

2023

Examining the Relationship Between Time Spent on Tasks, Job Responsibilities, and Job Satisfaction Among Nurse Practitioners

lasia E. Owens
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Health and Medical Administration Commons](#), and the [Public Health Education and Promotion Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Management and Human Potential

This is to certify that the doctoral study by

Iasia Owens

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Miriam Ross, Committee Chairperson, Health Sciences Faculty

Dr. Thomas Clobes, Committee Member, Health Sciences Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2023

Abstract

Examining the Relationship Between Time Spent on Tasks, Job Responsibilities, and Job

Satisfaction Among Nurse Practitioners

by

Iasia Owens

MHA, University of Arizona, 2016 (Formerly-Ashford University)

BS, Ashworth University, 2013

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Healthcare Administration

Walden University

August 2023

Abstract

Managing patient care with the help of nurse practitioners is an expanding trend in healthcare and achieving job satisfaction is a priority for these professionals. The purpose of this quantitative study was to examine two research questions and the associated variables concerning the relationship between time spent on tasks, job responsibilities, and job satisfaction among nurse practitioners. Conway's role theory, which is used to explore and predict behaviors of workers in certain roles, informed this study. Data were derived from the 2017 National Survey of Nurse Practitioners and 972 participants were included. Correlation and linear regression analyses were used to analyze the data points and determine how the independent variables of time spent on tasks and job responsibilities affected the dependent variable job satisfaction. Regression analysis results for RQ 1 showed that job responsibility was not a significant predictor of job satisfaction, which demonstrated that no statistically significant association existed between job responsibilities and job satisfaction for nurse practitioners. Regression analysis results for RQ 2 showed that there was a significant correlation between job satisfaction and time spent on tasks. The implications of these findings for professional practice are that nurse practitioners and other healthcare professionals can manage workload effectively by implementing efficient management principles, such as task prioritization and work optimization requests. The implications for positive social change may include ways to improve retention through the management of tasks that impact satisfaction thereby reducing hiring and error-related costs by administrators.

Examining the Relationship Between Time Spent on Tasks, Job Responsibilities, and Job

Satisfaction Among Nurse Practitioners

by

Iasia Owens

MHA, University of Arizona, 2016 (Formerly-Ashford University)

BS, Ashworth University, 2013

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Healthcare Administration

Walden University

August 2023

Dedication

I dedicate this project to my late grandmother, Narolyn Ward. I am grateful that GOD chose her to raise me. She always told me to reach for the stars. I could never give her enough credit. Most importantly, I want to give thanks to my beautiful baby girl. She was my motivation and my “why”. Even with my darkest days on this journey, she inspired me to keep pushing forward. Both have been central pillars of the success of this dissertation.

Acknowledgments

First and foremost, praises and thanks to God, the Almighty for his showers of blessings throughout my research work to complete my Dissertation successfully. I would like to express my deep and sincere gratitude to my chair, Dr. Miriam Ross, for her generosity during my project. I am boundlessly thankful for her help and guidance throughout the toughest stages of my dissertation. Dr. Ross was patient and encouraging when I thought I could not produce. Without her help, guidance, useful comments, and suggestions, I would not have ended up with a well-versed piece of writing. This includes my other committee member, Dr. Tom Clobes, thank you!

Table of Contents

List of Tables.....	iv
List of Figures.....	v
Section 1: Foundation of the Study and Literature Review.....	1
Introduction.....	1
Background.....	2
Problem Statement.....	3
Purpose of the Study.....	4
Research Question(s) and Hypotheses.....	4
Theoretical and/or Conceptual Framework.....	5
Nature of the Study.....	6
Literature Search Strategy.....	7
Literature Review Related to Key Variables and/or Concepts.....	8
Job Satisfaction.....	8
Job Responsibilities.....	12
Time Spent on Tasks.....	14
Nurse Practitioners and the Role Theory.....	17
Literature Review Conclusion.....	21
Definition of Terms.....	24
Assumptions.....	25
Scope and Delimitations.....	26
Limitations.....	27

Significance.....	27
Summary and Conclusions.....	27
Section 2: Research Design and Data Collection.....	29
Introduction.....	29
Research Design and Rationale.....	31
Methodology.....	32
Population.....	32
Sampling and Sampling Procedures.....	33
Instrumentation and Operationalization of Constructs.....	33
Data Analysis Plan.....	34
Threats to Validity.....	35
Summary.....	37
Section 3: Presentation of the Results and Findings.....	39
Introduction.....	39
Data Collection Procedures.....	40
Statistical Analysis Type and Explanation.....	40
Descriptive Analysis Results.....	41
Descriptive Statistics of Study Variables.....	41
Responsibilities and Time Spent on Task Variables.....	43
Normality Test for Study Variables.....	43
Assumptions Testing for Linear Regression Analysis.....	45
Linear Regression Results.....	48

Research Question 1.....	48
Research Question 2.....	48
Conclusion and Summary.....	49
Section 4: Application to Professional Practice and the Implications for Social Change	51
Summary of Key Findings.....	52
Descriptive Statistics.....	52
Correlation Analysis.....	53
Regression Analysis.....	54
Interpretation of the Findings.....	54
Research Question 1: Job Satisfaction and Job Responsibilities.....	55
Research Question 2: Job Satisfaction and Time Spent on a Tasks.....	56
Limitations of the Study.....	57
Recommendations for Future Research.....	58
Implications for Professional Practice and Social Change.....	60
Implications for Professional Practice.....	60
Implications for Positive Social Change.....	61
Summary and Conclusion.....	61
References.....	63

List of Tables

Table 1. Descriptive Statistics of Study Variables.....	42
Table 2. Descriptive Statistics of Responsibilities and Time Spent on Tasks Variables..	43
Table 3. Shapiro-Wilk's Tests.....	44
Table 4. Spearman's Rho Correlation.....	44
Table 5. Variance Inflation Factors.....	48
Table 6. Linear Regression Analysis Result.....	49

List of Figures

Figure 1. Boxplot of Job Satisfaction Scores.....	45
Figure 2. Box Plot on Job Responsibilities.....	46
Figure 3. Box Plot of Time Spent on Tasks.....	47

Section 1: Foundation of the Study and Literature Review

Introduction

The aim of this study was to examine the relationship between time spent on tasks, job responsibilities, and job satisfaction among nurse practitioners. Previous researchers examined the time spent on tasks in the healthcare profession and identified burnout and fatigue as common outcomes (Akbar, 2020; Strazzieri-Pulido et al., 2019). The study makes an important contribution to the literature by addressing the relationship between time spent on tasks and job satisfaction among nurse practitioners. According to Akbar (2020), time spent on tasks leads to work dissatisfaction among healthcare workers, leading to marriage and family problems. Therefore, this study may have potential implications for social change, as determining the correlation between time spent on tasks for nurse practitioners may provide information about how nurse practitioners can be more productive.

In this section, I first provide the background of literature that guides the understanding of the gap in this research subject. Subsequently, I discuss the problem statement and emphasize its significance to the discipline. I then present the purpose of the study and guiding research questions. The following section includes a review of the theoretical foundation. In addition, in this section, I review the literature relevant to this study. The final section includes a discussion of definitions, assumptions, scope, and delimitations. Finally, I emphasize the significance of this study and provide a summary and conclusion to Section 1.

Background

Previous researchers examined the relationship between time spent on tasks, job responsibilities, and job satisfaction among nurse practitioners from the perspective of care team composition. Bruhl et al. (2020) demonstrated that a greater proportion of full-time physician equivalent nurse practitioners on the care team experiences lower emotional exhaustion or burnout. Researchers also demonstrated that understanding the job satisfaction work of nursing practitioners is important in considering the support they require to carry out their tasks effectively (Cimiotti et al., 2019). Previous research also indicates a need to understand the impact of burnout on nurse practitioners' job satisfaction and how changing the levels of workload influences this relationship (Guixia & Hui, 2020).

The effect of time spent on tasks is an important consideration when assessing how to support clinical staff. For example, Ancker et al. (2017) noted that fatigue could increase because of overload, potentially negatively affecting nurses. Thus, emphasizing the importance of addressing alert overrides and fatigue will ensure patient care delivery is positively impacted while caring for nursing practitioners. Further, it was identified that nursing practitioners experience emotional exhaustion, depersonalization, and feelings of reduced personal accomplishments due to workplace burnout (Ancker et al., 2017; Bourdeanu et al., 2020; Fisher et al., 2017; Guixia & Hui, 2020; Laurant et al., 2004). Additionally, some researchers noted that there is a need to further understand team factors that impact the time spent on tasks of nurse practitioners (Bourdeanu et al., 2020; Côté et al., 2019; Torrens et al., 2020).

The empirical literature indicates a need to understand time spent on tasks in the healthcare profession and its influence on burnout, fatigue, and adverse outcomes among nurse practitioners (Ancker et al., 2017; Guixia & Hui, 2020). Previously, researchers have demonstrated negative outcomes of the time spent on tasks such as burnout among healthcare professionals. However, research that relates to the statistical relationship between time spent on tasks, job responsibilities, and job satisfaction and how specific time spent on tasks have a direct correlation with hours spent outside of work, or hours associated with job satisfaction is lacking. In the following section, I identified the problem and purpose statements that guided this study.

Problem Statement

There is currently a gap in literature, as the effects of time spent on tasks, job responsibilities and job satisfaction are unknown (Ancker et al., 2017; Guixia & Hui, 2020). The research problem addressed through this study is the relationship between time spent on tasks, job responsibilities, and job satisfaction among nurse practitioners. Although researchers have determined that negative outcomes, such as burnout, are associated with time spent on tasks and job responsibilities among healthcare professionals, there was a lack of studies examining the statistical relationship between time spent on tasks and job satisfaction. Specifically, an understanding of the aspects of job responsibilities and time spent on tasks that are associated with job satisfaction was lacking.

Purpose of the Study

The purpose of this quantitative retrospective quasi-experimental correlational study was to examine the relationship between time spent on tasks, job responsibilities, and job satisfaction among nurse practitioners in the United States using data from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners. Additionally, the trends in identified staffing needs are described in relation to time spent on tasks. The dependent variable of interest was job satisfaction. The independent variables of interest are job responsibilities and time spent on tasks (Bourdeanu et al., 2020; Côté et al., 2019; Laurant et al., 2004; Torrens et al., 2020).

Research Questions and Hypotheses

RQ1. Is there a statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction?

H_01 : There is no statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction.

H_a1 : There is a statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction.

RQ2. Is there a statistically significant relationship between the independent variable, time spent on tasks, and the dependent variable, job satisfaction?

H_02 : There is no statistically significant relationship between the independent variable, time spent on a tasks, and the dependent variable,

job satisfaction.

H_{a2}: There is a statistically significant relationship between the independent variable, time spent on a tasks, and the dependent variable, job satisfaction.

Theoretical and Conceptual Framework

The theories and/or concepts that grounded this study are those within Conway's (1988) role theory. Hardy and Conway (1988) developed the role theory, which has been used to explore the roles of health professionals. Based on role theory, some ideas pertaining to roles can be used to predict the behavior of actors within a certain role (Conway, 1988; Hardy & Conway, 1988). The concepts include the behaviors, characteristics, norms, and values of a person or job position, which can be used to describe the role as well as role perceptions (Conway, 1988; Hardy & Conway, 1988; Taylor et al., 2020).

Role theory was used to ground this study because, in the health profession, an individual's role is related to the job responsibilities required for the position (Conway, 1988). The role of nursing practitioners, their job satisfaction, as measured by job responsibilities and time spent on tasks, and the potential relationship with job satisfaction among nurse practitioners were examined. The logical connections between the framework presented and the nature of my study imply that in healthcare practice, healthcare professionals often must change roles in meeting patient needs, which may require taking on tasks outside of their preliminary or assigned role. As nurse practitioners take on additional roles to meet patient needs, other administrative tasks,

and support other coworkers (Bourdeanu et al., 2020; Côté et al., 2019; Torrens et al., 2020), there are implications for increased job responsibilities, which may lead to an increased sense of stress associated with their role.

Nature of the Study

To address the research questions in this study, quantitative methodology and a correlational research design were used to examine the relationship between job responsibilities and job satisfaction among nurse practitioners. The quantitative method was determined to be appropriate for this study, as quantitative research entails collecting and analyzing numerical data. A typical quantitative study requires that a researcher clearly defines and operationalizes key variables, which should then be measured, and degrees of associations established (Creswell & Creswell, 2018). The quantitative method was deemed appropriate for the current study as the research involved measuring variables and the associations among them by answering the research questions and determining whether a statistically significant relationship exists between the independent variables (job responsibilities, and time spent on tasks) and the dependent variable (job satisfaction). For this study, the independent variables were defined within the data set. Specifically, the research purpose and subsequent questions were addressed by measuring nurse practitioners' job satisfaction and job responsibilities, as well as the relationship between these variables.

