n=403 n M=203 n w/oM=178 P=127 Ntl Setting: PC FNP Inclusion – Y1, fulltime employment Exclusion – dual C	IV_1-M IV_2 -MQ IV_3-MF IV_4-IM/FM DV- OC Variables:	MATCMEC – Cronbach's α affective 0.85 continuance 0.79 normative 0.73 MFQ9 Cronbach's α 0.91 0.82-0.85 (subscales) QMRS Cronbach's α 0.88	ANOVA, MANOVA, descriptive analysis, Pearson's correlations	IV_1 M Affective p = .003 Continuance p = Nsig Normative p = 0.14 IV_2 MQ Affective p < .001 Continuance p = Nsig Normative p = 0.11 IV_3 MF Affective p < .001 Continuance p = Nsig Normative p = Nsig IV_4 IM/FM Affective p = .029 Continuance p = Nsig Normative p = 0.30	LOE: VI M increases affective & normative OC, Nsig of continuance OC maybe related to challenges in TTP. Format of mentoring less important than presence of mentoring. Weakness: Recall based, average 9 yrs of practice, M NP maybe more likely to respond. Only FNP included, maynot apply to specialities. Maynot apply to DNP (3% of study size)

Key: **A**-Autonomy; **adm**-administration; **ATS**-Anticipated Turnover Scale; **C**-certified; **CCS**-Cross Sectional Survey; **D**-Degree; **DV**-dependent variable; **FNP**-Family Nurse Practitioner; **FM**-Formal Mentoring; **G**-Gender; **H**-Hospital; **IM**-Informal Mentoring; **IV**-independent variable; **JS**-Job Satisfaction; **M**-mentor/mentorship; **m**-months of practice; **MATCMEC**-Meyers & Allen's Three Component Model of Employee Commitment; **MBI**-Maslach Burnout Inventory; **MF**-Mentoring Functions; **MFQ9**-Mentoring Functions Questionnaire; **MMM**-Multidimensional Mentoring Measure; **MNPJSS**-Misner Nurse Practitioners Job Satisfaction Survey; **MQ**-Mentorship Quality; **N**-number of sample size; **n**-number of final participants; **NP**-Nurse Practitioner; **NS**-Not Stated; **NST**-Nonstandard Tool; **Ntl**-National; **OC**-Organizational Commitment; **OEQ**-Open-Ended Questions; **OSI** -Organizational Socialization Inventory; **P**-Power; **PA**- Physician Assistant; **PC**-Primary Care; **QMRS**-Quality of Mentoring Relationship Scale; **RA**-Role Ambiguity; **RAS**-Role Ambiguity Scale; **rec**-recruitment; **Reg**-Regional; **RN**-Registered Nurse; **sig**-significant; **Sp**-Specialty; **SSQ6**-Social Support Questionnaire Short Version; **TI**-Turnover Intent; **WLC**-Work-Life Conflict; **Y**-Years of Practice;

Citation 5	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Kim, J. (2017). Work-life conflict of married and childless single female workers. Country: S. Korea Funding: NS Bias: None	NS (Organizational Culture Theory, Work-Family Conflict Construct)	CSS Purpose: Examine M role OC, WLC, in a male-dominated culture	N= 325 n=288 P=NS Natl Setting: 6 companies w/ >1000 employees Inclusion: Female Exclusion: Male, single Female w/children	IV_1-M IV_2-WLC DV- OC Variables: E, Y employed, Age, Marital status	MATCMEC Cronbach's α affective 0.85 continuance 0.79 normative 0.73 Ahmad's (2011) WLC Cronbach's α 0.74 Noe's (1988) MF Scale Cronbach's α = 0.92 0.79-0.85 (subscales)	t-test linear regression, hierarchical moderated regressions	IV_1-M $p < .001$ IV_2-WLC $p < .001$ -role model work-life balance & professionalism -gender/role definitions	LOE: VI WLC negatively impacts OC, but M mitigates it. The presence of M increases OC. Female NP, 2/3 physicians are male Weakness: Overall education less, and culture different from US
Citation 6	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Pathak, D. (2017). Understanding the role of	Kram's (1985) Mentoring Theory	CSS	N= 200 n=200 P=NS	IV_1-M DV- JS	MMM Cronbach's α = 0.93	Regression analysis, t-test, Tukey's	IV_1-M $R= 0.74; p > .0.05$	LOE: VI Employees need both autonomy

Key: **A**-Autonomy; **adm**-administration; **ATS**-Anticipated Turnover Scale; **C**-certified; **CCS**-Cross Sectional Survey; **D**-Degree; **DV**-dependent variable; **FNP**-Family Nurse Practitioner; **FM**-Formal Mentoring; **G**-Gender; **H**-Hospital; **IM**-Informal Mentoring; **IV**-independent variable; **JS**-Job Satisfaction; **M**-mentor/mentorship; **m**-months of practice; **MATCMEC**-Meyers & Allen's Three Component Model of Employee Commitment; **MBI**-Maslach Burnout Inventory; **MF**-Mentoring Functions; **MFQ9**-Mentoring Functions Questionnaire; **MMM**-Multidimensional Mentoring Measure; **MNPJSS**-Misner Nurse Practitioners Job Satisfaction Survey; **MQ**-Mentorship Quality; **N**-number of sample size; **n**-number of final participants; **NP**-Nurse Practitioner; **NS**-Not Stated; **NST**-Nonstandard Tool; **Ntl**-National; **OC**-Organizational Commitment; **OEQ**-Open-Ended Questions; **OSI**-Organizational Socialization Inventory; **P**-Power; **PA**-Physician Assistant; **PC**-Primary Care; **QMRS**-Quality of Mentoring Relationship Scale; **RA**-Role Ambiguity; **RAS**-Role Ambiguity Scale; **rec**-recruitment; **Reg**-Regional; **RN**-Registered Nurse; **sig**-significant; **Sp**-Specialty; **SSQ6**-Social Support Questionnaire Short Version; **TI**-Turnover Intent; **WLC**-Work-Life Conflict; **Y**-Years of Practice;

demographic diversity on mentoring and job satisfaction: A study on managers in information technology (IT) industry in India. Country: India Funding: NS Bias: None	(Organizational Culture Theory)	Purpose: Understand the relationship between M and JS, and diversity's role in M satisfaction and JS	Ntl Setting: Private IT sector companies with mentor policies, managers,	Variables: G, Age, Management Level	NST JS (modified/combined 2 scales)	multiple comparisons	M - No gender differences	and support for JS and to increase OC. States need for design of M guides. Service industry employees backbone – JS increases business success Weakness – self-reporting and limited geographic area, outside of US
Citation 7	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
DeAngelis, K. (2013). The impact of preservice preparation and early career support on novice teachers' career intentions and decisions.	NS (Organizational Development Theory, Career Cycles Theory)	CSS & Longitudinal administrative data Purpose: Examine interactions of preservice preparation and career support on	N= 2,221 n= 1,159 P=NS Reg Setting: Y1 teachers public school	IV$_1$-M IV$_2$ -MQ DV- TI Variables: G, Sp, same Sp M,	NST survey – collaboration of school systems	Descriptive statistics, MANOVA, predicated probabilities	IV$_1$-M $p < .05$ same subject & high MQ Nsig different subject or poor MQ IV$_2$ -MQ $p < .001$ high MQ Nsig poor MQ	LOE: VI Quality is more important than M availability. Subject specialty improved quality of M. Weakness:

Key: **A**-Autonomy; **adm**-administration; **ATS**-Anticipated Turnover Scale; **C**-certified; **CCS**-Cross Sectional Survey; **D**-Degree; **DV**-dependent variable; **FNP**-Family Nurse Practitioner; **FM**-Formal Mentoring; **G**-Gender; **H**-Hospital; **IM**-Informal Mentoring; **IV**-independent variable; **JS**-Job Satisfaction; **M**-mentor/mentorship; **m**-months of practice; **MATCMEC**-Meyers & Allen's Three Component Model of Employee Commitment; **MBI**-Maslach Burnout Inventory; **MF**-Mentoring Functions; **MFQ9**-Mentoring Functions Questionnaire; **MMM**-Multidimensional Mentoring Measure; **MNPJSS**-Misner Nurse Practitioners Job Satisfaction Survey; **MQ**-Mentorship Quality; **N**-number of sample size; **n**-number of final participants; **NP**-Nurse Practitioner; **NS**-Not Stated; **NST**-Nonstandard Tool; **Ntl**-National; **OC**-Organizational Commitment; **OEQ**-Open-Ended Questions; **OSI** -Organizational Socialization Inventory; **P**-Power; **PA**- Physician Assistant; **PC**-Primary Care; **QMRS**-Quality of Mentoring Relationship Scale; **RA**-Role Ambiguity; **RAS**-Role Ambiguity Scale; **rec**-recruitment; **Reg**-Regional; **RN**-Registered Nurse; **sig**-significant; **Sp**-Specialty; **SSQ6**-Social Support Questionnaire Short Version; **TI**-Turnover Intent; **WLC**-Work-Life Conflict; **Y**-Years of Practice;

