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Exploring Relationships between Psychological Capital and Perceived Stress among Newly Graduated Nurses

Rita June Jarvis-Isaac
Walden University

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Walden University
2023

Abstract

Exploring Relationships between Psychological Capital and Perceived Stress among
Newly Graduated Nurses

by

Rita June Jarvis-Isaac

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MSc/ MHA, University of Phoenix, 2008

BS, University of London, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Nursing Education

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Abstract

Stress among the newly graduated nurses has been linked to physical and emotional distress, high turnover rates, and the quality of patient care. Psychological capital is a positive state of mind that consists of four components (hope, efficacy, resilience, and optimism). Higher levels of psychological capital have been linked to improvements in the work environment, and the psychological and emotional state of nurses. Despite the extensive work of researchers exploring psychological capital among nurses, its relationship to stress among new graduate nurses has not been well studied. The purpose of this quantitative, correlational study was to explore the relationship between the components of psychological capital (efficacy, optimism, hope, resilience) and the perceived level of stress among newly graduated nurses with a maximum of one year of practice. The job-demand resource model was used to frame this study. Perceived stress was measured using the Nursing Stress Scale and psychological capital was measured using the PsyCap scale. Spearman's rho and multiple linear regression were used to analyze the data. A total of 144 new graduate nurses participated in the study. There was a moderate negative association between efficacy, hope, resilience components of psychological capital and stress ($p < .001$), however, the only significant predictor of a reduction in stress was hope ($p < .001$). The study contributes to positive social change by providing organizations with an understanding of psychological capital and how it mitigates perceived stress among new graduate nurses; this information can be used to develop programs that ultimately result in reduced stress and turnover.

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Dedication

I would like to dedicate this page to my late mother Monica Jarvis. I know you would have been so proud of me. Life was hard and difficult, but you were determined as a single parent to provide my foundational education and more so my spiritual development. Thank you for all your endeavors, it was not in vain.

I would also like to dedicate this accomplishment to my husband Joel Isaac. You were prepared to stand behind and let me shine. Thank you for the encouragement and support on this journey. We did it!

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Chapter 1: Introduction to the Study

Introduction

Psychological capital (PsyCap) is a construct that consists of four malleable traits in individuals that contribute to an overall positive mindset: (a) hope, (b) efficacy, (c) resilience, and (d) optimism. In this study, I explored these components of PsyCap individually and collectively to determine whether a relationship exists between them and the level of perceived stress experienced by newly graduated nurses. I used the job demands–resources (JD–R) model as the theoretical framework to connect job demands, job resources, and personal resources to perceived stress experienced by newly graduated nurses.

The purpose of this quantitative study was to seek knowledge on whether a relationship exists between PsyCap and perceived stress among nurses with a maximum of 1 year in clinical practice. Newly graduated nurses contribute significantly to the supply of nurses; however, high levels of attrition from the profession are contributing to poor health outcomes, emotional and physical illness, and economic losses due to loss of human resources.

Although many researchers have identified strategies to develop and prevent the loss of new graduate nurses, the focus of this study was on personal factors that may contribute to the retention and reduction of work-related stress among new graduates with a maximum of 1 year. There is a gap in the literature related to the relationship between PsyCap and the level of perceived stress experienced by new graduate nurses within their first year.

This study's findings have potential implications for the identification of personal resources that can be developed to enhance the ability of new graduate nurses to manage stress during this period when the desire to quit is greatest. If the negative effects of psychological distress on newly graduated nurses can be reduced, positive social change could result for patients and nurses. In this chapter, I discuss the background, problem statement, purpose of the study, the research hypothesis, the nature of the study, the assumptions, scope and delimitations, the limitations, and significance of the study.

Background

Previous researchers have indicated that new graduate nurses are at risk for leaving their first professional position. Cochran (2017) found that a reduction in stress levels at the 12 month marker for new nurses could be achieved through nurse residency programs; the breaking point for stress and intention to leave occurs among newly graduated registered nurses during their first 5 to 7 months in the profession. Kim et al. (2016) examined the influence of PsyCap and work engagement (WE) on the intention to remain among new graduate nurses. The authors provided evidence supporting the use of PsyCap as a personal resource that new graduate nurses use to transition to their environment, resulting in an adjustment to professional work, reduction of emotional exhaustion, and an increase in job satisfaction (Kim et al., 2016). Kim et al. found that PsyCap affected new graduate nurses' intent to leave. The sample used in Kim et al.'s study was similar to the sample that I used for this study, as the authors investigated nurses with between 3 months and 1 year of clinical practice.

Evaluating stress among the newly graduated nurse may reduce early burnout and intention to leave. Zhang et al. (2019) found that the transition period from student nurse to new practicing nurse is stressful and unsatisfying and closely linked with intent to leave. Zhang et al.'s finding supports evaluating new nurses at the end of 1 year of clinical practice as this allows for more timely evaluation of stress and early interventions to prevent burnout. The authors recommended further research on the impact of other variables, such as personality traits, coping strategies, resilience, and professional identity on occupational stress (Zhang et al., 2019). Zhang et al. used a modified version of Yeh and Yu's (2009) occupational stress scale for newly graduated nurses. The scale addresses specific areas related to the transition process but is recommended for use within the first 3 months of practice.