For the research design, I utilized secondary data. The secondary data source was the 2017 National Survey of Primary Care Physicians and Nurse Practitioners. The data points needed from the source included all indicators of job satisfaction and job

responsibilities for nurse practitioners with the dataset to answer the research questions. The job responsibilities indicators were separated into two independent variables (job responsibilities and time spent on tasks) and examined in relation to job satisfaction, corresponding with the two research questions used to guide this study. The dependent variable is job satisfaction. The independent variables are job responsibilities and time spent on tasks.

Literature Search Strategy

The following databases were accessed in the review of literature EMBASE, PubMed, ProQuest, JSTOR, Web of Science, EBSCO Host, and Database. The following keywords were searched to address the review of literature: “job responsibilities and nurse practitioners,” “burnout and nurse practitioners,” “job satisfaction and nurse practitioners,” “job satisfaction and job responsibilities,” “nurse practitioner role,” and “nurse practitioner burnout.” The scope of the literature review was based on information published within the past 5 years, specifically from 2017 to 2021. In addition, only full-text available data and empirical assessments published in English to avoid translation bias were used. An absence of literature was identified regarding job responsibilities and job satisfaction among nurse practitioners. However, to address this gap, I continued to examine multiple databases, a combination of keywords, as well as to review the reference section of the relevant empirical literature. In the next section, the literature review related to this study's key variables and concepts is presented.

Literature Review Related to Key Variables and Concepts

In the following section, the key variables related to the purpose of this study are reviewed. The first section includes a discussion of job satisfaction and the relationship between health care practitioners and nurse practitioners. The second section includes a review of the job responsibilities by health care workers and nurse practitioners. The third section includes a review of the time spent on tasks, as this is a relevant concept and variable to the current study.

Job Satisfaction

Researchers have indicated that emotional exhaustion, burnout, and stress are significant factors that impact nurse practitioners' experiences in the workplace. Firstly, Bruhl et al. (2020) examined the relationship between the emotional exhaustion domain of burnout and care team composition in a Midwestern primary care practice network. Bruhl et al. determined that a more significant proportion of full-time equivalent physicians on the care team was associated with a lower emotional exhaustion domain of burnout among individual clinicians. Bruhl et al. demonstrated that adding staff to address the workload within the healthcare profession could reduce emotional exhaustion as a domain of burnout. In this study, understanding the workload factors will have implications for staffing to improve job satisfaction.

Similar to Bruhl et al. (2020), Lebet et al. (2021) explored nurses' perception of job satisfaction regarding workplace burden. In their research, Lebet et al. performed a multicenter randomized clinical trial regarding 35 nurses in pediatric critical care. The study included an intention survey and two workload assessment surveys. The surveys

were administered to 1476 nurse practitioners who were predominantly female. The results showed that 65% of nurses indicated that time burden was the most significant element that added to reduced job satisfaction and workload. In addition, 22% of nurses reported cognitive or psychological stress burdens that decreased job satisfaction and, in turn, affected workload. The empirical literature indicates that there is a need to understand further how to address the workload burden experienced by nurse practitioners to improve their job satisfaction (Brayer & Marcinowicz, 2018; Hagan & Curtis, 2018; Steinke et al., 2018).

Burnout, turnover, and job satisfaction are critical variables associated with nurse practitioners' experiences in the workplace. Hoff et al. (2019) reviewed the literature to examine satisfaction, burnout, and turnover among nurse practitioners and physician assistants. Hoff et al. found an emphasis on job satisfaction in existing research and that there were low levels of job satisfaction among nurse practitioners and physician assistants. Hoff et al. also identified a need for studies with larger, more representative samples. Hoff et al. identified a gap that was addressed in this study by utilizing a large, representative sample from secondary data. Hoff et al. also determined that there is an issue of job satisfaction among nurse practitioners, namely low job satisfaction, as dependent on their experience of burnout. These findings corroborate previous research that demonstrates the importance of considering the job satisfaction of nurse practitioners (Horner, 2017; Poghosyan et al., 2017a; Steinke et al., 2018). The understanding of the burden experienced by nurse practitioners was addressed in this study by exploring how

internal and external factors may contribute to adverse outcomes comments such as burnout.

Job satisfaction is positively associated with an increased risk of nurse practitioners reporting intent to leave their jobs. Han et al. (2018) conducted a systematic review to understand the relationships between practice registered nurses, their job satisfaction, and their intent to leave their jobs. Han et al. noted that previous research has heavily focused on burnout and the workload of purchase nurse practitioners. However, there was a lack of literature exploring how job satisfaction and intent to leave are related. In their assessment, the authors reviewed CINAHL, PubMed, and PsycINFO, databases with the keywords “Advanced Practice Registered Nurse,” “job satisfaction,” “intent to leave,” “anticipated turnover,” and “Nurse Practitioner” the findings indicated that extrinsic factors such as salary, and administrative support are significantly associated with job dissatisfaction. However, internal factors, which include autonomy and the meaningfulness of work, also contribute to job satisfaction. Further, Han et al. noted there is a need for continued research regarding factors that relate to job satisfaction and intent to leave among nurse practitioners.

Han et al.’s (2018) findings are significant in discussing how job satisfaction among nurse practitioners is related to internal and external factors (Faraz, 2019; Kleinpell et al., 2018), which was explored in this study. In a similar research setting, Bourdeanu et al. (2020) examined the relationship between burnout, workplace factors, and intent to leave among hematology and oncology nurse practitioners using a cross-sectional survey of 201 hematology/oncology nurse practitioners. Based on the analysis

of the data, Bourdeanu et al. found that 21.9% (44) of the participants reported an intention to leave, 30.8% reported an elevated level of emotional exhaustion, 9.0% reported high depersonalization, and 21.0% reported low personal accomplishment. Emotional exhaustion was related to the increased likelihood of intent to leave. Due to the high intention to leave among study participants, Bourdeanu et al. concluded that nurse practitioners experience emotional exhaustion, depersonalization, and personal accomplishment, demonstrating that low job satisfaction and retention are an issue within the profession. Bourdeanu et al. also used descriptive, correlational, and logistic regression analyses to examine the associations between variables, which is similar to the methodology and analysis used in this study.

Job satisfaction is also mediated by relationships created in the workplace and the ability to spend hours outside of work (Spetz et al., 2017; Weaver, 2019). Coplan et al. (2018) examined job satisfaction in relation to two nurse practitioners. Coplan et al. gained data from the 2016 American Society of Nurse Practitioners alongside salary survey data. In addition, descriptive statistics were employed as a means of examining burnout, happiness, and stress of nurse practitioners. The findings indicated that burnout and job satisfaction are associated with 55.6% of nurse practitioners. Further, Coplan et al. noted that many nurse practitioners (32.2%) quit their jobs due to hours spent at work. This result indicates that work-life demands, job satisfaction, and burnout are positively associated with factors that relate to nursing practitioners' perception of workload. These findings are essential to the current study as they demonstrate that there is a need to

understand internal and external factors that impact job satisfaction among nurse practitioners, which were addressed in this study.

Job Responsibilities

The job responsibilities of nurse practitioners may also exacerbate stress and burnout and increase their workload (Torrens et al., 2020; Restuptri et al., 2019). Torrens et al. (2020) conducted a scoping review to identify, appraise, and synthesize the barriers and facilitators to the implementation of advanced practitioners' roles in the primary care setting. Torrens et al. identified 5976 potential records, screened 2852 abstracts, and retrieved 122 full texts. Fifty-four studies (reported across 76 publications) met the established selection criteria. Based on the analysis of these studies, Torrens et al. determined that team factors were the most frequently reported barriers and facilitators. In this qualitative study, Torrens et al. demonstrated that the role of advanced practitioners is dependent on two team factors (cohesion and communication). These team factors are relevant to this study, because they may impact the workload of nurse practitioners based on their interaction with their team members.

Research indicates that nurse practitioners experience difficult and complex events within the workplace that may impact their perceived workload as well as correlate with different job responsibilities (Fundora et al., 2021; Okoroafor et al., 2019; Pochert et al., 2019; Watson et al., 2019). Côté et al. (2019) employed a qualitative descriptive study design to explore the optimization of advanced practice nursing roles in the primary care setting among forty-one participants. The findings indicated that advanced nursing practice nurses expressed an inadequate understanding of their role and

perceived restrictions on their professional autonomy. Additionally, their sense of engagement in their work is dependent on their work environment and the individual they worked with. Côté et al. demonstrated the issue of nurse practitioners' roles and impacts on their work engagement, which is related to job satisfaction, a variable that was explored in this study. Additionally, Côté et al. identified the negative impacts of inadequate understanding of roles by nurse practitioners.

The systematic analysis illustrates that nurse practitioners' perception of job responsibilities, as well as teamwork with other practitioners, may aid in the reduction of stress and burden (Chang et al., 2019; Farid et al., 2020; Wilbanks & McMullan, 2018). Norful et al. (2018) conducted a systematic review of the literature and performed 26 interviews with nurse practitioners and physicians to explore their perceptions of nurse practitioner–physician comanagement. Norful et al. determined that nurse practitioner – physician co-management elements include effective communication, mutual respect and trust, and clinical alignment/shared philosophy of care. The results of the interviews were that successful co-management could alleviate the individual workload, prevent burnout, improve patient care quality, and lead to increased patient access to care. However, there were identified legal and organizational barriers that limited the autonomy of nurse practitioners. Norful et al. demonstrated the importance of improving the co-management between physicians and nurse practitioners to address issues of workload and burnout, both variables are relevant to this study with the workload of nurse practitioners being the focus of this research.

Time Spent on Tasks

Time spent on tasks is one variable that may impact or decrease the stress, burnout, and workload that nurse practitioners perceive. Sieja et al. (2019) reviewed data from an intensive team-based intervention as a means of improving the time that nurse practitioners spend on specific tasks. An 11-member team was composed, which included a project manager, a physician informaticist, a nurse, and pharmacists, to oversee the development of improved workflow optimization over 2 weeks. The intervention included both clinicians and staff, including nurse practitioners. The intervention procedure included improving management principles, optimizing work requests, and providing alerts for prioritization requests. The findings were also analyzed by reviewing burnout 60 days before the intervention and 2 weeks after the intervention. The authors concluded that nurse practitioners' satisfaction with the intervention was improved, and burnout was reduced to 39% (47/119) and 34% (37/107), respectively, after the intervention. Sieja et al argued that there is a need to further understand how nurse practitioners employ their time in the workplace and how this may potentially impact their work overload, burnout, and stress. The findings of these authors are important to the current study as they illustrate that the workload of nurse practitioners and time spent on tasks may be mediated through specific interventions. Further, these findings illustrate a gap in the research regarding how job satisfaction, time spent on tasks, and perceived workload may influence the job satisfaction of nurse practitioners.

Team-based care models may be one aspect that can reduce the stress of nurse practitioners and allow for a more effective organization of time spent on tasks (Higgins

et al., 2018; Sengar et al., 2019; Seruga et al., 2020). Poghosyan et al. (2017a) reviewed team-based care models as a means of understanding work time spent on tasks and the work overload of nurse practitioners. For the assessment, the authors employed a mixed-method design to understand practice characteristics that may improve interpersonal team procedures between nurse practitioners, team health care providers, and administration. Poghosyan et al. (2017a) found that nurse practitioners and administrators could improve organizational support and governance. The findings are important for the current study as they demonstrate that nurse practitioners face various barriers to overcoming a significant workload, which may be reduced by better management of time spent on tasks through interventions. The present study extends the current literature by renewing and understanding how nurse practitioner job satisfaction is potentially mediated by adverse outcomes such as workload and time spent on tasks and time spent outside of work.

Tsay et al. (2019) further indicated that nurse practitioners' scope of practice, which relates to the tasks spent at work, requires a renewed understanding and policy modification to reduce workload and improve effective communication in the health care setting. Tsay et al. examined the most extended policy cycle model for the assessment, which assesses nurse practitioners' scope of practice, regulations, policy formation, and policy implementation. The findings indicated that nurse practitioners' scope included multiple fields of healthcare practice, which increased their workload stress. Further, the authors argued for renewed research regarding the factors that may contribute to the workload stress of nurse practitioners, which the current study will fulfill.