	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Country: USA Funding: NS Bias: survey questions filled data gathering needs of school districts		novice teachers' career intentions					DV- TI Correlation of M frequency & MQ $r=.881$	No reason provided for completed TI – could be move out of state or to private school or poor JS
Citation 8	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Pogodzinski, B. (2015). Administrative context and novice teacher-mentor interactions. Country: USA Funding: NS Bias: None	NS (Organizational Theory of Leadership, Transformational Theory)	Cross-sectional Purposeful sample Purpose: Examine administration's role in M	N= 380 n=184 P=NS Reg Setting: 2 states & 11 school districts – 1 state req. Mx3y, 1 state req. Mx1y	IV_1-MQ IV_2-Adm Climate DV- Job roles DV_2-M contact frequency Variables: G, Yteaching,	NST MQ MF MBI Cronbach's α emotional 0.90 depersonalization 0.76 personal accomplishment 0.76	Logistic regression models, t-test	IV_1-MQ $p < .001$ IV_1-MQ $p < .05$ DV_1- Job roles DV_2-M contact frequency IV_2-Adm Climate $p < .001$ DV_1- Job roles IV_2-Adm Climate $p < .05$ DV_2-M contact frequency	LOE: VI Supportive adm climate increases frequency of contact with M. Weakness – other elements of school context could influence results, both states had required formal M programs (1y & 3yrs).

Key: **A**-Autonomy; **adm**-administration; **ATS**-Anticipated Turnover Scale; **C**-certified; **CCS**-Cross Sectional Survey; **D**-Degree; **DV**-dependent variable; **FNP**-Family Nurse Practitioner; **FM**-Formal Mentoring; **G**-Gender; **H**-Hospital; **IM**-Informal Mentoring; **IV**-independent variable; **JS**-Job Satisfaction; **M**-mentor/mentorship; **m**-months of practice; **MATCMEC**-Meyers & Allen's Three Component Model of Employee Commitment; **MBI**-Maslach Burnout Inventory; **MF**-Mentoring Functions; **MFQ9**-Mentoring Functions Questionnaire; **MMM**-Multidimensional Mentoring Measure; **MNPJSS**-Misner Nurse Practitioners Job Satisfaction Survey; **MQ**-Mentorship Quality; **N**-number of sample size; **n**-number of final participants; **NP**-Nurse Practitioner; **NS**-Not Stated; **NST**-Nonstandard Tool; **Ntl**-National; **OC**-Organizational Commitment; **OEQ**-Open-Ended Questions; **OSI** -Organizational Socialization Inventory; **P**-Power; **PA**- Physician Assistant; **PC**-Primary Care; **QMRS**-Quality of Mentoring Relationship Scale; **RA**-Role Ambiguity; **RAS**-Role Ambiguity Scale; **rec**-recruitment; **Reg**-Regional; **RN**-Registered Nurse; **sig**-significant; **Sp**-Specialty; **SSQ6**-Social Support Questionnaire Short Version; **TI**-Turnover Intent; **WLC**-Work-Life Conflict; **Y**-Years of Practice;

Citation 9	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Farnese, M. (2016). Learning the ropes: The protective roles of mentoring in a correctional police officers' socialization process Country: Italy Funding: Italian Ministry of Justice Bias: Vested interested in program success	Organizational socialization, Nonaka's (1994) dynamic model	CSS Mailed to University for anonymity Purpose: Role of FM on OC & TI	N= 396 n=117 P= Ntl Setting: Multiple correctional facilities	IV_1-FM DV_1- OC DV_2-TI Variables: G, D, Age Mentor-completed formal training & not supervisor	MATCMEC Cronbach's α affective 0.85 continuance 0.79 normative 0.73 OSI Cronbach's α 0.83	Moderated regression models,	IV_1-FM p =0.27 DV_1- OC IV_1-FM $p < .001$ DV_2-TI	LOE: VI OSI examines many aspects of M – all subscales sig Formalized training for M OSI indicates M creates culture of training Weakness Self-reporting, small sample size, contractual obligations limit TI

Key: **A**-Autonomy; **adm**-administration; **ATS**-Anticipated Turnover Scale; **C**-certified; **CCS**-Cross Sectional Survey; **D**-Degree; **DV**-dependent variable; **FNP**-Family Nurse Practitioner; **FM**-Formal Mentoring; **G**-Gender; **H**-Hospital; **IM**-Informal Mentoring; **IV**-independent variable; **JS**-Job Satisfaction; **M**-mentor/mentorship; **m**-months of practice; **MATCMEC**-Meyers & Allen's Three Component Model of Employee Commitment; **MBI**-Maslach Burnout Inventory; **MF**-Mentoring Functions; **MFQ9**-Mentoring Functions Questionnaire; **MMM**-Multidimensional Mentoring Measure; **MNPJSS**-Misner Nurse Practitioners Job Satisfaction Survey; **MQ**-Mentorship Quality; **N**-number of sample size; **n**-number of final participants; **NP**-Nurse Practitioner; **NS**-Not Stated; **NST**-Nonstandard Tool; **Ntl**-National; **OC**-Organizational Commitment; **OEQ**-Open-Ended Questions; **OSI** -Organizational Socialization Inventory; **P**-Power; **PA**- Physician Assistant; **PC**-Primary Care; **QMRS**-Quality of Mentoring Relationship Scale; **RA**-Role Ambiguity; **RAS**-Role Ambiguity Scale; **rec**-recruitment; **Reg**-Regional; **RN**-Registered Nurse; **sig**-significant; **Sp**-Specialty; **SSQ6**-Social Support Questionnaire Short Version; **TI**-Turnover Intent; **WLC**-Work-Life Conflict; **Y**-Years of Practice;

Citation 10	Conceptual Framework	Design/ Method/Sampling	Sample/ Setting	Major Variables Studies & Their Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Manzi, A. (2017). Mentorship & coaching to support strengthening healthcare systems: lessons learned across the five Population Health Implementation & Training (PHIT) partnership projects in sub-Sharan Africa. Country: Africa Funding: Doris Duke Charitable Foundation Bias: None	African Health Initiative Mentorship & Coaching	Mixed Method, Semi-structured interviews of key project informants & PHIT project literature review Purpose: Evaluation of M component of PHIT projects to improve quality of care	N= NS n=NS Ntl Setting: 5 PHIT project sites that implemented mentorship programs to improve health outcomes	IV=M DV=various health outcomes Variables: Priority areas, M training,	NST Questionnaire administered in one on one interviews	Conceptual Framework	-Each system has unique challenges but all show benefit with M -Improved service delivery & quality -Increased leadership & EPB skills -Increased workforce motivation	LOE: VI Part of larger study of PHIT, covering 7 years in underserved areas, using a variety of programs and correlated with health outcome measure. Weakness: No demographic data of "key informants", other factors in PHIT could account for successes

Key: **A**-Autonomy; **adm**-administration; **ATS**-Anticipated Turnover Scale; **C**-certified; **CCS**-Cross Sectional Survey; **D**-Degree; **DV**-dependent variable; **FNP**-Family Nurse Practitioner; **FM**-Formal Mentoring; **G**-Gender; **H**-Hospital; **IM**-Informal Mentoring; **IV**-independent variable; **JS**-Job Satisfaction; **M**-mentor/mentorship; **m**-months of practice; **MATCMEC**-Meyers & Allen's Three Component Model of Employee Commitment; **MBI**-Maslach Burnout Inventory; **MF**-Mentoring Functions; **MFQ9**-Mentoring Functions Questionnaire; **MMM**-Multidimensional Mentoring Measure; **MNPJSS**-Misner Nurse Practitioners Job Satisfaction Survey; **MQ**-Mentorship Quality; **N**-number of sample size; **n**-number of final participants; **NP**-Nurse Practitioner; **NS**-Not Stated; **NST**-Nonstandard Tool; **Ntl**-National; **OC**-Organizational Commitment; **OEQ**-Open-Ended Questions; **OSI**-Organizational Socialization Inventory; **P**-Power; **PA**-Physician Assistant; **PC**-Primary Care; **QMRS**-Quality of Mentoring Relationship Scale; **RA**-Role Ambiguity; **RAS**-Role Ambiguity Scale; **rec**-recruitment; **Reg**-Regional; **RN**-Registered Nurse; **sig**-significant; **Sp**-Specialty; **SSQ6**-Social Support Questionnaire Short Version; **TI**-Turnover Intent; **WLC**-Work-Life Conflict; **Y**-Years of Practice;