Nurses who are optimistic may be better able to manage stress. Cruz et al. (2018) conducted a study among 227 nurses from the Philippines and found that nurses who possessed high levels of optimism and proactive coping were better able to cope with stress and had an enhanced quality of life. The concept of *proactive coping* means that nurses show good internal control, active coping, and self-efficacy.

PsyCap is an important factor for new graduate nurses to survive on entry to the profession. Dwyer et al. (2019) attempted to explore the simultaneous effect of intrapersonal, interpersonal, and organizational factors on new nurses with regard to burnout and intention to leave. The authors used PsyCap to address intrapersonal factors (Dwyer et al., 2019). Despite significant findings in relation to all three dimensions with regard to burnout and intent to leave, Dwyer et al. recommended focusing on

intrapersonal factors, specifically PsyCap, as they contribute to the effect on the new graduate nurse.

The JD–R model is used to provide a link between job demand, job resources, personal resources and burnout. Huang et al. (2016) conducted a quantitative study and used the JD–R model (Karasek & Thordell, 1992) to address whether personal resources can mediate the effect of burnout. Huang et al. found that employees who had more job resources (social support and performance feedback) display better personal resources (self-efficacy, optimism, hope, resilience) and, in turn, have lower levels of burnout. Huang et al.'s study provided clarity on the application of Karasek and Thordell's (1992) JD–R model, although the participants were not newly graduated nurses.

Problem Statement

Stress is present in every occupation, including nursing. The ability of new graduate nurses with a maximum of 1 year of clinical experience to manage stress affects the nurses' quality of life, the quality of healthcare delivered, and the turnover rate for new graduate nurses (Cochran, 2017; Wakefield, 2018). Alvarez et al. (2019) reported that 34% of new graduate nurses changed their profession due to stress and burnout. Other researchers have identified additional stressors affecting new graduate nurses: lack of task mastery, role clarity, lack of social acceptance, heavy workloads, high acuity patients, incivility, and moral distress (Bong, 2019; Frögéli et al., 2019; Haplin et al., 2017). A significant problem exists when stress impacts the psychosocial and biological well-being of a nurse and the quality of care patients receive. Benner's novice-to-expert model (1984) describes the features of new nurses as advanced beginners having less

than 1 year of experience; these nurses can be anxious and prone to errors and can have limited foresight. In a literature review, Cochran (2017) found that the peak level for stress among new graduate nurses occurs between the fifth and seventh month of practice, with decreasing levels around the 12th month, as nurses gain more confidence.

Newly graduated nurses entering the profession contribute the largest supply of nurses, and the U.S. Bureau of Labor Statistics estimates a nursing shortage of about 11 million nurses by 2024 (Haddad et al., 2020). As a result, the retention of newly graduated nurses entering the profession is a priority concern among healthcare organizations. The process of transitioning into a new position is filled with stress and uncertainty in any profession, and nurses are well-known for experiencing high levels of stress (Frögéli et al., 2019). Sources of stress can be either external or internal. Nonetheless, how the internal dispositions of individual new graduate nurses influence their ability to manage stress is not clearly understood.

The concept of PsyCap was developed by Luthans et al. (2007) and consists of four internal personal resources: (a) efficacy, (b) optimism, (c) hope, and (d) resilience. Luthans et al. (2007) defined PsyCap as a positive state of mind displayed during the growth and development of an individual. Boamah and Laschinger (2015) found that although access to workplace resources has a significant effect on WE, PsyCap accounts for additional differences beyond workplace empowerment alone. Thus, one can deduce that PsyCap can enhance workplace resources.

Each component of PsyCap may affect the effect of stress on an individual differently. Zhao et al. (2015), Yao et al. (2018), and Del Mar Molero et al. (2018) found

that efficacy moderates the effects of stress, whereas Cruz et al. (2018) found that attributes such as optimism and proactive coping have positive effects on nurses' quality of life. Hope has been negatively correlated with negative emotions like helplessness, anxiety, depression, and loneliness, yet resilience has been reported as essential in supporting mental health (Zhou et al., 2017). Despite the extensive work of researchers exploring PsyCap among nurses, its relationship to stress among new graduate nurses has not been well studied.

Purpose

The purpose of this quantitative study was to explore the relationship between the components of PsyCap (efficacy, optimism, hope, resilience) and the perceived level of stress among newly graduated nurses with a maximum of 1 year of practice. I determined the relationship of each independent variable, efficacy, optimism, hope, and resilience, to the dependent variable of the perceived level of stress experienced by the new graduate nurses. To bring more clarity to the nature of the relationships, I also examined the composite effects of the components of PsyCap on perceived stress. I collected primary data from new graduate nurses with a maximum of 1 year in practice measuring and assessed their perceived stress. The results of this study can be beneficial to educators, nursing administrators and health care institutions to understand how PsyCap can be used to develop programs to improve the performance of the new graduate nurse and manage occupational stress, during that first year of transition.