Halliday et al. (2018) further explored the practices that nurse practitioners complete in the workplace that may contribute to the burden of tasks completed during the day. Halliday et al. reviewed ward perceptions of nurse practitioners through a discussion of tasks completed throughout the day based on routines and teamwork. The researchers adopted a qualitative descriptive phenomenological approach to examine the experiences of 10 nurse practitioners. The findings from the thematic analysis showed that the effectiveness of a nurse practitioner's role is based upon their ability to prioritize specific tasks and improve patient flow. The following findings indicated that nurse practitioners must have a constant presence within the rotation while also supplying stability through effective teamwork. Further, the nurse practitioners noted that there is a need to provide better teamwork and communication to ensure that the tasks completed throughout the day reflect a reduced workload by prioritizing the most critical patient-based care needed. Heale et al. also examined the methods that can be best implemented to ensure that nurse practitioners appropriately organize daily tasks. For this particular assessment, eight nurse practitioners were interviewed regarding the quality of care provided to patients to comment on daily work tasks and needs, and barriers. The findings demonstrated that nurse practitioners felt that there is a need to address high turnover rates, which often increase the burden and reduce the ability to provide adequate care to patients. Further, the authors noted a need for an improved understanding of internal and external factors that may affect nurse practitioner workload, which was addressed in the current study.

Nurse Practitioners and the Role Theory

Role theory has been used in previous assessments specific to the health profession. Torrens et al. (2020) examined role theory focusing on health professions and educational programs to improve health care services. According to Côté et al. (2019), health professions and educational programs can influence the workplace culture, improve job satisfaction, and ultimately address issues associated with challenges in the workplace as a health care professional. Additionally, Côté et al. explored the roles that nurse practitioners require to meet patient needs. According to Bourdeanu et al. (2020), administrative tasks and support from other coworkers are critical factors that improve their ability to handle the stress associated with their role.

Researchers have also employed role theory specific to the health profession to understand how to meet the needs of nurses, nurse practitioners, and health care administration (Bourdeanu et al., 2020; Côté et al., 2019; Laurant et al., 2004; Torrens et al., 2020). The evident research regarding role theory and specification towards health professions indicates the importance of understanding the specific tasks, workload, and perceived stress as reported by different individuals. Additionally, as applied to the health profession, the role theory provides a foundation for understanding how different roles require differential support, tasks assessment, and improved interventions to address stress associated with burnout and workloads (Bourdeanu et al., 2020; Côté et al., 2019; Laurant et al., 2004; Torrens et al., 2020).

Data also indicates that the role of nurse practitioners can ultimately contribute to a differential burden within the workplace. For example, Halliday et al. (2018) reviewed

daily nurse practitioner tasks based upon routines and teamwork using a descriptive phenomenological approach. The findings illustrated that nurse practitioners had differential tasks, significant workloads, and often provided critical patient-based care needs. Poghosyan et al. (2017b) also indicated that nurse practitioners spend significant time on differential tasks and often have a significant workload. Using a mixed-method design, Poghosyan et al. (2017b) identified that nurse practitioners often spend significant time at the workplace or require various strategies for time management and often intervene in sharing specific tasks in the workplace. These findings indicate, based on previous research, that nurse practitioners face significant stress, differential role positions, and varying tasks in the workplace that can potentially lead to burnout, stress, and reduced job satisfaction (Higgins et al., 2018; Sengar et al., 2019; Seruga et al., 2020).

Norful et al. (2018) also used role theory to understand care delivery model-specific general practitioners. In their review, Norful et al. proposed that a role model was appropriate for exploring primary the roles that nurse practitioners hold as primary care clinicians. Through a literature review, they identified 26 studies specific to nurse practitioners and their roles within specific clinics. According to Norful et al., nurse practitioners hold rules specific to communication development of trust, shared care philosophy, and a need to improve and prevent burnout. Additionally, data indicated that there is a need to address the roles of nurse practitioners to reduce burnout associated with the workload as well as job satisfaction. Hoff et al. (2019) performed a similar assessment specific to role theory and nurse practitioners. Through a review of empirical

literature, they identified 32 articles regarding the roles and potential stress and burnout factors related to nurse practitioners. The findings indicated factors such as stress, the lack of job enrichment or satisfaction, and burnout are related to the turnover of nurse practitioners. Hoff et al. argued that role theory should be used in future assessments to understand the intersection between nurse practitioner-specific roles, adverse outcomes such as turnover, and ways to improve job satisfaction. Thus, research from Hoff et al. (2019) and Norful et al. (2018) indicates the importance of understanding practitioners' focus on role theory, which was addressed in the current study.

The role theory has also been employed to understand the reduction of attrition in terms of nurse practitioners due to internal and external factors within the workplace. Hagan and Curtis (2018) examined nurse practitioner turnover with a focus on role theory and gathering data specific to nurse practitioner job satisfaction. A survey was distributed to Texas nurse practitioner organization members, which garnered responses from 315 nurse practitioners. Using logistic regression model analysis, the findings indicated that higher annual salary and autonomy are associated with reduced turnover intentions and improved job satisfaction.

Hagan and Curtis (2018) argued that the role of nurse practitioners requires a unique consideration in terms of understanding turnover and job satisfaction assessments. Cooper et al. (2019) additionally examined rule theory focusing on nurse practitioners through a rigorous meta-analysis of 120 articles associated with the key phenomenon. According to Cooper et al. (2019), the roles of nurse practitioners are valuable and effective. They are associated closely with leadership oversight, research roles, and their

ability to serve as a specialist and a generalist dependent upon the clinician setting. Cooper et al. (2019) and Hagan and Curtis (2018) indicated that role theory provides a critical method for founding and understanding the role of nurse practitioners and their experiences with workload and job satisfaction.

Jairath et al. (2018) argued that there is a need to improve the theoretical application toward understanding nurse practitioners' roles within the health profession. Jairath et al. employed role theory to explore nurse practitioners setting within the health profession paradigm. According to Jairath et al., the lack of theory often used within previous assessments specific to our practitioners has reduced understanding of how to prevent adverse outcomes, such as turnover. Additionally, Han et al. (2018) argued that there is a need to improve the understanding of nurse practitioners in terms of their role within the workplace, and the specific tasks they complete, to prevent workload burnout and turnover by improving job satisfaction. The findings of Han et al. and Jairath et al. indicate the importance of applying the theory of role models as it will be applied to the current study.

Role theory was used to ground the current study because, in the health profession, the role of the individual is related to the workload required for the position (Conway, 1988). The role of the professional, their workload, as measured based on job responsibilities and time spent on tasks, and the potential relationship with job satisfaction among nurse practitioners were specifically examined. The logical connections between the framework presented and the nature of my study imply that in healthcare practice, healthcare professionals often have to change roles in meeting patient

needs, which may require taking on tasks outside of their ordinary or assigned role. As nurse practitioners take on additional roles to meet patient needs, other administrative tasks, and support other coworkers (Bourdeanu et al., 2020; Côté et al., 2019; Laurant et al., 2004; Torrens et al., 2020), there are implications for increased workload, which may lead to an increased sense of stress associated with their role.

Role theory provides a logical framework for understanding the key variables of this study. In particular, the independent variable of job satisfaction is identifiable through the role theory's foundational information regarding the importance of nurse practitioners in meeting patients, administration, and support from coworkers while maintaining their job satisfaction. In turn, previous researchers indicated the importance of understanding job responsibility and time spent on tasks, as they are related to the roles of nurse practitioners in the United States (Bourdeanu et al., 2020; Côté et al., 2019; Laurant et al., 2004; Torrens et al., 2020). In sum, role theory was used as the theoretical foundation for the current study. In addition, the role theory provided a theoretical foundation for exploring how the differential rules within the healthcare sector may ultimately influence behaviors, physicians, and characteristics such as workload, job responsibilities, and time spent on tasks, which were assessed in this study.

Literature Review Conclusion

A review of the literature concerning job satisfaction has revealed factors that are associated with job satisfaction among nurse practitioners. Bruhl et al. (2020) and Lebet et al. (2021) concurred that declines in job satisfaction are directly linked to emotional exhaustion, burnout, and stress. This finding suggests that job satisfaction among nurse

practitioners is determined by workload distribution, which would explain why Brayer and Marcinowicz (2018) and Hagan and Curtis (2018) concluded that adding more nurse workers could help reduce the workload and can be useful in reducing burnout and emotional exhaustion. As such, it is logical to state that the relationship between job satisfaction and workload among nurse practitioners is mediated by nurse experiences that lead to burnout, emotional exhaustion, and stress. Such a point of view raises concerns about the relationships created by nurses in the work environment and the impact of those relationships on job satisfaction. As revealed by Coplan et al. (2018), the capability of nurses to establish and sustain relationships with their workmates contributes to increased job satisfaction because the practitioners spend limited time outside of their work environments. However, Weaver (2019) contradicted this statement indicating that although relationships in the workplace are essential in helping nurses combat emotional exhaustion, the relationships are ineffective when it comes to determining job satisfaction in the presence of hefty workloads.

Researchers have concurred that the shortage of physicians in the United States is the leading cause of heightened workloads (Halcomb & Bird, 2020; Mundt & Zakletskaia, 2019). Such a consensus would suggest that workload challenges stemming from staff shortages are chiefly to blame for the decline in job satisfaction among nurse practitioners. Nonetheless, Cimiotti et al. (2019) contradicted this point of view noting that even in cases of reduced workloads through recruitment of additional nurses, the practitioners report low job satisfaction due to a lack of support from administrative staff and fellow physicians in the primary care setting. This finding raises concerns regarding

the relationship between job satisfaction and job responsibilities while considering the work environment. Dye and Wells (2017) shed light on the nature of this relationship pointing out that work environment factors resident duty hours, intensive care unit admissions, and shortage of nurse practitioners may contribute to the nurse practitioner job responsibilities leading to job satisfaction declines. Conversely, Guixia and Hui (2020) indicated that work environments may not exert an impact on job satisfaction unless nurse practitioners have to work in environments that create and heighten anxiety as has been the case during the COVID-19 pandemic. This statement qualifies the assertion that workload is related to job satisfaction given that workload, when combined with stressful working conditions, easily leads to fatigue (Abrams et al., 2020).

The relationship between job satisfaction and workload has been viewed through the lens of job responsibilities. For instance, Torrens et al. (2020) and Restuptri et al. (2019) concurred that the job responsibilities of nurse practitioners also exacerbate their stress and burnout and increase their workload, leading to declines in job satisfaction. However, it is important to note that further research should be carried out to determine the specific job responsibilities that are associated with heightened workload and stress increases. On the other hand, Côté et al. (2019) enlightened that advanced nursing practice nurses expressed an inadequate understanding of their role and perceived restrictions on their professional autonomy. Although this may not shed sufficient light on the aspect of job responsibilities, it demonstrates that job satisfaction, even in the presence of hefty workloads, can be attained if nurse practitioners understand their roles and can cope with restrictive working policies. At the same time, job responsibilities

come with specific tasks, and the time spent on tasks may impact or decrease the stress, burnout, and workload that nurse practitioners perceive (Sieja et al. (2019). However, Seruga et al. (2020) contradicted this point of view after finding out that the time spent on tasks has minimal influence on job satisfaction in work environments where team-based care models are implemented. Conversely, Tsay et al. (2019) defended the point of view that time spent on tasks influences workload and job satisfaction, stating that nurse practitioners' scope of practice, which relates to the tasks spent at work, without renewed understanding and policy modification heightens workload, hinders effective communication, leading to a decline in job satisfaction.

Definition of Terms

Job satisfaction: Job satisfaction refers to the perceived happiness or reported satisfaction with the workplace as perceived by the employer (Han et al., 2018). In the current study, job satisfaction refers to the satisfaction of nurse practitioners regarding their health care duties as well as the general practices and procedures they employ in their work (Coplan et al., 2018).

Workload: In the current study, perceived workload is the perception that nurse practitioners have regarding how heavy their daily job activities are in relation to their job responsibilities. Thus, nurse practitioners may describe a heavy or light perceived workload based on the healthcare workplace, nurse shortages, and internal and external factors (Bruhl et al., 2020).

Job responsibilities: Job responsibilities refer to the day-to-day activities that nurse practitioners are required to carry out in the health care placement. Their routine

activities include caring for patients, completing documentation and charting, as well as administrative tasks, which they are expected to complete per the hiring procedures within the healthcare workplace (Dye & Wells, 2017).

Nurse practitioner: A nurse practitioner is an advanced practice nurse. Nurse practitioners are trained in assessing patient needs, ordering, interpreting diagnostic and laboratory tests, diagnosing diseases, and formulating and prescribing specific treatment plans. However, the nurse practitioners' role, depending upon the health care setting and geographical location, is limited regarding the prescription of controlled substances (Austin et al., 2021).

Time spent on tasks: Time spent on tasks refers to the time that a nurse practitioner takes to complete a specific task in the workplace. This time may vary according to the complexity of the tasks as well as internal or external barriers to presenting a tasks and ineffective period (Hoff et al., 2019).

Role theory: Role theory was used as the theoretical framework for the current study. The role theory provides an understanding of how different roles within the healthcare sector can impact behaviors, characteristics, job positions, as well as issues such as workload, time spent on tasks, and responsibilities (Conway, 1988).