Appendix H

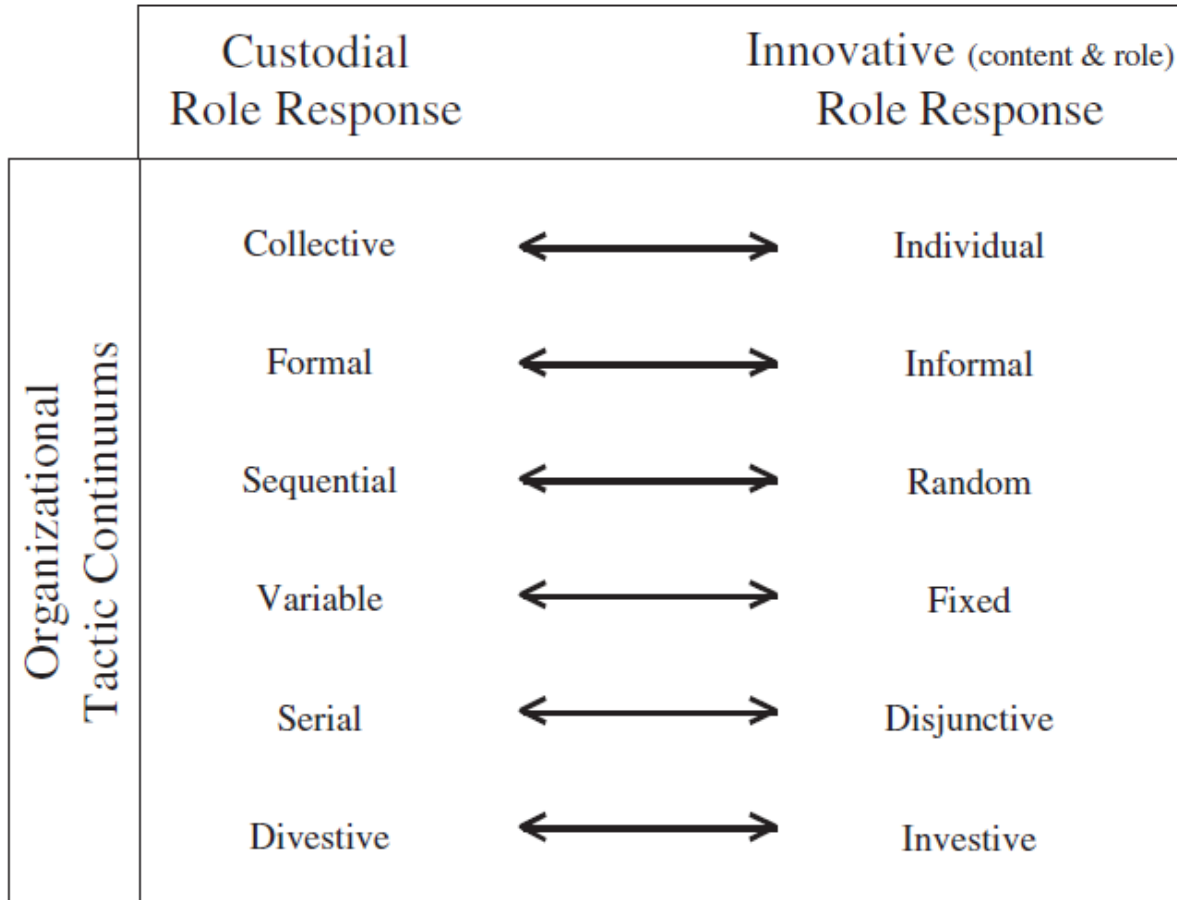Mentorship Research Studies Synthesis Summary

Table 1H.

Synthesis Table

Author/Year	Horner 2017	Faraz 2016	DeMilt 2011	Bartley-Daniele 2014	Kim 2016	Pathak 2017	DeAngelis 2013	Pogodzinski 2015	Farnese 2016	Manzi 2017
Industry	**N/n**	**N/n**	**N/n**	**N/n**	**N/n**	**N/n**	**N/n**	**N/n**	**N/n**	**N/n**
Healthcare	69/37	293/177	35K/254	1500/403						NS
Business					325/288	200/200				
Educational							2221/1159	380/184		
Correctional									396/117	
Demographics										
% Female		92.9%	97.6%	91.5%	100%	43%	79%	>80%	33%	NS
Age	$\bar{x}$ 48 (27-67)	$\bar{x}$ 35 (21->50)	$\bar{x}$ 47 (24-72)	$\bar{x}$ 49 (26-76)	79% 20-40 (20-61)	NS	$\bar{x}$ 27	NS	$\bar{x}$ 26	NS
Bachelors					43%	NS	NS	NS	4.6%	NS
Masters & Post Certif	86.5%	79.7%	90.1%	98%	5%					
>Doctorate	13.5%	5.1%	9.9%	3%						
Years Exp	$\bar{x}$ 11.5 (1-28)	<1	$\bar{x}$ 8.1 (1-35)	$\bar{x}$ 9.3 (1-44)			<2	<3	<1	
Years Current Job	<3 35.1% >3 64.9%	<3 100%	$\bar{x}$ 6.3 (0-35)		<3 52% >3 48%	0-5 34% 5-10 46% >10 20%	<2 100%	<3	<1	
Outcomes										
Job Satisfaction	↑	Nsig				↑				
Turnover Intent		Nsig					↓		↓	
Organizational Commitment				↑		↑			↑	↑
Themes										
Desire for Mentorship	+	+		+				+		
Role Definition	+	+		+	+	+	+	+	+	+
Work-life balance				+	+		+			
Program Type	B			B	F	F	B	F	F	F

Key: ↑or ↓ Effect of mentorship; **B**-Both Formal & Informal; **F**-Formal Mentorship Program; **I**-Informal Mentorship; **N**-number of sample size; **n**-number of final participants **NS**-Not stated; **Nsig**-Not statistically significant

Appendix I

Theoretical Framework and Evidence-Based Practice Model Diagrams

Figure 1I. The Theory of Organizational Socialization

Custodial Role Response		Innovative (content & role) Role Response
Collective	⟷	Individual
Formal	⟷	Informal
Sequential	⟷	Random
Variable	⟷	Fixed
Serial	⟷	Disjunctive
Divestive	⟷	Investive

Organizational Tactic Continuums

(Tuttle, 2002, p. 80)

Figure 2I. Application of Organizational Socialization and Mentorship Themes
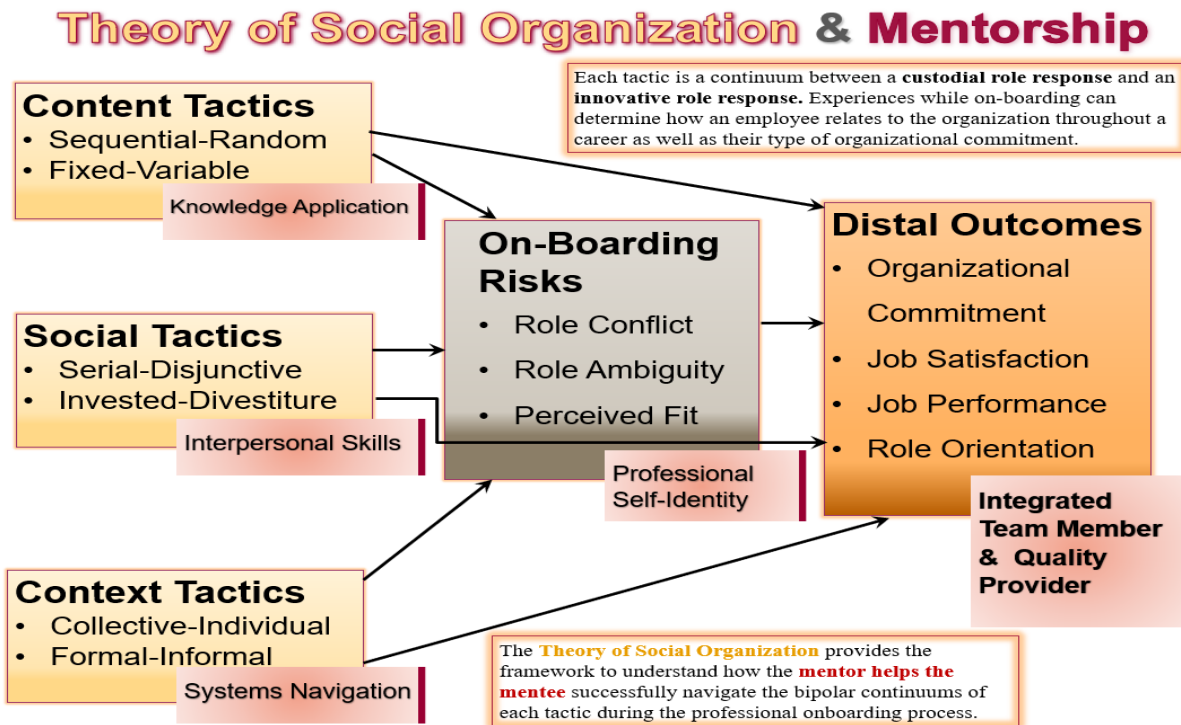
(Adapted from Saks, Uggerslev, & Fassina, 2007, p. 417)

Figure 3I. Meyer and Allen's Three Component Model of Employee Commitment

(Kreitner & Kinicki, 2013, p.164)

Figure 4I. The Stevens Star Model of Knowledge Transfer

Stevens Star Model of Knowledge Transformation   © 2015 Used with expressed permission
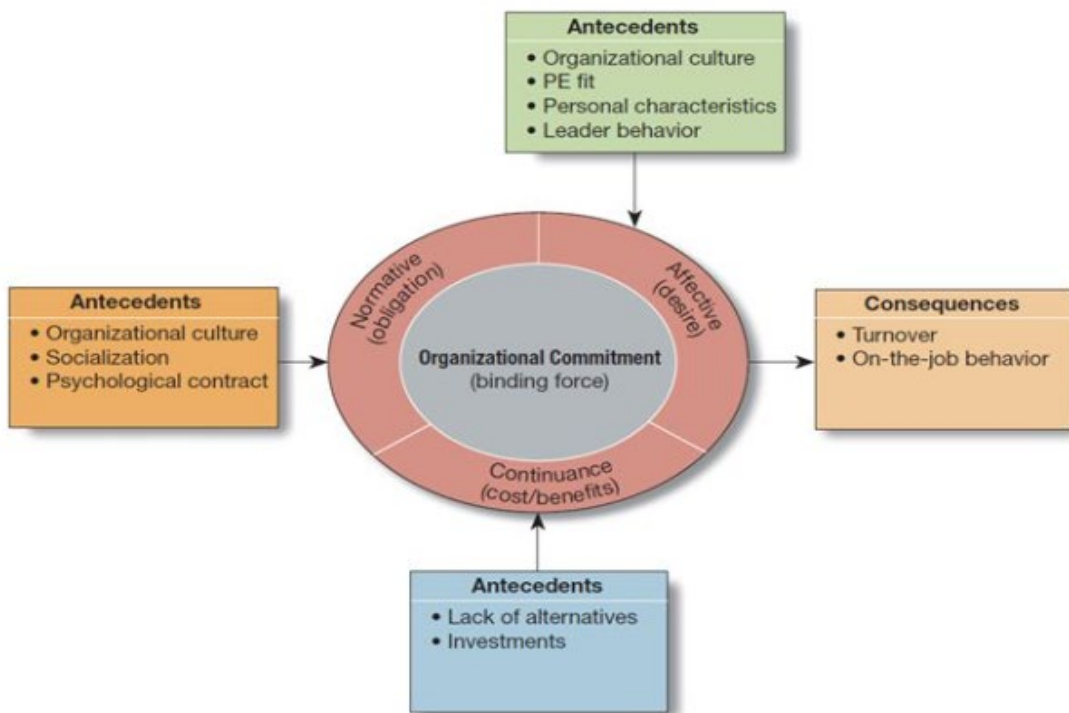
1

Discovery
Research

5   2

Process,
Outcome
Evaluation

Evidence
Summary

Practice
Integration

Translation
to Guidelines

4   3
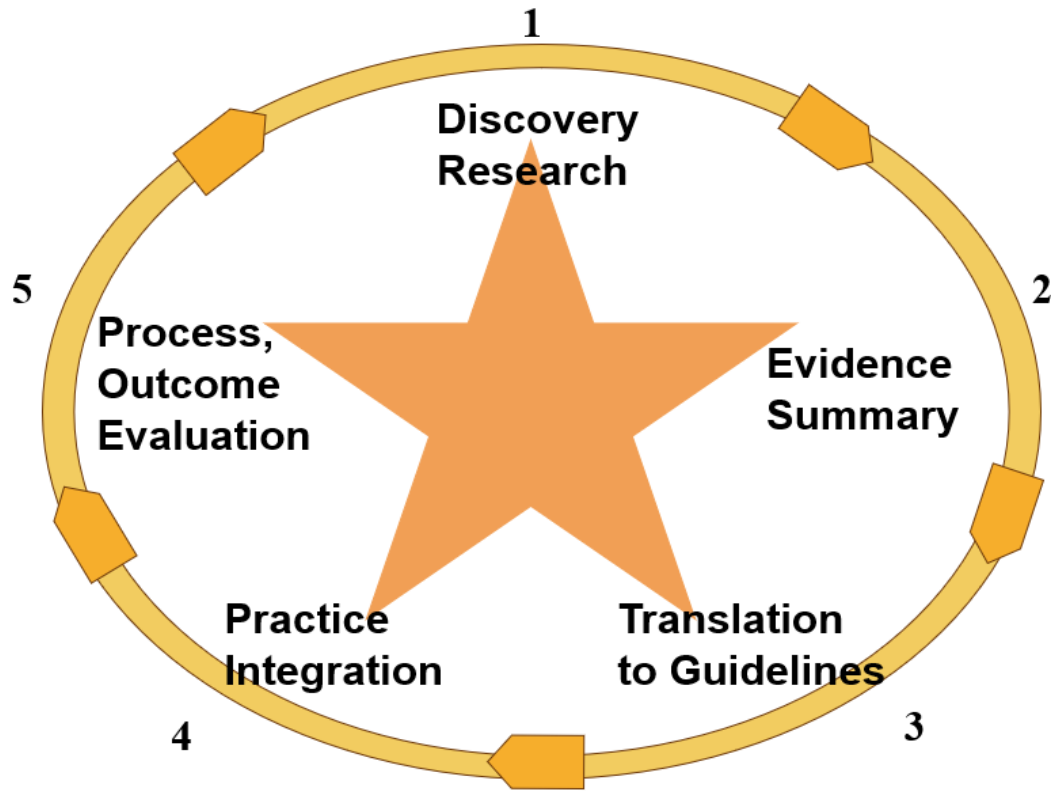
(©Stevens, 2015. Used with Permission)

Appendix J

Instrument Permission Letters

Figure 1J. MATCMEC Academic Subscription Notification

4/12/2019   Arizona State University Mail - TCM Employee Commitment Survey - File Download is now Available!

ASU   Deb White <dohay@asu.edu>

TCM Employee Commitment Survey - File Download is now Available!
1 message

InnoVerify <no-reply@innoverify.ca>   Wed, Apr 11, 2018 at 8:32 PM
Reply-To: InnoVerify <no-reply@innoverify.ca>
To: deb.white@asu.edu

Hello Deb ,

Thank you for your purchase of Academic License. You may log in to download the product at this URL:
http://innoverify.com/shop/download/?pid=54dcf78c2007a

Log in using your email address above. Your access password has been set to:

Please save this message, or the URL for future reference.

Regards,
TCM Employee Commitment Survey

Why are you receiving this email?
You have recently purchased or requested access to Academic License at TCM Employee Commitment Survey. The
registration, transaction and access to your product is protected securely via the InnoVerify - Gateway to Secured
Innovations Online portal.

Still have questions?
Please contact a representative at TCM Employee Commitment Survey.

Figure 2J. MFQ9 Permission Letter

ASU

Deb White <dohay@asu.edu>

Permission to use MFQ9
2 messages

Deb White <dohay@asu.edu>   Mon, Jul 16, 2018 at 10:51 AM
Reply-To: deb.white@asu.edu
To: scandura@miami.edu

Hi Dr. Scandura,

I am in Arizona State University's Doctor of Nursing Practice - Family Nurse Practitioner program. For my doctoral project, *Mentorship Matters: Understanding the Impact of Mentoring on Advanced Practice Providers,* I am proposing mentorship as a means to improve job satisfaction, retention, and performance, beginning with an examination of the characteristics of strong mentors and barriers to mentorship. I believe that well-mentored nurse practitioners and physician assistants will ultimately reduce healthcare costs and improve health outcomes. As part of my initial survey of needs and experiences, I would like to use your *Mentoring Functions Questionaire (MFQ-9).* Please reply to this email with your permission statement and any comments you would like to share.

Also, if you are aware of any validated instruments examining barriers to mentorship, I would appreciate your information on those. At this time, I am planning on open-ended questions to obtain the participants' perception of barriers.

Thank you for your consideration in this matter. If you would like copies of any of my papers thus far or in the future related to this project, please let me know.