Assumptions

It was assumed that the findings of this study might positively contribute to a renewed understanding of how to reduce the workload for nurse practitioners. This assumption is not possible to verify empirically. However, based on the reviewed gap in the literature as well as the problem statement, there is a need to address this issue to

provide further information to support intervention designed to address workload burnout and potential negative outcomes, such as burnout.

Scope and Delimitations

The scope of the study is limited in terms of the problem statement identified within this section. The problem identified included a gap in the literature regarding large workloads in the healthcare profession that can result in burnout, fatigue, and negative outcomes for nurse practitioners (Ancker et al., 2017; Guixia & Hui, 2020). In addition, this study delimitation focuses on the relationship between job responsibilities and job satisfaction among nurse practitioners. This delimitation was necessary due to the identified negative outcomes associated with nurse practitioners who experience workload, such as burnout. Variables outside of hours spent on various tasks, hours spent outside of work, job satisfaction, workload, and tasks in the workplace were excluded from this study to refine the assessment of the identified gap and research problem.

The current study is limited in generalizability, as the focus of this research design was correlation, not causation. Thus, future researchers are encouraged to extend the findings of this study through consideration of causation or other related quantitative assessments. In addition, the findings of this study are limited in terms of generalizability due to the use of secondary data from the 2017 national survey of primary care physicians and nurse practitioners. Despite some limitations to generalizability, the findings ideally provide informed data regarding job responsibilities and time spent on tasks for nurse practitioners to understand how to improve workload for these critical health care providers.

Limitations

As a secondary data source was utilized in this study, permissions associated with the data set were a barrier that had to be addressed before utilizing the data. Another limitation associated with the use of secondary data in this study is that the findings are limited to the available data and restricted to the operationalization of variables within the data set. Therefore, challenges of missing data were addressed through data cleaning and the selection of multiple potential indicators to explore the variables of interest.

Significance

This study is significant in that its findings may help determine the relationship between job responsibilities and job satisfaction among nurse practitioners. The findings can help to inform healthcare administration by identifying areas in which workload and organization of care delivery may need to be changed to address identified workload issues. The findings of this study may positively contribute to empirical literature through writing and renewed understanding of the relationship between job responsibilities and job satisfaction among nurse practitioners. The findings may also be useful for the development of interventions that can inform health care administration, specifically targeting nurse practitioners by addressing workload and organization of care delivery.

Summary and Conclusions

In this section, I presented a thorough review of the literature and provided critical foundational definitions of the purpose, problem, and guiding research questions period. The purpose of this quantitative retrospective quasi-experimental correlational study was to examine the relationship between job responsibilities, time spent on tasks, and job

satisfaction among nurse practitioners in the United States using data from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners. I also presented the guiding theoretical framework, the role theory developed by Conway in 1988. Subsequently, I discussed the nature of the study, which included quantitative methodology and a correlational research design. For this study, secondary data were collected, with job satisfaction as the dependent variable and as job responsibilities, and time spent on tasks as the independent variables. I also reviewed literature that focused on job satisfaction, workload, job responsibilities, and time spent on tasks. I then provided the definitions of key terms that underpinned this study's independent and dependent variables. Lastly, I reviewed the assumptions, scope and limitations, and significance of the current study. In the next section, I provide a renewed discussion of the research design and methodology used to collect and analyze data for this study.

Section 2: Research Design and Data Collection

Introduction

In an initial search of the literature, research was identified on the importance of nurse practitioners in addressing the issue of burnout by supporting physicians (Cimiotti et al., 2019; Côté et al., 2019; Norful et al., 2018). However, in recent studies, issues of integrating nurse practitioners into the workforce across care settings were also identified (Bruhl et al., 2020; Côté et al., 2019; Torrens et al., 2020). Moreover, researchers have identified a low level of job satisfaction among nurse practitioners (Hoff et al., 2019). Although negative outcomes such as alert fatigue and burnout were found to be associated with workload (Ancker et al., 2017), including among nurse practitioners (Bourdeanu et al., 2020; Hoff et al., 2019), there was a lack of research on the relationship between job responsibilities and job satisfaction among nurse practitioners in recent literature.

The purpose of this quantitative retrospective quasi-experimental correlational study was to examine the relationship between job responsibilities, time spent on tasks, and job satisfaction among nurse practitioners in the United States using data from the National Survey of Primary Care Physicians and Nurse Practitioners, 2017. Additionally, the trends in identified staffing needs were described in relation to job responsibilities. The dependent variable of interest is job satisfaction. The independent variables of interest are job responsibilities and time spent on tasks. Specifically, this study focused on addressing the following two research questions:

RQ1. Is there a statistically significant relationship between the independent

variable, job responsibilities, and the dependent variable, job satisfaction?

H_{01} : There is no statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction.

H_{a1} : There is a statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction.

RQ2. Is there a statistically significant relationship between the independent variable, time spent on tasks, and the dependent variable, job satisfaction?

H_{02} : There is no statistically significant relationship between the independent variable, time spent on a tasks, and the dependent variable, job satisfaction.

H_{a2} : There is a statistically significant relationship between the independent variable, time spent on a tasks, and the dependent variable, job satisfaction.

In this section, detailed discussions of the research design and rationale for the study are provided. This section also includes details on the methodology such as the population, samples, and sampling procedures as well as the instrumentation, operationalization of constructs, and data analysis procedures. The threats to validity including the ethical considerations are also discussed in this section. This section ends with a summary of the research design and data collection procedures used in this study.

Research Design and Rationale

To address the research questions in this study, a quantitative methodology and a correlational research design were used to examine the relationship between job responsibilities, time spent on tasks and job satisfaction among healthcare practitioners. The quantitative methodology was determined to be appropriate for this study as quantitative research entails the collection and analysis of numerical data. A typical quantitative study necessitates that a researcher clearly defines and operationalizes key variables, which should then be measured and degrees of associations among them established (Creswell & Creswell, 2018). The quantitative method was deemed appropriate for the current study as the researcher measured variables and the associations among them by answering the research questions and determining whether a statistically significant relationship exists between the dependent variable (job satisfaction) and the independent variables job responsibilities, and time spent on tasks). Regression analysis was used because it not only showed which independent variable has the most weight on job satisfaction but it also statistical significance. Specifically, the research purpose and subsequent questions were addressed by measuring the job satisfaction and workload of nurse practitioners, as well as the relationship between the independent variables. Secondary data from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners were used to numerically measure job satisfaction, job responsibilities, and time spent on tasks of participants.

In this study, a qualitative method was deemed inappropriate for measuring the relationship between variables. The qualitative method entails the collection and

subsequent analysis of non-numerical data to gain a deeper insight into the opinions, perceptions, and feelings of people (Dudovskiy, 2014). My intention was not to explore the in-depth reasons for job satisfaction or perceptions of workload but rather seek to examine the relationship between indicators of job responsibilities, time spent on tasks, and job satisfaction among nurse practitioners. Additionally, I utilized secondary quantitative data, which means that the qualitative method would not be feasible in this study. Several designs can be used to conduct quantitative studies. In this particular study, I intended to use a correlational quantitative design to examine the correlational relationship between the variables of interest. However, qualitative methods may be used in future research to expand upon the findings of this study.

Methodology

Population

The target population for this study included nurse practitioners in the United States. Secondary data from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners was used in the study. The participants in the secondary data included nurse practitioners who were 18 years old and above. No other inclusion criteria were used to screen data points for use in this study, but descriptive statistics were generated to characterize the population based on the demographic data made available by the National Survey of Primary Care Physicians and Nurse Practitioners. These data included state of resident (C15_State), years in practice (D1), age (D3), gender (D4), race/ethnicity (D6M2-D6M10). The figures in parentheses note the corresponding variable in the

dataset's codebook. All available data from the secondary data source were used in the study.

Sampling and Sampling Procedures

A convenience sampling technique was used to select data from all available data from the 2017 National Survey for Primary Care Physicians and Nurse Practitioners in this study. Convenience sampling is a nonprobability sampling technique wherein all available data are used to ensure that many samples are included in the study. To ensure that enough samples were gathered for the study, a priori sample size calculation was conducted. The analysis involved a power of 80%, a medium effect size, a significance level of .05, and a two-tailed correlation analysis or linear regression analysis. The result of the G*Power analysis indicated that a minimum of 82 participants were necessary for correlation analysis and interpretation, while 77 participants were necessary for linear regression analysis with three predictors. Therefore, at least 82 participants were necessary for this study. The 2017 National Survey for Primary Care Physicians and Nurse Practitioners included 972 participants. Thus, there was enough data for the study.

Instrumentation and Operationalization of Constructs

Secondary data were obtained from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners. Donelan (2017) conducted this survey for the American Medical Association Masterfile. The samples included primary care physicians and nurse practitioners. However, for this study, the responses of nurse practitioners were the focus. The survey questionnaire included perceptions of the health workforce, current employment, clinical practice, and demographic characteristics. For this study, the focus

was on measures of job satisfaction, job responsibilities, and time spent on tasks. Job satisfaction was measured using the item “On the whole, how satisfied are you with your employment?” (i.e., variable B1 in the dataset’s codebook). Participants were asked to respond based on a four-point Likert-type scale ranging from very dissatisfied (1) to very satisfied (4). Job responsibilities were measured using the responses of participants on the items “During a typical week of work, what percentage of your time is spent doing the following?” (i.e., variable B6aa in the dataset’s codebook). The percentage responses from the participants on the time for each activity was taken as the job responsibility scores of participants. Time spent on tasks was measured using the responses of participants on the items “During a typical week of work, what percentage of your time is spent doing the following?” The responses of participants were based on a three-point Likert-type scale with 1 indicating too much, 2 indicating too little, and 3 indicating about the right amount.

Data Analysis Plan

All data gathered for the study was imported to SPSS v26.0. I used frequencies and percentages to present the demographic characteristics of participants. I also used measures of central tendency to present the variables for job satisfaction, job responsibilities, and time spent on tasks. To address the research questions, I conducted correlation analyses after performing Shapiro-Wilk’s tests to determine whether the data followed a normal distribution. For normal distribution data, Pearson’s correlation analysis was conducted, whereas for non-normal distributions, Spearman’s correlation analysis was conducted. For the first research question, the perceived workload and the

job satisfaction scores were inputted in the correlation analysis, including all items on the questions for job responsibilities, time spent on tasks and job satisfaction. Further analysis of the data involved linear regression analysis wherein all items for each of the three variables were inputted as predictors and job satisfaction as the dependent variable. Assumptions of linear regression analysis such as outliers, linearity, normality of residuals, independence, homoscedasticity, and multicollinearity were tested before conducting the linear regression analysis (Lund, 2021). A significance level of .05 was used for all analyses.

Threats to Validity

External validity refers to the generalizability of the results while internal validity refers to the extent to which what was done in the study produced the given results and that the results were not influenced by other factors (Price et al., 2018). This section includes a discussion of the threats to the external and internal validity of the study. Selection bias has one of the most profound effects on a study's external validity since how samples were chosen will influence how generalizable the findings are from the samples to the rest of the population (Liu et al., 2019). In quantitative research, the sample taken should ideally be representative of the larger population to maximize the generalizability of the findings. Random (probability) sampling is one strategy that can be used to reduce the presence of selection bias since all the samples are drawn at random (Liu et al., 2019). In other words, because each sample is equally as likely to be chosen, the results are more likely to be more generalizable to the rest of the population (and potentially to other populations) than they would have been had the samples been chosen

purposefully or for convenience. When the sampling strategy does not result in a representative sample of participants, as can be the case when convenience sampling is used, it is important to consider how this might influence the generalizability of the results. It is important to note that a study's findings will not be generalizable to the target population if the specific characteristics that define the target population will make it difficult to apply these results to other groups. Specifically, for this study, convenience sampling was employed. However, all available data from secondary data were used in the study to ensure that the results are generalizable to the population of nurse practitioners.

Internal validity refers to the extent to which the research design supports the conclusions made (Price et al., 2018). Nonexperimental designs, such as the one used in this study, typically have lower validity than other quantitative research designs because the independent variables are not manipulated or controlled (Price et al., 2018). Therefore, it is more likely that an unmeasured variable, called a confounding variable, influenced the study's results. An example of a confounding variable in the context of this study would be the years of service of nurse practitioners, which may influence their job satisfaction. Other potential threats to the internal validity of a study include changes in instrumentation, participant selection, maturation, and the administration of multiple tests (Rahman, 2020). The use of secondary data, instead of primary data collected during surveys, helped increase this study's internal validity. The data were not subject to nurse practitioners' perceptions of the study, the number of surveys that were administered, or the data collection methods used.

Ethical Procedures

Ethical considerations constitute a key component of the research process and should be considered through the design and implementation of a study (Liu et al., 2019). Getting approval from the university IRB board was the first step in the process of addressing the ethical concerns of this study. Issues such as confidentiality and anonymity should be continuously renegotiated. For this study, secondary data were collected from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners. Data were used with permission from Donelan (2017). The data considered in the study did not include identifiable information and all data gathered for the study was only accessible to the researcher. The data was only used for this study. Because no primary data were collected, an informed consent form was not necessary. All data collected were stored in locked file cabinets and password-protected computer files to which only the researcher has access, and after 3 years from the approval of this study, all information will be destroyed and permanently deleted.