Thanks,
Deb White, RN, MSN/MHA
DNP-FNP student, 3rd-year student
GNO Mentorship Co-Chair & Committee Rep
deb.white@asu.edu
920-948-1080 (cell)
480-219-6646

Scandura, Teresa Anne <scandura@miami.edu>   Mon, Jul 16, 2018 at 2:31 PM
To: "deb.white@asu.edu" <deb.white@asu.edu>

Dear Deb,

The MFQ-9 is available for dissertation research.

Best regards,

Terri

Terri A. Scandura
Professor of Management
University of Miami

[Quoted text hidden]

Figure 3J. PBM Permission Letter

ASU   Deb White <dohay@asu.edu>

Permission to Use Perceived Barriers to Mentorship Scale
2 messages

Deb White <dohay@asu.edu>   Mon, Jul 16, 2018 at 11:04 AM
Reply-To: deb.white@asu.edu
To: ragins@uwm.edu

Hi Dr. Ragins,

I am in Arizona State University's Doctor of Nursing Practice - Family Nurse Practitioner program. For my doctoral project, *Mentorship Matters: Understanding the Impact of Mentoring on Advanced Practice Providers*, I am proposing mentorship as a means to improve job satisfaction, retention, and performance, beginning with an examination of the characteristics of strong mentors and barriers to mentorship. I believe that well-mentored nurse practitioners and physician assistants will ultimately reduce healthcare costs and improve health outcomes. As part of my initial survey of needs and experiences, I would like to use your *Perceived Barriers to Mentoring* assessment tool that appeared in the *Acadamy of Management Journal, 1991,34 (4)*. If you have an updated version or further validity data on this tool I would appreciate learning about it. Please reply to this email with your permission statement and any comments you would like to share.

Also, I happen to be back in Watertown, WI through July 25 if you would have any time available to discuss mentorship research in more detail. I found it interesting that you also received a degree where I earned my BSN - UT-Knoxville! And now you are an hour away from me!

Thank you for your consideration in this matter. If you would like copies of any of my papers thus far or in the future related to this project, please let me know.

Thanks,
Deb White, RN, MSN/MHA
DNP-FNP student, 3rd-year student
GNO Mentorship Co-Chair & Committee Rep
deb.white@asu.edu
920-948-1080 (cell)
480-219-6646

Belle Rose Ragins <ragins@uwm.edu>   Mon, Jul 16, 2018 at 1:45 PM
To: "deb.white@asu.edu" <deb.white@asu.edu>

Dear Ms White

Thank you for your interest in our measure. You have my permission to use it. I've also attached some recent work that may be of interest to you

Good luck with your research!!

Belle

p.s. I'm out of town for the month of July -- but hope you enjoy your stay in Wisconsin! Much cooler than Arizona!

[Quoted text hidden]
Dr. Belle Rose Ragins
Professor of Human Resource Management
Sheldon B. Lubar School of Business
University of Wisconsin-Milwaukee
3202 N. Maryland Avenue
Milwaukee, Wisconsin 53211

Appendix K

Complete Survey

ASU
College of Nursing
& Health Innovation
ARIZONA STATE UNIVERSITY

APP Mentorship Survey

1. Demographics

This demographic data will help determine the relationships among various factors associated with mentorship.

As stated in the consent email received with your link to this survey, you may skip any question or questions you do not feel comfortable answering.

Answer the following general demographic and background questions by clicking the appropriate answer or by filling in the text box.
All of your answers are confidential. No-one at BMDACC has access to individual survey responses. Only compiled data will be provided in the final reporting of the survey analysis.

1. What is your age? (type in whole number only)

2. What is your gender

○ Female
○ Male
○ Other (please specify)

3. What is the highest degree you have earned?

○ Bachelor degree
○ Master degree
○ Doctorate

1

4. Which Advanced Practice Provider (APP) license do you hold?

○ Nurse Practitioner

○ Physician Assistant

5. How many years did you practice as a RN

[   ]

6. How long have you worked as an APP?

○ Less than 1 year   ○ 13 - 17 years

○ 1 -3 years   ○ 17 - 20 years

○ 4 - 8 years   ○ More than 20 years

○ 8 - 12 years

7. How long have you worked for Banner MD Anderson Cancer Center (BMDACC)?

○ <6 months

○ 6 months to 2 years

○ 2 to 5 years

○ 5+ years

8. Have you worked as an APP for any other organizations?

○ Yes

○ No

9. In your opinion is a preceptor the same as a mentor?

○ Yes

○ No

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DEFINITION - For the purposes of this study - a **mentor** is a more **experienced person who helps a newer professional with professional identity, role integration, systems navigation, and organizational socialization**, which are skills that cannot be taught in a didactic fashion but must be learned and practiced under the guidance of the more experienced peer, or mentor. A **preceptor** is typically a fellow employee tasked with showing a new employee policies and procedures and providing some **introductions.** Preceptors also often have an evaluation role that can impact the new employee's job security. While a preceptor relationship can develop into a mentoring relationship, not all precepting is mentoring. **When answering the following questions please consider only the professional relationships that do NOT have an evaluation or supervisory aspect.**

10. Have you ever had a mentor (see definition above) in your APP career?

○ Yes

○ No

11. Have you ever been a mentor (see definition above) in your APP career?

○ Yes

○ No

12. What type of mentorship relationship(s) have you experienced? Please select ALL that apply.

- [ ] Formal, arranged by someone else
- [ ] Informal, established by mentor or mentee
- [ ] Within the same organization (mentor & mentee in same organization)
- [ ] External to employer or school (mentor & mentee in different organizations)
- [ ] I have not had any mentoring relationships

13. I have/had a mentoring relationship when I was hired at BMDACC.

- ( ) Yes
- ( ) No

14. Do you have any teaching or education experience?

- ( ) Yes (please describe below)
- ( ) No

Please describe your education or teaching experiences.

[   ]

15. Do you have any teaching or education training or certifications?

- ( ) Yes (please describe below)
- ( ) No

Please describe the training or certification

[   ]

16. Feel free to share a brief description of any prior mentoring experiences

APP Mentorship Survey

2. **Meyer & Allen Organizational Commitment Scale**

Your answers are confidential. No one at BMDACC can access specific survey data. Only compiled data is provided to BMDACC.

Listed below is a series of statements that represent feelings that individuals might have about the company or organization for which they work. With respect to your own feelings about the particular organization for which you are now working, please indicate the degree of your agreement or disagreement with each statement by clicking the appropriate choice below each question.

1. I would be very happy to spend the rest of my career with BMDACC.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

2. I enjoy discussing BMDACC with people outside of it.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

3. I really feel as if BMDACC's problems are my own.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

4. I think that I could easily become as attached to another organization as I am BMDACC.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

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5. I do not feel like "part of the family" at BMDACC.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

6. I do not feel "emotionally attached" to BMDACC.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

7. BMDACC has a great deal of personal meaning for me.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

8. I do not feel a strong sense of belonging to BMDACC.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

9. I am not afraid of what might happen if I quit my job without having another one lined up.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

10. It would be very hard for me to leave BMDACC right now, even if I wanted to.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

11. Too much in my life would be disrupted if I decided I wanted to leave BMDACC now.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

12. It wouldn't be too costly for me to leave BMDACC now.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

13. Right now, staying with BMDACC is a matter of necessity as much as desire.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

14. I feel that I have too few options to consider leaving BMDACC.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

15. One of the few serious consequences of leaving BMDACC would be the scarcity of available alternatives.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

16. One of the major reasons I continue to work for BMDACC is that leaving would require considerable personal sacrifice - another organization may not match the overall benefits I have here.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

17. I think that APPs these days move from company to company too often.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

18. I do not believe that an APP must always be loyal to his or her organization.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

19. Jumping from organization to organization does not seem at all unethical to me.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

20. One of the major reasons I continue to work for BMDACC is that I believe that loyalty is important and therefore feel a sense of moral obligation to remain.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

21. If I got another offer for a better job elsewhere I would not feel it was right to leave BMDACC.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

22. I was taught to believe in the value of remaining loyal to one's organization.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

23. Things were better in the days when people stayed with one organization for most of their careers.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

24. I do not think wanting to be "company person" is sensible anymore.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

APP Mentorship Survey

3. Mentor Functions Quality

Your answers are confidential. No one at BMDACC can access specific survey data. Only aggregated data is provided to BMDACC.

Listed below is a series of statements that represent possible qualities or attributes found in a mentoring relationship. With respect to your own feelings about effective mentorship, please indicate the degree of your agreement or disagreement with each statement by clicking the appropriate choice below each question.

If you have had multiple mentoring relationships throughout your career(s), please think of the one involving APPs. If you have not had an APP mentoring relationship, think about any mentoring relationship in your career that you feel was successful.

1. My mentor takes a personal interest in my career.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

2. My mentor helps me coordinate professional goals.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

3. My mentor has devoted special time and consideration to my career.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

4. I share personal problems with my mentor.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

5. I exchange confidences with my mentor.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

6. I consider my mentor to be my friend.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

7. I try to model my behavior after my mentor.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

8. I admire my mentor's abiity to motivate others.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

9. I respect my mentor's abiity to teach others.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

10. Please rank the following mentoring role-development qualities or skills from most valuable (1) to least valuable (5)

		Teaching
		Clinical skills
		Organizational knowledge
		Time management
		Patient relationship or bedside mannerisms

11. Please rank the following mentoring career development qualities or skills from most valuable (1) to least valuable (5)

		Professional knowledge
		Goal setting
		Networking
		Providing challenges for mentee
		Similar educational backgrounds

12. Please rank the following mentoring psychosocial qualities or skills from most valuable (1) to least valuable (5)

		Be of the same gender
		Friendship
		Emotional support
		After work hours availability
		Motivational support

13. Describe the ideal APP mentoring relationship

APP Mentorship Survey

4. **Barriers to Mentorship**

Question 1 is an open-ended question for you to share your thoughts. **Your answers are confidential** and no one at BMDACC has access to the specific answers. Only aggregated data is provided in the final report.

Questions 2 through 27 are a series of statements that represent possible barriers to mentoring relationships. With respect to your own feelings about mentorship, please indicate the degree of your agreement or disagreement with each statement by clicking the appropriate choice below each question.

1. Before proceeding to the following questions, **please share your thoughts** in the box below on what **barriers you feel are present when considering mentorship for the APP.**

2. I am prevented from obtaining a mentoring relationship because of a **lack of opportunity to meet** potential mentors.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

3. I am prevented from obtaining a mentoring relationship because of the **lack of opportunity to develop relationships** with potential mentors.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

4. I am prevented from obtaining a mentoring relationship because of a **shortage of potential mentors.**

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

5. I am prevented from initiating a relationship with a mentor because there is a **lack of access to potential mentors**.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

6. I am prevented from initiating a relationship with a mentor because **I am uncomfortable taking an assertive role in approaching** a potential mentor.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

7. I am prevented from initiating a relationship with a mentor because I am **afraid of being rejected** by a potential mentor.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

8. I am prevented from initiating a relationship with a mentor because I am afraid that a **potential mentor may be "put off"** by such as advancement.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

9. I am prevented from initiating a relationship with a mentor because I believe that it is up to the **mentor to make the first move**.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

10. I am prevented from initiating a relationship with a mentor because potential mentors are **unwilling to develop a relationship** with me.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

11. I am prevented from initiating a relationship with a mentor because potential mentors are unwilling to develop a relationship with me **because of *my* gender.**

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

12. I am prevented from obtaining a mentoring relationship because potential mentors are unwilling to develop a relationship with me **because of *their* gender.**

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

13. I am prevented from obtaining a mentoring relationship because potential mentors **lack the time to develop a mentoring relationship** with me.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

14. I am prevented from obtaining a mentoring relationship because potential mentors **don't notice me**.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

15. I am prevented from obtaining a mentoring relationship because *supervisors* **would disapprove** if I entered a mentoring relationship.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

16. I am prevented from obtaining a mentoring relationship because *coworkers* **would disapprove** if I entered a mentoring relationship.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

17. I am prevented from initiating a mentoring relationship because my *immediate supervisor* **would disapprove** of me initiating a mentoring relationship.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

18. I am prevented from initiating a mentoring relationship because **my co-workers may disapprove** of me initiating a mentoring relationship.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

19. I am prevented from initiating a mentoring relationship because such an approach may be **misinterpreted as a sexual advance** by a potential mentor.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
○	○	○	○	○	○	○

20. I am prevented from initiating a mentoring relationship because such an approach may be **seen as a sexual advance by others** at BMDACC.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

21. I am or will be prevented from becoming a mentor due to **productivity requirements** of my APP role.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

22. I am or will be prevented from becoming a mentor due to **BMDACC expectations of the APP role.**

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

23. I am or will be prevented from becoming a mentor due to **my lack of experience as a teacher.**

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

24. I am or will be prevented from becoming a mentor due to **my lack of training as a teacher.**

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

25. I am or will be prevented from becoming a mentor due to my **lack of mentoring skills.**

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

26. I am or would be interested in a program to develop mentoring skills.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

27. I am or would be interested in a program to understand building mentoring relationships.

Strongly disagree	Disagree	Slightly disagree	Undecided	Slightly agree	Agree	Strongly agree
◯	◯	◯	◯	◯	◯	◯

28. Please share any other thoughts or comments generated by completion of this survey.

Appendix L

IRB and Consent Documents

Figure 1L. ASU IRB Exemption Letter

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Diane Nunez
CONHI: DNP
602/496-0751
DIANE.NUNEZ@asu.edu

Dear Diane Nunez:

On 9/24/2018 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Mentorship Matters: Understanding the Impact of Mentorship on Advanced Practice Providers (APPs)
Investigator:	Diane Nunez
IRB ID:	STUDY00008720
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Consent as sent by SurveyMonkey, Category: Consent Form; • Dean Letter of Support, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Clarification Response 1, Category: Other (to reflect anything not captured above); • BMDACC Letter of Support, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • SurveyMonkey Auto send Reminder Email, Category: Recruitment Materials; • SurveyMonkey Auto send Thank you email, Category: Recruitment Materials; • BMDACC IRB Response, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Presentation Outline, Category: Recruitment Materials;

	• APP Mentorship Matters SurveyMonkey, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • HRP 503a White Mentorship, Category: IRB Protocol;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 9/24/2018.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Deborah White
        Deborah White
        Amanda Dean
        Johannah Uriri-Glover

Figure 2L. Consent with survey

APP Mentorship - ASU DNP Project

MESSAGE: ⓘ   EDIT MESSAGE ▼

APP Mentorship Survey

I am Deb White, a graduate student under the direction of Dr. Diane Nunez in the College of Nursing and Health Innovation at Arizona State University. I am conducting a research study to determine the attributes of effective, high-quality mentoring relationships, the impact of mentoring relationships APPs organizational commitment as well as discover current barriers to mentoring in the APP role.

Thank you for your attendance at an introductory presentation on TBD during your regular APP bi-monthly meeting. You were provided information about the background of APP mentoring, project description, and survey methods. You were given the opportunity to ask questions and share experiences and opinions during that meeting. As described in the presentation, this is the email that will serve as your informational document, contact source for further questions, and your informed consent. Below is your link to the confidential survey. The survey consists of 81 questions, most of them Likert scale ratings, with some open-ended and ranking questions. You can complete the survey in one sitting (approximately 20 minutes) or you may stop/start the survey and complete in several sittings if you wish. Reminder emails will be sent bi-weekly to those who have not fully completed the survey. The survey is scheduled to close 6 weeks after initial sending. You have the right not to answer any question, and to stop participation at any time.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. The survey is open to all current APPs hired at Banner MD Anderson Cancer Center on or before the initial mailing of the survey.

Although there is no direct, immediate benefit to you, possible benefits of your participation are an improved understanding and utilization of APP mentors during role transitions, and an expansion of the limited knowledge base of APP mentorship. There are no foreseeable risks or discomforts to your participation. Should you feel any discomfort answering any question within the survey, you may skip that question.

Your responses are confidential. Your BMDACC email will be associated with your responses within Survey Monkey to allow the stop/start completion of the survey. Only Dr. Nunez and I will have access to the individual Survey Monkey data. The de-identified survey results will be exported to the statistical analysis software (IBMs SPSS). Only aggregate data will be shared with BMDACC or used in presentations, reports, or publications. If any comments are shared, there will be no name or other identifying information associated with the comment.

If you have any questions concerning the research study, please contact the research team at:

Principle Investigator – Dr. Diane Nunez, office phone: 602-496-0751, email: diane.nunez@asu.edu

ASU Project Implementor – Deb White, mobile phone: 920-948-1080, email: deb.white@asu.edu

Project Lead/Site Coordinator – Amanda Dean-Martin, office phone: 480-256-3675, email: amanda.dean2@bannerhealth.com

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

By clicking on the link below and completing the survey, you are agreeing to your informed consent for voluntary participation in the study.