Summary

In this section, I presented the research design that was employed in the present study and discussed procedures for data analysis and concerns relating to study validity and maintaining an ethical code of conduct. A quantitative correlational design was chosen for this study to determine the relationship between job responsibilities and time spent on tasks on job satisfaction of nurse practitioners. Data were gathered from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners regarding job satisfaction, job responsibilities, and time spent on tasks. To examine potential

relationships between variables, Pearson's correlation of Spearman's correlation analysis was performed. This statistical test was appropriate for this study because it is used to determine the relationships between two identified variables. Linear regression analysis was also conducted to determine which of the three predictors significantly affects the job satisfaction scores of participants. Potential validity threats included selection bias and confounding variables. All ethical procedures, as required by the university IRB, were followed, and participants were reassured that all information would be kept secure and anonymous.

Section 3: Presentation of the Results and Findings

Introduction

The purpose of this quantitative retrospective quasi- experimental correlational study was to examine the relationship between time spent on tasks, job responsibilities, and job satisfaction among nurse practitioners in the United States using data from the National Survey of Primary Care Physicians and Nurse Practitioners, 2017. Additionally, the trends in identified staffing needs will be described in relation to time spent on tasks and job responsibilities. The dependent variable of interest is job satisfaction. The independent variables of interest, time spent on tasks, and job responsibilities will be measured (Bordeanu et al., 2020; Côté et al., Torrens et al., 2020).

The following research questions were addressed in this study.

RQ1. Is there a statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction?

H_01 : There is no statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction.

H_1 : There is a statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction.

RQ2. Is there a statistically significant relationship between the independent variable, time spent on tasks, and the dependent variable, job satisfaction?

H_02 : There is no statistically significant relationship between the independent variable, time spent on tasks, and the dependent variable, job satisfaction.

*H*₂: There is a statistically significant relationship between the independent variable, time spent on tasks, and the dependent variable, job satisfaction.

Data Collection Procedures

Secondary data from the National Survey of Primary Care Physicians and Nurse Practitioners in 2017 were used in the study. The participants in the secondary data included nurse practitioners who are 18 years old and above. No other inclusion criteria were used to screen data and all available data were used in the analyses for this study. However, no data on demographic characteristics was provided. All items on demographic characteristics did not have responses.

Statistical Analysis Type and Explanation

All data gathered for the study were imported to SPSS v26.0. Frequencies and percentages were used to present the demographic characteristics of participants. Measures of central tendencies were used to present the variables for job satisfaction, job responsibilities, and time spent on tasks. To address the research questions, correlation analyses were conducted. Before conducting the analyses, Shapiro-Wilk's tests were conducted to determine whether the data follows a normal distribution. If the data follows the normal distribution, Pearson's correlation analysis was conducted. If the data did not follow the normal distribution, Spearman's correlation analysis was conducted.

Two correlation analyses were conducted. The first analysis included the independent variable job responsibilities and the dependent variable job satisfaction. For the independent variable job responsibilities and dependent variable job satisfaction, each item on the question for job responsibilities and job satisfaction were inputted in the

correlation analysis of SPSS. The second analysis included the independent variable time spent on tasks and the dependent variable job satisfaction. For the time spent on tasks and job satisfaction variables, each item on the question for time spent on tasks and job satisfaction were inputted in the correlation analysis of SPSS. Linear regression analysis was also conducted to further analyze the data. The linear regression analysis involved all items for each of the two variables as predictors and job satisfaction as the dependent variable. Assumptions of linear regression analysis such as outliers, linearity, normality of residuals, independence, homoscedasticity, and multicollinearity were tested before conducting the linear regression analysis (Lund, 2021). A significance level of .05 was used for all analyses.

Descriptive Analysis Results

This section presents the descriptive statistics of study variables. The study variables include job satisfaction, job responsibilities, and time spent on tasks. Measures of central tendencies are presented to describe the data gathered for the study.

Descriptive Statistics of Study Variables

A total of 972 participants data were included in the study. The study variables for this study include job satisfaction, job responsibility items, and time spent on tasks items. Job satisfaction has a mean of 1.65 (SD = .710) with a range from 1 to 4. The responsibilities of participants were categorized into 10 types of responsibilities. The highest mean score was observed for direct patient care (M = 49.78, SD = 20.96). The lowest mean score was observed for other (M = 0.42, SD = 2.81) and research (M = 1.37, SD = 7.25). For the time spent on tasks, the highest mean scores were observed for direct

patient care (M = 2.62, SD = 0.55), patient/family teaching (M = 2.55, SD = 0.55), teaching (M = 2.57, SD = 0.54), research (M = 2.62, SD = 0.50), and other (M = 2.82, SD = 0.45).

Table 1

Descriptive Statistics of Study Variables

	N	Min	Max	M	SD
Job Satisfaction	972	1	4	1.65	.710
Responsibility - Direct Patient Care	916	0	100	49.78	20.96
Responsibility - Patient/family teaching	916	0	100	10.72	11.11
Responsibility - Patient care notes/documentation	916	0	100	16.83	12.25
Responsibility - Patient related telephone calls	916	0	90	8.24	7.18
Responsibility – Teaching	916	0	100	3.91	10.27
Responsibility - Continuing education for your own development/licensure	916	0	50	3.38	3.75
Responsibility – Research	916	0	100	1.37	7.25
Responsibility – Administration	916	0	90	5.11	11.72
Responsibility - Continuing education	916	0	60	3.72	4.17
Responsibility – Other	916	0	50	0.42	2.81
Time spent on tasks- Direct patient care	876	1	3	2.62	0.55
Time spent on tasks - Patient/family teaching	825	1	3	2.55	0.55
Time spent on tasks- Patient care notes/documentation	851	1	3	1.82	0.96
Time spent on tasks- Patient related telephone calls	815	1	3	2.32	0.91
Time spent on tasks – Teaching	680	1	3	2.57	0.54
Time spent on tasks- Continuing education for your own development/licensure	744	1	3	2.49	0.53
Time spent on tasks – Research	627	1	3	2.62	0.50
Time spent on tasks– Administration	706	1	3	2.53	0.77
Time spent on tasks - Continuing education	750	1	3	2.50	0.54
Time spent on tasks – Other	255	1	3	2.82	0.45

Responsibilities and Time Spent on Tasks Variables

Job responsibility items were averaged to calculate the job responsibilities variable. Similarly, the time spent on job responsibilities items were also averaged to calculate the time spent on tasks variable. The mean responsibilities score is 10.35 (SD = 2.98) with a range of 0 to 55.50. The mean time spent on tasks is 2.60 (SD = 0.36) with a range of 1.60 to 3.00.

Table 2

Descriptive Statistics of Responsibilities and Time Spent on Tasks Variables

	N	Min	Max	M	SD
Job Responsibilities	916	0.00	55.50	10.35	2.98
Time Spent on Tasks	234	1.60	3.00	2.60	0.36

Normality Test for Study Variables

Shapiro-Wilk's tests were conducted to examine whether the data are normally distributed. Shapiro-Wilk's tests of study variables are presented in Table 3. As observed, all the variables are not normally distributed ($p < .001$). Therefore, Spearman's correlation analysis as opposed to Pearson's correlation analysis was conducted. Spearman's correlation analysis is a nonparametric test to determine relationships between variables. In this study, Spearman's correlation analyses were conducted to examine relationships between job satisfaction and job responsibilities and time spent on tasks.

Table 3*Shapiro-Wilk's Tests of Study Variables*

	Shapiro-Wilk		
	Statistic	Df	Sig.
Job Satisfaction	.527	222	.000
Job Responsibilities	.198	222	.000
Time Spent On Tasks	.908	222	.000

The results of the Spearman's correlation analysis were presented in Table 4. As observed, job satisfaction was significantly related to time spent on tasks (Spearman's $Rho = -.347, p < .001$). The negative correlation coefficients indicated that time spent on tasks resulted in lower job satisfaction by participants. However, the correlation analysis determined that there is no significant correlation between job responsibilities and job satisfaction (Spearman's $Rho = -.016, p = .624$).

Table 4*Spearman's Rho Correlation Analysis Results*

			Job Satisfaction
Spearman's Rho	Job Responsibilities	Correlation Coefficient	-.016
		Sig. (2-tailed)	.624
		N	900
	Time Spent on Tasks	Correlation Coefficient	-.347**
		Sig. (2-tailed)	.000
		N	228

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

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

Assumptions Testing for Linear Regression Analysis

To further analyze the data, assumptions of a linear regression analysis were tested. Figure 1 presents the box plot of job satisfaction. Boxplots were used to determine whether there are significant outliers in the data. Outliers are data points outside of the normal range of values in the dataset. As observed in the boxplots, there are significant outliers for the job satisfaction variable. The significant outliers were removed from the dataset for the linear regression analysis.

Figure 1

Boxplot of Job Satisfaction Scores: Significant Outliers Were Observed but Were Removed for the Linear Regression Analysis



The boxplot of job responsibility has a high number of outliers. The values for Q1, the median, and Q3 all overlap at 1.0. This indicates that there is no skew to the

dataset. However, there are outliers both above and below this 1.0 value. There are more outliers in the upper range of the dataset than in the lower range. The boxplot of time spent on tasks demonstrates a left skew. Q3 and the maximum value overlap at 3.0 while the width of the first quarter is approximately equal to the width of the remaining 75% of the data. There are no outliers for this variable.

Figure 2

Box Plot on Job Responsibilities: There is no Skew for the Data as Pertains to the Job Responsibilities Variable due to Values for Q1, the Median, and Q3 all Overlap at 1.0

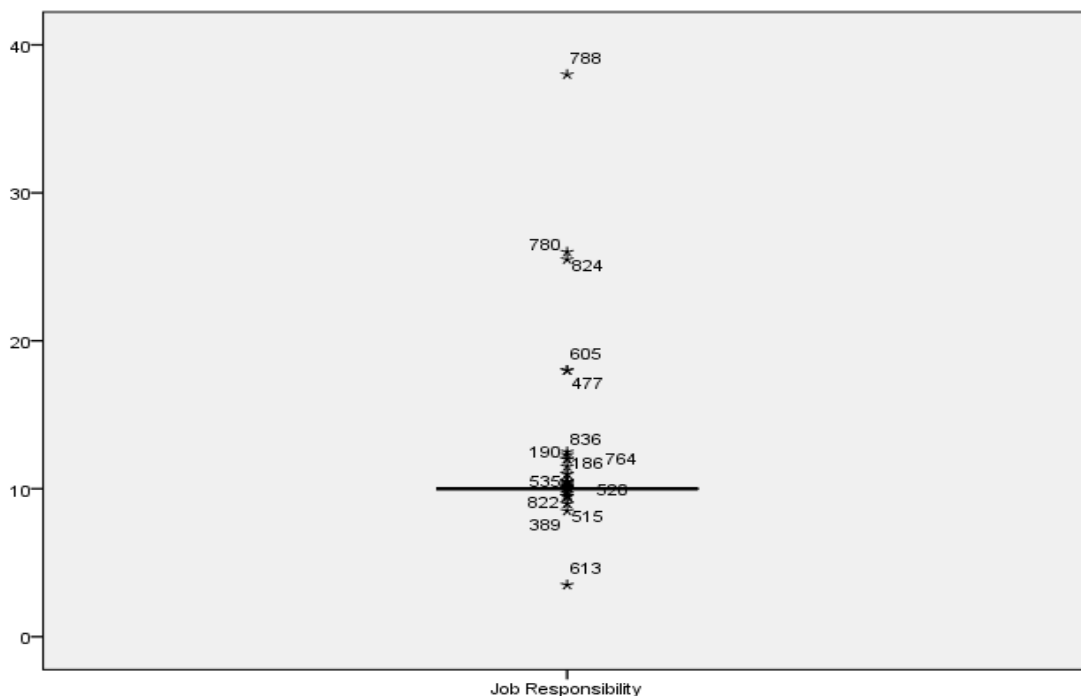
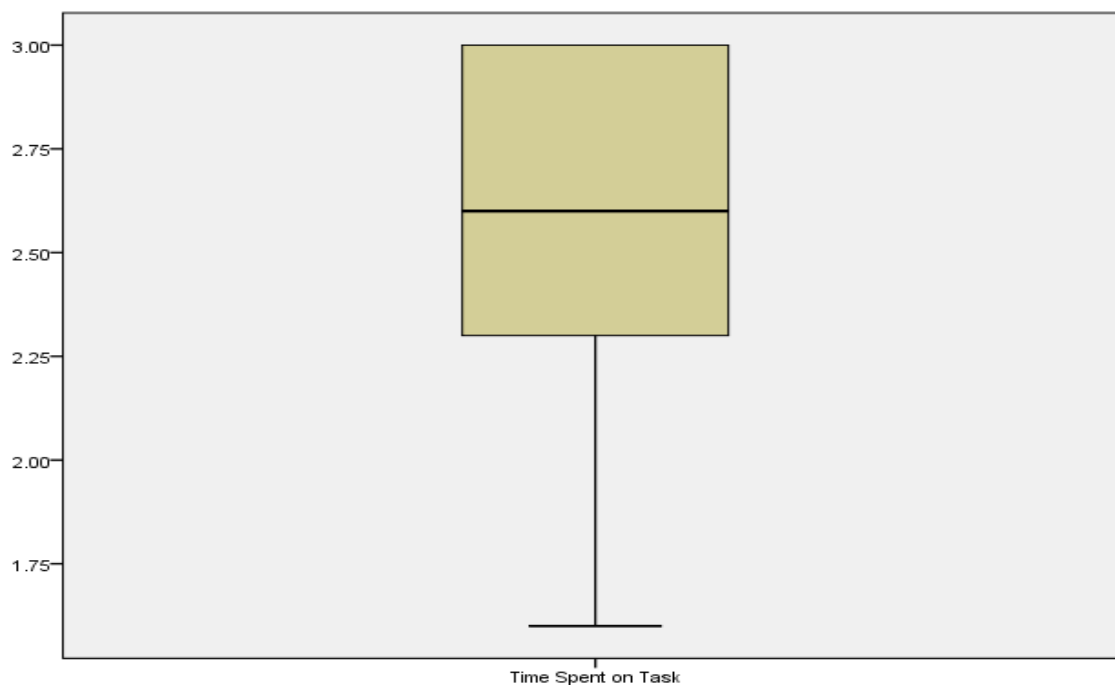