Begin Survey

Please do not forward this email as its survey link is unique to you.
Privacy | Unsubscribe

Appendix M

Results Tables and Charts

Table 1M. Demographic Descriptives

Question	Frequency	Percent
Gender		
Female	21	87.5
Male	3	12.5
Other	0	0
Total	24	100.0
Highest Degree Earned		
Bachelors degree	0	0
Masters degree	21	87.5
Doctorate	3	12.5
Total	24	100.0
Type of License Held		
Nurse Practitioner	17	70.8
Physician Assistant	7	29.2
Total	24	100.0
Years RN Experience		
3	1	4.2
4	1	4.2
5	2	8.3
6	1	4.2
7	1	4.2
10	3	12.5
11	1	4.2
13	2	8.3
16	1	4.2
17	1	4.2
20	1	4.2
21	1	4.2
28	1	4.2
N/A	7	29.2
	24	100.0
Years of APP Experience		
Less than 1 year	1	4.2
1 -3 years	9	37.5
4 - 8 years	5	20.8

8 - 12 years	2	8.3
13 - 17 years	3	12.5
17 - 20 years	2	8.3
More than 20 years	2	8.3
Total	24	100.0
Years at BMDACC		
<6 months	7	29.2
6 months to 2 years	6	25.0
2 to 5 years	8	33.3
5+ years	3	12.5
Total	24	100.0

Table 2M. Mentorship Perceptions and Experience

Question		Frequency	Percent
Are a mentor & preceptor the same thing			
	No	19	79.2
	Yes	5	20.8
	Total	24	100.0
Have you ever had an APP mentor			
	No	8	33.3
	Yes	16	66.7
	Total	24	100.0
Have you ever been an APP mentor			
	No	15	62.5
	Yes	9	37.5
	Total	24	100.0
Have you had a formal or arranged mentorship			
	No	17	70.8
	Yes	7	29.2
	Total	24	100.0
Have you had an informal mentorship			
	No	11	45.8
	Yes	13	54.2
	Total	24	100.0
Have you had a mentor within the same organization			
	No	14	58.3
	Yes	10	41.7
	Total	24	100.0
Have you had a mentor outside the organization			
	No	18	75.0
	Yes	6	25.0
	Total	24	100.0
I have NO experience with mentorship			
	No	17	70.8

Yes	7	29.2
Total	24	100.0
Was a mentor provided on hire		
No	17	70.8
Yes	7	29.2
Total	24	100.0
Do you have any teaching experience		
No	11	45.8
Yes	13	54.2
Total	24	100.0
Do you have any education certifications		
No	21	87.5
Yes	3	12.5
Total	24	100.0

Figure1M. Ranking of Mentor Functions by Domain

Role Modeling Domain

Psychosocial Domain

Career Development Domain

Most to Least Valued
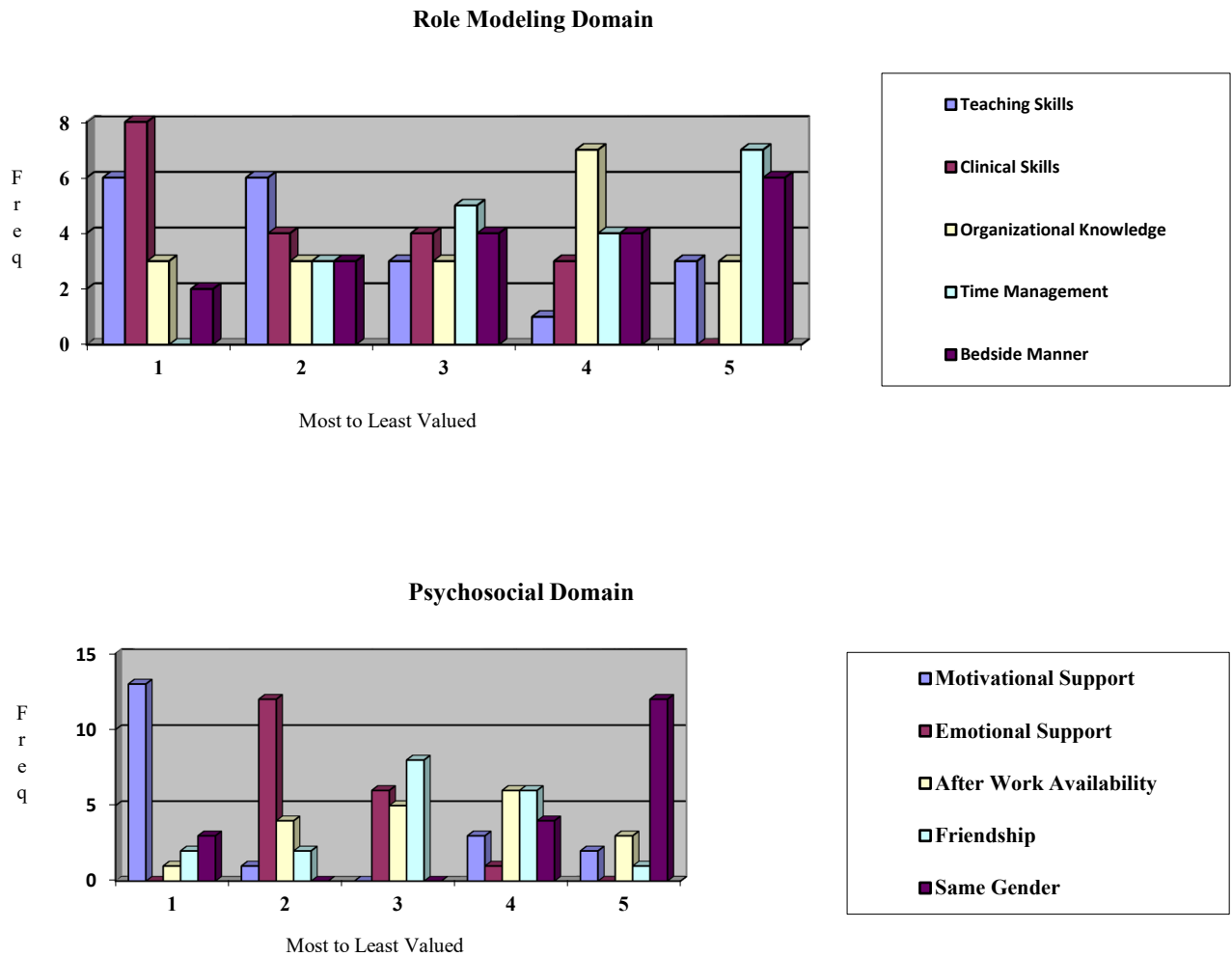
Legend: Professional Knowledge, Goal Setting, Networking, Providing Challenges, Similar Education

Table 3M. Perceived barriers correlation tables

Correlations

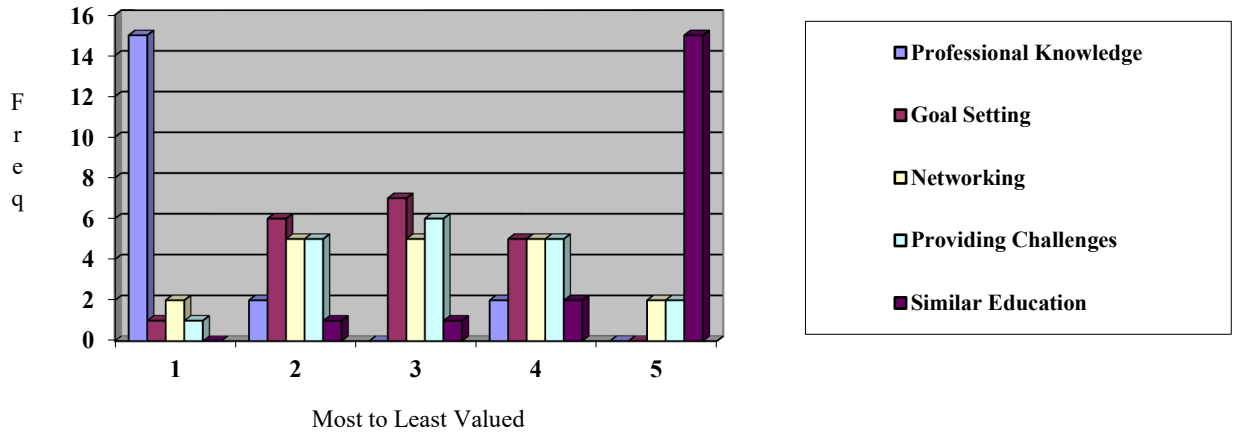|			NP or PA	Other Emp	Mentor Preceptor the Same	Had APP Mentor	Been APP Mentor	Teaching Exp	Education Cert	OCA Total Score	MFQ9 Total Score	PBM Total Score
Spearman's rho	NP or PA	Correlation Coefficient	1.000	-.122	.348	.259	-.118	-.514*	-.243	.186	.067	-.007
		Sig. (2-tailed)	.	.569	.096	.221	.582	.010	.253	.384	.756	.975
	Other Emp	Correlation Coefficient	-.122	1.000	.011	-.145	-.026	.558**	.194	-.067	-.128	.075
		Sig. (2-tailed)	.569	.	.961	.499	.902	.005	.364	.756	.552	.729
	Mentor Preceptor the Same	Correlation Coefficient	.348	.011	1.000	.363	.238	-.146	.116	-.052	.090	-.164
		Sig. (2-tailed)	.096	.961	.	.081	.262	.496	.588	.809	.676	.443
	Had APP Mentor	Correlation Coefficient	.259	-.145	.363	1.000	.365	-.296	.267	-.333	-.052	-.129
		Sig. (2-tailed)	.221	.499	.081	.	.079	.161	.207	.112	.810	.549
	Been APP Mentor	Correlation Coefficient	-.118	-.026	.238	.365	1.000	.367	.228	-.006	.151	-.163
		Sig. (2-tailed)	.582	.902	.262	.079	.	.078	.285	.977	.481	.447
	Teaching Exp	Correlation Coefficient	-.514*	.558**	-.146	-.296	.367	1.000	.095	.115	.141	-.097
		Sig. (2-tailed)	.010	.005	.496	.161	.078	.	.659	.592	.512	.650
	Education Cert	Correlation Coefficient	-.243	.194	.116	.267	.228	.095	1.000	-.164	.009	-.092
		Sig. (2-tailed)	.253	.364	.588	.207	.285	.659	.	.443	.966	.670
	OCA Total Score	Correlation Coefficient	.186	-.067	-.052	-.333	-.006	.115	-.164	1.000	.416*	-.357
		Sig. (2-tailed)	.384	.756	.809	.112	.977	.592	.443	.	.043	.087
	MfQ9 Total Score	Correlation Coefficient	.067	-.128	.090	-.052	.151	.141	.009	.416*	1.000	-.352
		Sig. (2-tailed)	.756	.552	.676	.810	.481	.512	.966	.043	.	.092
	PBM Total Score	Correlation Coefficient	-.007	.075	-.164	-.129	-.163	-.097	-.092	-.357	-.352	1.000
		Sig. (2-tailed)	.975	.729	.443	.549	.447	.650	.670	.087	.092	.

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		Age	Years RN	Years APP	Yrs at IHDS	OCA Total Score	MFQ9 Total Score	PBM Total Score
Age	Pearson Correlation	1	.345	.681**	.299	-.288	-.151	.176
	Sig. (2-tailed)		.176	.000	.156	.172	.481	.410
Years RN	Pearson Correlation	.345	1	.081	.184	-.462	-.598*	.058
	Sig. (2-tailed)	.176		.758	.479	.062	.011	.825
Years APP	Pearson Correlation	.681**	.081	1	.491*	-.101	.043	.021
	Sig. (2-tailed)	.000	.758		.015	.640	.842	.921
Yrs at IHDS	Pearson Correlation	.299	.184	.491*	1	.181	.363	-.417*
	Sig. (2-tailed)	.156	.479	.015		.399	.081	.043
OCA Total Score	Pearson Correlation	-.288	-.462	-.101	.181	1	.380	-.469*
	Sig. (2-tailed)	.172	.062	.640	.399		.067	.021
MFQ9 Total Score	Pearson Correlation	-.151	-.598*	.043	.363	.380	1	-.351
	Sig. (2-tailed)	.481	.011	.842	.081	.067		.093
PBM Total Score	Pearson Correlation	.176	.058	.021	-.417*	-.469*	-.351	1
	Sig. (2-tailed)	.410	.825	.921	.043	.021	.093	

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Table 4M. Organizational commitment correlation tables.

Correlations

			OCA Total Score	OCC Total Score	OCN Total Score	Mentor Preceptor the Same	Had APP Mentor	Been APP Mentor	Other Emp	Mentor Provided on Hire	Teaching Exp
Spearman's rho	OCA Total Score	Correlation Coefficient	1.000	.538**	.464*	-.052	-.333	-.006	-.067	-.133	.115
		Sig. (2-tailed)	.	.007	.022	.809	.112	.977	.756	.536	.592
	OCC Total Score	Correlation Coefficient	.538**	1.000	.479*	.193	.083	.006	-.216	.086	-.030
		Sig. (2-tailed)	.007	.	.018	.365	.699	.977	.311	.688	.888
	OCN Total Score	Correlation Coefficient	.464*	.479*	1.000	.067	-.250	.087	.007	.047	.352
		Sig. (2-tailed)	.022	.018	.	.756	.239	.685	.972	.829	.092
	Mentor Preceptor the Same	Correlation Coefficient	-.052	.193	.067	1.000	.363	.238	.011	-.103	-.146
		Sig. (2-tailed)	.809	.365	.756	.	.081	.262	.961	.630	.496
	Had APP Mentor	Correlation Coefficient	-.333	.083	-.250	.363	1.000	.365	-.145	.259	-.296
		Sig. (2-tailed)	.112	.699	.239	.081	.	.079	.499	.221	.161
	Been APP Mentor	Correlation Coefficient	-.006	.006	.087	.238	.365	1.000	-.026	-.308	.367
		Sig. (2-tailed)	.977	.977	.685	.262	.079	.	.902	.144	.078
	Other Emp	Correlation Coefficient	-.067	-.216	.007	.011	-.145	-.026	1.000	-.122	.558**
		Sig. (2-tailed)	.756	.311	.972	.961	.499	.902	.	.569	.005
	Mentor Provided on Hire	Correlation Coefficient	-.133	.086	.047	-.103	.259	-.308	-.122	1.000	-.146
		Sig. (2-tailed)	.536	.688	.829	.630	.221	.144	.569	.	.497

Teaching Exp	Correlation Coefficient	.115	-.030	.352	-.146	-.296	.367	.558**	-.146	1.000
	Sig. (2-tailed)	.592	.888	.092	.496	.161	.078	.005	.497	.

**. Correlation is significant at the 0.01 level (2-tailed).   *. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		Age	Years RN	Years APP	Yrs at IHDS	OCA Total Score	OCC Total Score	OCN Total Score	MFQ9 Total Score	Program to develop skills	Program to build relationship
Age	Pearson Correlation	1	.345	.681**	.299	-.288	-.445*	-.291	-.151	.095	.191
	Sig. (2-tailed)		.176	.000	.156	.172	.029	.168	.481	.660	.371
Years RN	Pearson Correlation	.345	1	.081	.184	-.462	-.335	-.206	-.598*	-.073	-.306
	Sig. (2-tailed)	.176		.758	.479	.062	.189	.427	.011	.781	.233
Years APP	Pearson Correlation	.681**	.081	1	.491*	-.101	-.568**	-.206	.043	.048	.131
	Sig. (2-tailed)	.000	.758		.015	.640	.004	.334	.842	.824	.542
Yrs at IHDS	Pearson Correlation	.299	.184	.491*	1	.181	-.375	-.096	.363	-.044	-.101
	Sig. (2-tailed)	.156	.479	.015		.399	.071	.656	.081	.837	.638
OCA Total Score	Pearson Correlation	-.288	-.462	-.101	.181	1	.561**	.631**	.380	.247	.359
	Sig. (2-tailed)	.172	.062	.640	.399		.004	.001	.067	.245	.085
OCC Total Score	Pearson Correlation	-.445*	-.335	-.568**	-.375	.561**	1	.540**	-.047	-.031	.062
	Sig. (2-tailed)	.029	.189	.004	.071	.004		.006	.828	.887	.772
OCN Total Score	Pearson Correlation	-.291	-.206	-.206	-.096	.631**	.540**	1	.352	.073	.064
	Sig. (2-tailed)	.168	.427	.334	.656	.001	.006		.092	.736	.767
MFQ9 Total Score	Pearson Correlation	-.151	-.598*	.043	.363	.380	-.047	.352	1	-.063	.049
	Sig. (2-tailed)	.481	.011	.842	.081	.067	.828	.092		.769	.819
Program to develop skills	Pearson Correlation	.095	-.073	.048	-.044	.247	-.031	.073	-.063	1	.879**
	Sig. (2-tailed)	.660	.781	.824	.837	.245	.887	.736	.769		.000
Program to build relationship	Pearson Correlation	.191	-.306	.131	-.101	.359	.062	.064	.049	.879**	1
	Sig. (2-tailed)	.371	.233	.542	.638	.085	.772	.767	.819	.000	

**. Correlation is significant at the 0.01 level (2-tailed).   *. Correlation is significant at the 0.05 level (2-tailed).

Table 5M. Likert Means Scores for Custom Perceived Barriers

	Min	Max	M	SD
Productivity requirements	1.00	6.00	3.28	1.35
Role expectations	1.00	6.00	3.06	1.23
No exp teaching	1.00	5.00	2.61	.89
No training to teach	1.00	5.00	2.67	.93
No mentoring skills	1.00	6.00	3.00	1.22