Figure 3

Box Plot of Time Spent on Tasks: There Were no Outliers for Time Spent on Tasks

Variable as it is a Left Skew



To test the assumption on independence, Durbin-Watson Statistic was calculated for job responsibilities and time spent on tasks. Based on the calculation, the Durbin-Watson statistic was 2.031. A Durbin-Watson statistic within the range of 1.5 to 2.5 indicates that the assumption of independence is not violated. Thus, the assumption on independence was accepted. The variance inflation factor (VIF) was used to determine whether the assumption on multicollinearity was met. The VIFs are presented in Table 5. Based on the VIF scores, the range is from 1.004 to 1.008 which are below the value of 10. Thus, the assumption on multicollinearity is met which showed that the predictor variables are not linearly related to each other.

Table 5*Variance Inflation Factors*

	Collinearity Statistics	
	Tolerance	VIF
Job Responsibilities	.996	1.004
Time Spent on Tasks	.992	1.008

Linear Regression Results**Research Question 1**

To address the research question concerning whether there a statistically significant relationship between the independent variable (job responsibilities and the dependent variable (job satisfaction), Table 6 presents the linear regression analysis results for the independent variable, job responsibilities and job satisfaction as the dependent variable. Based on the results of the analysis, job responsibilities ($B = -.063$, $p = .450$) is not a significant predictor of job satisfaction. Therefore, the alternative hypothesis is rejected and the null hypothesis is accepted indicating that there is no statistically significant association between job responsibilities and job satisfaction.

Research Question 2

However, for question 2 addressing if there is a statistically significant relationship between the independent variable, time spent on tasks and the dependent variable (job satisfaction), the results indicated that time spent on tasks is a significant predictor of job satisfaction ($B = -.704$, $p < .001$). The model was also determined to be significant in predicting job satisfaction ($F(3, 210) = 9.737$, $p < .001$) and explains

12.4% of the variance in job satisfaction scores. Therefore, the null hypothesis is rejected, and the alternate hypothesis is accepted indicating that there is a statistically significant association between time spent on tasks and job satisfaction.

Table 6

Linear Regression Analysis Result

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	4.197	.919		4.567	.000
Job Responsibilities	-.063	.083	-.049	-.756	.450
Time Spent on Tasks	-.704	.133	-.347	-5.312	.000

a. Dependent Variable: Job Satisfaction; $F(3, 210) = 9.737, p < .001, R\text{-squared} = .124$

Conclusion and Summary

The purpose of this quantitative retrospective correlational study was to examine the relationship between job responsibilities, time spent on tasks, and job satisfaction among nurse practitioners in the United States using data from the National Survey of Primary Care Physicians and Nurse Practitioners, 2017. Correlation analyses consisted of job responsibilities; time spent on tasks as well as job satisfaction. The correlational analysis for RQ1 determined that there is no significant correlation between job responsibilities and job satisfaction. This includes determining that job responsibilities variable does not significantly predict job satisfaction. As for RQ2 the correlational analysis determined that job satisfaction is statistically significantly correlated with time spent on tasks. The linear regression analysis further determined that the time spent on

tasks variable is a significant predictor of job satisfaction, thus, the null hypothesis is rejected, and the alternate hypothesis is accepted indicating that there is a statistically significant association between job responsibility and job satisfaction. In closing, section 3 outlined the results of the study's data analysis and section 4 will focus on findings and discussion.

Section 4: Application to Professional Practice and the Implications for Social Change

Improving employee job satisfaction is critical to healthcare administrators as it may positively influence employee retention, benefit patient care, and quality outcomes. Healthcare administrators are responsible for guaranteeing that nurses have positive feelings and responses to their work conditions and desired demands. In this study, the problem of job satisfaction in relation to nurse practitioners was explored. The purpose of this quantitative retrospective quasi-experimental, correlational study was to examine the relationship between job responsibilities, time spent on tasks, and job satisfaction among nurse practitioners in the United States using data from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners. The study's dependent variable was job satisfaction, whereas job responsibilities and time spent on tasks were independent variables. In this section, the application of the study findings to professional practice and their implication for social change is elucidated. The analysis sought to answer the following research questions:

RQ1. Is there a statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction?

H_01 : There is no statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction.

H_{a1} : There is a statistically significant relationship between the independent variable, job responsibilities, and the dependent variable, job satisfaction.

RQ2. Is there a statistically significant relationship between the independent variable, time spent on tasks, and the dependent variable, job satisfaction?

H₀₂: There is no statistically significant relationship between the independent variable, time spent on a tasks, and the dependent variable, job satisfaction.

H_{a2}: There is a statistically significant relationship between the independent variable, time spent on a tasks, and the dependent variable, job satisfaction.

Summary of Key Findings

Descriptive Statistics

Descriptive statistics were utilized in this study to elucidate the features of data from the NSPCPNP 2017 concerning job satisfaction, job responsibilities, and time spent on tasks of a group of 972 participants. Job responsibilities were calculated by adding up the tasks participants performed for their patients. Job responsibilities included medication administration, wound care, and conducting assessments.

The results showed an average score of 1.65 for job satisfaction, implying that the participants' job satisfaction was moderately low. Concerning perceived workload, the participants reported moderate job responsibilities overall, with some reporting heavier responsibilities than others, which was shown by a minimum score of 7 and a maximum score of 63, with an average score of 16.11 and a standard deviation of 7.10. Concerning job responsibilities, more time was spent on direct patient care, with the item presenting a mean score of $M = 49.78$, $SD = 20.96$. Concerning time spent on tasks, higher mean

scores were found on direct patient care, patient/family teaching, teaching, and research. These findings provide insightful information that healthcare administrators and leaders can utilize to develop approaches to boost job satisfaction among nurse practitioners.

Correlation Analysis

Spearman's correlation and Shapiro-Wilk's tests were used in this study to find relationships between the dependent variable, job satisfaction, and independent variables, job responsibilities, and time spent on tasks. The correlation between job responsibilities and job satisfaction scores were examined in the first grouping, showing a significant relationship between job satisfaction and job responsibilities and time spent on tasks. The study found negative correlation coefficients in both cases, suggesting that higher perceived workload and time spent on tasks are linked to lower job satisfaction. This result indicates that staff who perceive heavy job responsibilities and spend much time on tasks may experience decreased job satisfaction. These findings imply that lower levels of job contentment can lower staff engagement and increase turnover, ultimately impacting the provision of quality care. Therefore, new approaches are needed to intervene in perceived workload and streamline tasks to improve providers' job satisfaction. Some interventions may include implementing technological solutions to automate tasks, providing additional resources and support for employees, or adjusting workload expectations to ensure a better work-life balance.

The second grouping focused on job responsibilities and job satisfaction. Each item on the job responsibility questionnaire was used as a separate variable, and the researchers examined how each of these items correlated with job satisfaction. This

approach provided a more detailed analysis of the job responsibilities most strongly associated with job satisfaction.

Regression Analysis

The analysis revealed that job responsibility is not a statistically significant predictor of job satisfaction. Conversely, time spent on tasks is a significant predictor of job satisfaction. The model was found to be significant in predicting job satisfaction, implying that it is helpful in predicting job satisfaction. The model accounted for 12.4% of the variance in job satisfaction scores. Therefore, the null hypothesis that there is no significant relationship between the independent variables (job responsibilities and time spent on tasks) and the dependent variable (job satisfaction), was rejected based on the evidence obtained.

Interpretation of the Findings

The correlation analysis revealed a link between job satisfaction and job responsibility and the amount of time spent on a task. The linear regression analysis revealed that the time spent on a task significantly predicts job satisfaction. This finding implies that as the amount of time spent on a task increases, job satisfaction also tends to increase. Based on these findings, it is possible to reject the null hypothesis that there is no significant relationship between the independent variables of job responsibilities and time spent on tasks and the dependent variable of job satisfaction. In other words, the results suggested that there is indeed a significant relationship between these factors and job satisfaction and that this relationship should not be ignored in further analysis or decision-making.

Research Question 1: Job Satisfaction and Job Responsibilities

Although the analysis showed a correlation between job satisfaction and job responsibilities, the regression analysis showed that job responsibility was not a significant predictor of job satisfaction. The alternative hypothesis (H_1) for this research question was rejected, whereas the null hypothesis (H_0) was accepted, implying that no statistically significant association exists between job responsibilities and job satisfaction. This result elucidates that the various duties NPs are entrusted with can be demanding and challenging and such duties can increase workload and aggravate stress and burnout.

Similar findings have been discussed in various journals. For instance, Torrens et al. (2020) and Restuptri et al. (2019) elucidated how job demands can lead to negative outcomes such as stress and burnout. In another study, Dall'Ora et al. (2020) explained that a high workload is linked to emotional exhaustion and burnout. Moreover, NPs encounter complex and challenging events in their work environment that can affect their time spent on tasks and correlate with different job responsibilities. Fundora et al. (2021), Okoroafor et al. (2019), Pochert et al. (2019), and Watson et al. (2019) also explored these experiences and their impact on nurse practitioners. Their findings suggest that NP's job responsibilities and the time spent on tasks can contribute to their overall stress levels and negatively impact their wellbeing.

Bourdeanu et al. (2020) asserted that emotional exhaustion, depersonalization, and personal accomplishment were significant issues experienced by nurse practitioners, which directly impact job satisfaction and retention. Emotional exhaustion refers to feeling emotionally drained and overwhelmed, whereas depersonalization is the feeling

of emotional detachment and lack of empathy toward patients. NPs who experience emotional exhaustion may become less engaged, leading to dissatisfaction and an intention to leave the profession. Therefore, emotional exhaustion can significantly affect the quality of care provided to patients because emotionally exhausted NPs may struggle to deliver a high level of care. Thus, it is essential to identify ways to manage NPs' workload and support them in their job responsibilities to promote their overall wellbeing and guarantee high-quality patient care.

Research Question 2: Job Satisfaction and Time Spent on a Tasks

The study's results showed a correlation between job satisfaction and time spent on a task. The null hypothesis (H_02) for Research Question 2 was rejected whereas the alternate hypothesis (H_2) was accepted. This result implies that there was a statistically significant association between time spent on tasks and job satisfaction. These findings correspond with results from various studies. For instance, Sieja et al. (2019) found that the amount of time dedicated to completing tasks is an essential factor that can significantly impact the level of stress, burnout, and workload experienced by NPs. According to Hellín Gil et al. (2022), a high workload increases job dissatisfaction, which decreases patient safety, lowers care quality, and increases the likelihood of mistakes.

According to Sieja et al. (2019), some of the aspects of handling work that influence job satisfaction include management principles, work request optimization, and the provision of alerts for prioritization requests. Poghosyan et al. (2017b) highlighted the challenges nurse practitioners face in managing their time and responsibilities and presume that they often spend long hours at the workplace, and their workload can be

significant. Halliday et al. (2018) highlighted the responsibilities that NPs juggle, including providing critical patient care, managing administrative duties, and ensuring effective communication with other healthcare team members.

Perceived time pressures are a major stressor confronting nurses and nurse managers should develop ways to enable their staff to become better time managers. Goldsby et al. (2020) suggested self-management and evidence-based time management practices for better performance within the nurse duties' constraints. In this way, nurse practitioners can ensure that they allocate their time appropriately and focus on the most critical tasks first. Nurmeksela et al. (2021) also recommended improving nursing practices by organizing and managing nurses' duties in supportive, motivating, and secure ways. Additionally, providing alerts for prioritization requests can help them stay on track and avoid feeling overwhelmed by the number of requests they receive. Côté et al. (2019) suggested that having a clear understanding of NPs' roles and the ability to navigate restrictive policies can attain job satisfaction in the face of heavy workloads. Therefore, acknowledging these challenges can help organizations to develop and adopt suitable strategies to provide a supportive and motivating environment for NPs.

Limitations of the Study

One of the constraints of this study is that it was retrospective. In this design, the researchers rely on previously collected data and, as such, have no control over the data collection process (Nayak & Singh, 2021). The data may have been collected for a different purpose and under different conditions, which could have influenced the accuracy and reliability of the results. Therefore, there is a possibility that some critical

variables that could have influenced the outcomes were not captured in this study. The retrospective design also limited my ability to manipulate the study variables, which could have allowed me to gain a more in-depth understanding of the relationship between job responsibilities, time spent on tasks, and job satisfaction among nurse practitioners. Additionally, it was impossible to control extraneous variables that could have influenced the data collection process.

The study has a limitation in terms of its generalizability, as it only drew data from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners. In this study, only the relationship between job responsibilities, time spent on tasks, and job satisfaction among nurse practitioners was examined. The results from retrospective study designs are also limited in generalization (Talari & Goyal, 2020). Therefore, the results cannot be generalized to other healthcare professionals, such as physicians or physician assistants. The scope of the study is limited to nurse practitioners, which may not be applicable to other healthcare professionals with different roles and job responsibilities.

Recommendations for Future Research

One of the areas that would be informative and therefore, should be considered for future research is exploring the relationship between job satisfaction and patient care outcomes. Such research can provide valuable insights into how nurse practitioners can deliver high-quality patient care while achieving job satisfaction. By evaluating patient outcomes such as readmission rates and patient satisfaction scores, researchers could assess the impact of job satisfaction on the quality of care delivered by nurse

practitioners. For example, Garcia et al. (2019) presumed that clinically contented nurses may be more stimulated to provide high-quality patient care. Alternatively, dissatisfied NPs may experience burnout, negatively affecting patient care.

Another possibility is conducting a qualitative research study to collect the views of nurses on solutions to increase job satisfaction despite workload and responsibilities. For instance, a study evaluating the relationship between job satisfaction and motivation for nurses in low-income countries found that factors, including work experiences ranging from 5 to 10 years, work features, professional advancement, recognition, and remuneration, influenced job contentment (Ayalew et al., 2019). Undertaking similar studies to gather NPs' views in the United States would enable healthcare managers to understand the underlying concerns and potential mitigating measures. Such studies can provide valuable insights into the experiences and perspectives of healthcare providers in this field.

Gathering information directly from the nurses would provide a deeper comprehension of the issues that contribute to job satisfaction or dissatisfaction and explore potential solutions to implement in the workplace. Such investigations could involve in-depth inquiry with nurses to explore their experiences with job satisfaction and strategies they have found effective in managing workload and responsibilities. Phenomenological hermeneutical techniques can also provide NPs with lived experiences in relation to their daily duties (Neubauer et al., 2019). Future study could also focus on the organizational factors contributing to job satisfaction, such as leadership, management practices, and workplace culture.

Implications for Professional Practice and Social Change

NPs increase access to primary care and dealing with medically complex clients, and high workloads can increase the susceptibility to poor outcomes for nurses and patients. This study found that a high workload is positively linked to work stress and thus, negatively linked to job contentment. The study findings provide various social change implications and implications for practice.

Implications for Professional Practice

Healthcare administrators are faced with the challenges of understaffing, preserving a healthy workforce, and maintaining high standards of patient care. They understand the effects of turnover, which can further increase the workload of the workforce. Healthcare administrators may benefit from this study's findings because they are critical in developing a supportive environment that values nurses and their contributions. They also address issues of workload and burnout and may benefit from these findings to stimulate work-life balance approaches to support NPs' psychosocial well-being, satisfaction, and retention. Through the study findings, nurse managers can manage workload efficiently by implementing effective management principles, such as tasks prioritization and work optimization requests. Promoting self-management and evidence-based time management practices for better performance would enable NPs to become better time managers (Goldsby et al., 2020). Nurse managers and administrators can also utilize these findings to improve nursing practice by organizing and managing NPs' duties in a supportive and motivating way. Overall, healthcare organizations can

develop and adopt suitable ways to provide a supportive and stimulating environment for NPs.

Implications for Positive Social Change

Demotivation and dissatisfaction limit the provision of quality care and increase the intention to leave the profession. The impacts are accumulative, where dissatisfaction increases burnout, turnover, and understaffing, negatively affecting quality care provision. A positive social change would be attained when retention of the NP workforce is achieved (Kueakomoldej et al., 2022). Positive social change would also be achieved when job stressors are addressed, and job contentment stimulated. This study's findings can help administrators increase NP retention, reducing hiring and error-related costs.

Summary and Conclusion

The quantitative retrospective quasi-experimental correlational study aimed to analyze the connection between job responsibilities, time spent on tasks, and job satisfaction among NPs in the United States using data from the 2017 National Survey of Primary Care Physicians and Nurse Practitioners. The dependent variable of interest was job satisfaction, whereas the independent variables were job responsibilities and time spent on tasks. The results for RQ1 showed that job responsibilities were not a significant predictor of job satisfaction. Therefore, the alternative hypothesis was rejected, and the null hypothesis accepted. This outcome indicates that no statistically significant association exists between job responsibilities and job satisfaction. The results for RQ2

showed that time spent on tasks was a significant predictor of job satisfaction. Therefore, the null hypothesis was rejected, and the alternate hypothesis accepted.

Healthcare administrators and managers understand the importance of a positively stimulating work environment that promotes providers' psychosocial wellbeing by reducing dissatisfaction and burnout. Providing support and resources to manage workload effectively can enhance the effectiveness of NPs. Suggested approaches may include self-management practice, proof-based time management training, and approaches to improve the delegation of tasks. Based on the findings of this study, phenomenological hermeneutical techniques and in-depth inquiries are suggested to understand better the issues that contribute to job satisfaction or dissatisfaction and explore potential solutions to this problem in the workplace.

References

- Abrams, R., Wong, G., Mahtani, K. R., Tierney, S., Boylan, A. M., Roberts, N., & Park, S. (2020). Delegating home visits in general practice: a realist review on the impact on GP workload and patient care. *British Journal of General Practice*, *70*(695), e412–e420. <https://doi.org/10.3399/bjgp20x710153>
- Akbar, M. (2020). Analysis of the needs of general practitioners in public health centers using health workload method. *Public Health of Indonesia*, *6*(2), 63–9. <https://dx.doi.org/10.36685/phi.v6i2.336>
- Ancker, J. S., Edwards, A., Nosal, S., Hauser, D., Mauer, E., & Kaushal, R. (2017). Effects of workload, work complexity, and repeated alerts on alert fatigue in a clinical decision support system. *BMC Medical Informatics and Decision Making*, *17*(1), 1–9. <https://doi.org/10.1186/s12911-017-0430-8>
- Austin, S., Powers, K., Florea, S., & Gaston, T. (2021). Evaluation of a nurse practitioner–led project to improve communication and collaboration in the acute care setting. *Journal of the American Association of Nurse Practitioners*, *33*(9), 746–753. <https://doi.org/10.1097/JXX.0000000000000402>
- Ayalew, F., Kibwana, S., Shawula, S., Misganaw, E., Abose, Z., Van Roosmalen, J., Stekelenburg, J., Kim, Y., Teshome, M., & Mariam, D. W. (2019). Understanding job satisfaction and motivation among nurses in public health facilities of Ethiopia: A cross-sectional study. *BMC Nursing*, *18*(1), 1–13. <https://doi.org/10.1186/s12912-019-0373-8>

- Bourdeanu, L., Zhou, Q. P., DeSamper, M., Pericak, K. A., & Pericak, A. (2020). Burnout, workplace factors, and intent to leave among hematology/oncology nurse practitioners. *Journal of the Advanced Practitioner in Oncology*, *11*(2), 141–148. <https://doi.org/10.6004%2Fjadpro.2020.11.2.2>
- Brayer, A., & Marcinowicz, L. (2018). Job satisfaction of nurses with master of nursing degrees in Poland: Quantitative and qualitative analysis. *BMC Health Services Research*, *18*(1), 1–7. <https://doi.org/10.1186/s12913-018-3053-6>
- Bruhl, E. J., MacLaughlin, K. L., Allen, S. V., Horn, J. L., Angstman, K. B., Garrison, G. M., Maxson, J. A., McCauley, D. K., Lampman, M. A., & Thacher, T. D. (2020). Association of primary care team composition and clinician burnout in a primary care practice network. *Mayo Clinic Proceedings: Innovations, Quality & Outcomes*, *4*(2), 135–142. <https://doi.org/10.1016%2Fj.mayocpiqo.2019.12.008>
- Chang, L. Y., Hsiu-Hui, Y. U., & Chao, Y. C. (2019). The relationship between nursing workload, quality of care, and nursing payment in intensive care units. *The Journal of Nursing Research*, *27*(1), 1–9. <https://doi.org/10.1097/jnr.0000000000000265>
- Cimiotti, J. P., Li, Y., Sloane, D. M., Barnes, H., Brom, H. M., & Aiken, L. H. (2019). Regulation of the nurse practitioner workforce: Implications for care across settings. *Journal of Nursing Regulation*, *10*(2), 31–37. [https://doi.org/10.1016/s2155-8256\(19\)30113-9](https://doi.org/10.1016/s2155-8256(19)30113-9)

- Conway, M. E. (1988). Theoretical approaches to the study of roles. In M. E. Reles (Ed.), *Role theory: Perspectives for health professionals* (pp. 63–72). Lippincott Williams & Wilkins. <https://doi.org/10.2307/3424831>
- Cooper, M. A., McDowell, J., Raeside, L., & ANP–CNS Group. (2019). The similarities and differences between advanced nurse practitioners and clinical nurse specialists. *British Journal of Nursing*, 28(20), 1308–1314. <https://doi.org/10.12968/bjon.2019.28.20.1308>
- Coplan, B., McCall, T. C., Smith, N., Gellert, V. L., & Essary, A. C. (2018). Burnout, job satisfaction, and stress levels of PAs. *Journal of the American Academy of PAs*, 31(9), 42–46. <https://doi.org/10.1097/01.jaa.0000544305.38577.84>
- Côté, N., Freeman, A., Jean, E., & Denis, J. L. (2019). New understanding of primary health care nurse practitioner role optimisation: The dynamic relationship between the context and work meaning. *BMC Health Services Research*, 19(1), 1–10. <https://doi.org/10.1186/s12913-019-4731-8>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage.
- Dall’Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: A theoretical review. *Human Resources for Health*, 18, 1–17. <https://doi.org/10.1186/s12960-020-00469-9>
- Donelan, K. (2017). National survey of primary care physicians and nurse practitioners, 2012. *Inter-university Consortium for Political and Social Research [distributor]*, 2017-07-27. <https://doi.org/10.3886/ICPSR36050.v1>

- Dudovskiy, J. (2014). *Interpretivism (interpretivist) research philosophy*. Sage.
- Dye, E., & Wells, N. (2017). Subjective and objective measurement of neonatal nurse practitioner workload. *Advances in Neonatal Care*, 17(4), E3–E12.
<https://doi.org/10.1097/anc.0000000000000353>
- Faraz, A. (2019). Facilitators and barriers to the novice nurse practitioner workforce transition in primary care. *Journal of the American Association of Nurse Practitioners*, 31(6), 364–370. <https://doi.org/10.1097/jxx.0000000000000158>
- Farid, M., Purdy, N., & Neumann, W. P. (2020). Using system dynamics modelling to show the effect of nurse workload on nurses' health and quality of care. *Ergonomics*, 63(8), 952–964.
<https://doi.org/10.1080/00140139.2019.1690674>
- Fisher, R. F., Croxson, C. H., Ashdown, H. F., & Hobbs, F. R. (2017). GP views on strategies to cope with increasing workload: A qualitative interview study. *British Journal of General Practice*, 67(655), e148–e156.
<https://doi.org/10.3399%2Fbjgp17X688861>
- Fundora, M. P., Liu, J., Calamaro, C., Mahle, W. T., & Kc, D. (2021). The association of workload and outcomes in the pediatric cardiac ICU. *Pediatric Critical Care Medicine: A Journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies*, 22(8), 683–691.
<https://doi.org/10.1097/PCC.00000000000002740>
- Garcia, C. D. L., Abreu, L. C. D., Ramos, J. L. S., Castro, C. F. D. D., Smiderle, F. R. N., Santos, J. A. D., & Bezerra, I. M. P. (2019). Influence of burnout on patient

safety: Systematic review and meta-analysis. *Medicina*, 55(9), 553.

<https://doi.org/10.3390%2Fmedicina55090553>

Goldsby, E., Goldsby, M., Neck, C. B., & Neck, C. P. (2020). Under pressure: Time management, self-leadership, and the nurse manager. *Administrative Sciences*, 10(3), 38. <https://doi.org/10.3390/admsci10030038>

Guixia, L., & Hui, Z. (2020). A Study on burnout of nurses in the period of COVID-19. *Psychol Behav Sci*, 9(3), 31–36. <https://doi.org/10.11648/j.pbs.20200903.12>

Hagan, J., & Curtis, D. L., Sr. (2018). Predictors of nurse practitioner retention. *Journal of the American Association of Nurse Practitioners*, 30(5), 280–284.

<https://doi.org/10.1097/jxx.0000000000000049>

Halcomb, E., & Bird, S. (2020). Job satisfaction and career intention of Australian general practice nurses: A cross-sectional survey. *Journal of Nursing Scholarship*, 52(3), 270–280. <https://doi.org/10.1111/jnu.12548>

Halliday, S., Hunter, D. J., & McMillan, L. (2018). Ward staff perceptions of the role of the advanced nurse practitioner in a 'hospital at day' setting. *British Journal of Nursing (Mark Allen Publishing)*, 27(2), 92–97.

<https://doi.org/10.12968/bjon.2018.27.2.92>

Han, R. M., Carter, P., & Champion, J. D. (2018). Relationships among factors affecting advanced practice registered nurses' job satisfaction and intent to leave: A systematic review. *Journal of the American Association of Nurse*

Practitioners, 30(2), 101–113. <https://doi.org/10.1097/jxx.0000000000000006>

- Hardy, M. E., & Conway, M. E. (1988). *Role theory: Perspectives for health professionals*. Appleton & Lange.
- Heale, R., James, S., Wenghofer, E., & Garceau, M. L. (2018). Nurse practitioner's perceptions of the impact of the nurse practitioner-led clinic model on the quality of care of complex patients. *Primary health care research & development*, 19(6), 553–560. <https://doi.org/10.1017/s1463423617000913>
- Hellín Gil, M. F., Ruiz Hernández, J. A., Ibáñez-López, F. J., Seva Llor, A. M., Roldán Valcárcel, M. D., Mikla, M., & López Montesinos, M. J. (2022). Relationship between job satisfaction and workload of nurses in adult inpatient units. *International Journal of Environmental Research and Public Health*, 19(18), 11701. <https://doi.org/10.3390%2Fijerph191811701>
- Higgins, A., Downes, C., Monahan, M., Gill, A., Lamb, S. A., & Carroll, M. (2018). Barriers to midwives and nurses addressing mental health issues with women during the perinatal period: The Mind Mothers study. *Journal of Clinical Nursing*, 27(9-10), 1872–1883. <https://doi.org/10.1111/jocn.14252>
- Hoff, T., Carabetta, S., & Collinson, G. E. (2019). Satisfaction, burnout, and turnover among nurse practitioners and physician assistants: a review of the empirical literature. *Medical Care Research and Review*, 76(1), 3–31. <https://doi.org/10.1177/1077558717730157>
- Horner, D. K. (2017). Mentoring: Positively influencing job satisfaction and retention of new hire nurse practitioners. *Plastic Surgical Nursing*, 37(1), 7–22. <https://doi.org/10.1097/psn.0000000000000169>

- Jairath, N. N., Peden-McAlpine, C. J., Sullivan, M. C., Vessey, J. A., & Henly, S. J. (2018). Theory and theorizing in nursing science: Commentary from the nursing research special issue editorial team. *Nursing Research*, *67*(2), 188–195.
<https://doi.org/10.1097/nnr.0000000000000273>
- Kleinpell, R., Cook, M. L., & Padden, D. L. (2018). American Association of Nurse Practitioners National Nurse Practitioner sample survey: Update on acute care nurse practitioner practice. *Journal of the American Association of Nurse Practitioners*, *30*(3), 140–149. <https://doi.org/10.1097/jxx.0000000000000030>
- Kueakomoldej, S., Turi, E., McMenamin, A., Xue, Y., & Poghosyan, L. (2022). Recruitment and retention of primary care nurse practitioners in underserved areas: A scoping review. *Nursing Outlook*, *70*(3), 401–416.
<https://doi.org/10.1016/j.outlook.2021.12.008>
- Laurant, M. G., Hermens, R. P., Braspenning, J. C., Sibbald, B., & Grol, R. P. (2004). Impact of nurse practitioners on workload of general practitioners: randomised controlled trial. *British Medical Journal*, *328*(7445), 927.
<https://doi.org/10.1136%2Fbmj.38041.493519.EE>
- Lebet, R. M., Hasbani, N. R., Sisko, M. T., Agus, M. S., Nadkarni, V. M., Wypij, D., & Curley, M. A. (2021). Nurses' perceptions of workload burden in pediatric critical care. *American Journal of Critical Care*, *30*(1), 27–35.
<https://doi.org/10.4037/ajcc2021725>

- Liu, X. S., Carlson, R., & Kelley, K. (2019). The common language effect size for correlations. *Journal of General Psychology, 146*(3), 325–338.
<https://doi.org/10.1080/00221309.2019.158532>
- Lund, A. (2021). *The ultimate IBM SPSS Statistics guide*.
<https://statistics.laerd.com/features-overview.php>
- Mundt, M. P., & Zakletskaia, L. (2019). Professional communication networks and job satisfaction in primary care clinics. *The Annals of Family Medicine, 17*(5), 428–435. <https://doi.org/10.1370%2Fafm.2442>
- Nayak, J. K., & Singh, P. (2021). *Fundamentals of research methodology problems and prospects*. SSDN Publishers & Distributors.
- Neubauer, B. E., Witkop, C. T., & Varpio, L. (2019). How phenomenology can help us learn from the experiences of others. *Perspectives on medical education, 8*, 90–97. <https://doi.org/10.1007/s40037-019-0509-2>
- Norful, A. A., de Jacq, K., Carlino, R., & Poghosyan, L. (2018). Nurse practitioner–physician comanagement: a theoretical model to alleviate primary care strain. *The Annals of Family Medicine, 16*(3), 250–256. <https://doi.org/10.1370/afm.2230>
- Nurmeksela, A., Mikkonen, S., Kinnunen, J., & Kvist, T. (2021). Relationships between nurse managers’ work activities, nurses’ job satisfaction, patient satisfaction, and medication errors at the unit level: A correlational study. *BMC Health Services Research, 21*, 1–13. <https://doi.org/10.1186/s12913-021-06288-5>
- Okoroafor, S., Ngobua, S., Titus, M., & Opubo, I. (2019). Applying the workload indicators of staffing needs method in determining frontline health workforce

- staffing for primary level facilities in River's state Nigeria. *Global Health Research and Policy*, 4(1), 1–8. <https://doi.org/10.1186/s41256-019-0125-z>
- Pochert, M., Voigt, K., Bortz, M., Sattler, A., Schübel, J., & Bergmann, A. (2019). The workload for home visits by German family practitioners: An analysis of regional variation in a cross-sectional study. *BMC family practice*, 20(1), 1–13. <https://doi.org/10.1186/s12875-018-0891-6>
- Poghosyan, L., Norful, A. A., & Martsolf, G. R. (2017a). Primary care nurse practitioner practice characteristics: Barriers and opportunities for interprofessional teamwork. *The Journal of Ambulatory Care Management*, 40(1), 77–86. <https://dx.doi.org/10.1097%2FJAC.0000000000000156>
- Poghosyan, L., Liu, J., Shang, J., & D'Aunno, T. (2017b). Practice environments and job satisfaction and turnover intentions of nurse practitioners: Implications for primary care workforce capacity. *Health care management review*, 42(2), 162–171. <https://doi.org/10.1097/hmr.0000000000000094>
- Price, P. C., Chiang, C. A., & Jhangiani, R. (2018). *Research methods in psychology* (2nd Canadian ed.). BCcampus.
- Rahman, M. S. (2020). The advantages and disadvantages of using qualitative and quantitative approaches and methods in language" testing and assessment" research: A literature review. *Journal of Education and Learning*, 6(1), 102–112. <http://dx.doi.org/10.5539/jel.v6n1p102>
- Sengar, M., Fundytus, A., Hopman, W. M., Malhotra, H., Gupta, S., Pramesh, C. S., Hammad, N., Vanderpuye, V., Seruga, B., Lopes, G., Brundage, M., & Booth, C.

M. (2019). Medical oncology in India: workload, infrastructure, and delivery of care. *Indian Journal of Medical and Paediatric Oncology*, 40(01), 121–127.

http://dx.doi.org/10.4103/ijmpo.ijmpo_66_18

Seruga, B., Sullivan, R., Fundytus, A., Hopman, W. M., Ocana, A., Joffe, J., Bodoky, G., Le Tourneau, C., Vanderpuye, V., Lopes, G., Hammad, N., Sengar, M.,

Brundage, M. D., & Booth, C. M. (2020). Medical oncology workload in Europe: One continent, several worlds. *Clinical Oncology*, 32(1), e19–e26.

<https://doi.org/10.1016/j.clon.2019.06.017>

Sieja, A., Marley, K., Pell, J., Gonzalez, C., Redig, B., Kneeland, P., & Lin, C. T. (2019).

Optimization sprints: Improving clinician satisfaction and teamwork by rapidly reducing electronic health record burden. *Mayo Clinic Proceedings*, 94(5) 793–

802. <https://doi.org/10.1016/j.mayocp.2018.08.036>

Spetz, J., Skillman, S. M., & Andrilla, C. H. A. (2017). Nurse practitioner autonomy and satisfaction in rural settings. *Medical Care Research and Review*, 74(2), 227–235.

<https://doi.org/10.1177/1077558716629584>

Steinke, M. K., Rogers, M., Lehwaldt, D., & Lamarche, K. (2018). An examination of advanced practice nurses' job satisfaction internationally. *International nursing review*, 65(2), 162–172.

<https://doi.org/10.1111/inr.12389>

- Strazzieri-Pulido, K. C., S González, C. V., Nogueira, P. C., Padilha, K. G., & G Santos, V. L. C. (2019). Pressure injuries in critical patients: Incidence, patient-associated factors, and nursing workload. *Journal of Nursing Management*, 27(2), 301–310. <https://doi.org/10.1111/jonm.12671>
- Talari, K., & Goyal, M. (2020). Retrospective studies - utility and caveats. *The Journal of the Royal College of Physicians of Edinburgh*, 50(4), 398–402. <https://doi.org/10.4997/JRCPE.2020.409>
- Taylor, S., Cairns, A., & Glass, B. (2020). Role theory: A framework to explore health professional perceptions of expanding rural community pharmacists' role. *Pharmacy (Basel, Switzerland)*, 8(3), 161. <https://doi.org/10.3390/pharmacy8030161>
- Torrens, C., Campbell, P., Hoskins, G., Strachan, H., Wells, M., Cunningham, M., Bottone, H., Polson, R., & Maxwell, M. (2020). Barriers and facilitators to the implementation of the advanced nurse practitioner role in primary care settings: A scoping review. *International Journal of Nursing Studies*, 104, 103443. <https://doi.org/10.1016/j.ijnurstu.2019.103443>
- Tsay, S. L., Tsay, S. F., Ke, C. Y., Chen, C. M., & Tung, H. H. (2019). Analysis of nurse practitioner scope of practice in Taiwan using the longest policy cycle model. *Journal of the American Association of Nurse Practitioners*, 31(3), 198–205. <https://doi.org/10.1097/jxx.000000000000127>

Weaver, S. H. (2019). Administrative supervisors and nursing unit-based managers:

Collaboration and job satisfaction. *Nursing Economic*, 37(2).

<http://dx.doi.org/10.1016/j.mnl.2020.07.012>

Watson, A. G., McCoy, J. V., Mathew, J., Gundersen, D. A., & Eisenstein, R. M. (2019).

Impact of physician workload on burnout in the emergency

department. *Psychology, Health & Medicine*, 24(4), 414–428.

<https://doi.org/10.1080/13548506.2018.1539236>

Wilbanks, B. A., & McMullan, S. P. (2018). A review of measuring the cognitive

workload of electronic health records. *CIN: Computers, Informatics,*

Nursing, 36(12), 579–588. <https://doi.org/10.1097/cin.0000000000000469>