Research Questions and Hypotheses

Research Question 1 (RQ1): What is the relationship between each component of PsyCap (hope, efficacy, resilience & optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice?

Null Hypothesis (H_01): There is no relationship between any component of PsyCap (hope, efficacy, resilience & optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice.

Alternative Hypothesis (H_11): There is a relationship between at least one component of PsyCap (hope, efficacy, resilience & optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice.

Research Question 2 (RQ2): What is the composite effect of PsyCap on perceived stress among new graduate nurses with a maximum of one year of clinical practice?

Null Hypothesis (H_02): PsyCap has no effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice.

Alternative Hypothesis (H_12): PsyCap has a significant effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice.

Theoretical and Conceptual Framework

The job demand, job decision latitude, and mental strain model (Karasek, 1979) has been used as a framework for classifying nursing as a stressful job. Since then, the model has been renamed as the job demand-resources model (JD-R) and revised to include social and personal resources. The model posits that job stress increases when job

demand or workload is high, but the presence of social and personal resources helps to mitigate the effects of job stress. Job demands are the manual or mental efforts required for fulfilling aspects of the job, and job resources are organizational support, which reduces job demands and stimulates individual growth and development. Personal resources refer to attributes such as self-efficacy, resilience, hope, self-esteem, and optimism. The concepts of the latter portion of the model (personal resources) was used in this study to select the independent variables. The JD–R model links high demand jobs with burnout and stress if the job and personal resources are insufficient. Based on the model, I used scales to measure personal resources and the level of perceived stress. I designed the research questions to determine whether personal resources contribute to how nurses manage the stress associated with job demands.

Nature of the Study

The nature of this study was a quantitative correlational research design, in which I intended to determine the level of stress experienced and describe the relationship between PsyCap and the level of perceived stress, experienced by new graduate nurses with a maximum of 1 year of clinical experience. I used the quantitative design to objectively determine the presence or absence of a relationship between the internal resources (PsyCap) and the level of perceived stress the new graduate nurse experiences. The independent variable was PsyCap (efficacy, optimism, hope, and resilience) and the dependent variable was the perceived level of stress. I used the components of PsyCap to answer the research questions, the relationship between each individual component of PsyCap (hope, efficacy, resilience, and optimism). I first examined perceived stress based

on correlation coefficients and then examined the effect of the composite of PsyCap on perceived stress using multiple regression analysis.

I gathered primary data from new graduate nurses with a maximum of 1 year of clinical experience using questionnaires. The Nursing Stress Scale (Gray-Toft & Anderson 1981) was designed to measure stress levels among hospital nursing staff. This instrument was developed to measure the effect of sources of stress experienced by nursing staff during their duties. I used the PsyCap Scale to measure the level of each component of PsyCap as well as a composite. All of the scales in this study were Likert scales, which maintained objectivity. I collected the data using an online survey platform.

Definitions

Newly graduated nurse: A period of transition from being a student to entering the work environment which exposes the nurses to high levels of work related stress (Read & Laschinger, 2015). Cochran, (2017) found that the most stressful periods existed between 5-7 months with decreasing levels and demonstration of greater confidence at the 12th month. This term also refers to a nurse who was successful in acquiring a Bachelor's degree, or an Associate's degree or a Diploma trained nurse who is now working with a recognized license to practice (also called a registered nurse or RN)

Perceived Stress: Perceived stress is defined as the degree to which events in a person's life are assessed as stressful, unpredictable and uncontrollable (Cohen, Kamarck, & Mermelstein, 1983; Phillips, 2012). Perceived stress is the independent variable and it was measured using the NSS (Gray-Toft & Anderson 1981). The total score was obtained

by adding all the scores for each item. A higher score indicates a higher frequency of stressful occurrences.

PsyCap: Luthans et al. (2007) defines PsyCap as a positive state of mind displayed during the growth and development of an individual. PsyCap consist of four components also referred to as HERO (hope, efficacy, resilience & optimism). This dependent variable was measured by using the PsyCap Questionnaire Scale (Luthans et al., 2007).

Work-related stress: Boamah and Laschinger (2016) cited bullying, workload demands and shift work while Kim & Yoo (2018), identified lack of confidence, loss of self-esteem, low job satisfaction, overwhelming workloads, and having limited job skills as some of the sources of stress in the new graduate nurse transition.

Assumptions

I made three assumptions in this study. First, I assumed that participants would truthfully answer the questions. In this instrument a mixture of positive and negatively worded questions indicated whether participants were answering the questions without reading or randomly answering. To assess the data for random responses, I checked for outliers. On the other hand, anonymity and confidentiality can encourage participants to answer truthfully. Second, I assumed that the instrument I used in this study accurately measured the variables I intended it to. The instruments that I used were well established and had good internal consistency and have been used on a variety of participants globally. While these scales may have been revised, I chose the current versions to reduce the length of the survey and all the components still provide standard reliability and

validity scores. My third assumption was that no participant was experiencing an extenuating stressful event that would influence the level of perceived stress the newly graduate nurse is experiencing while participating.

Scope and Delimitations

The scope of this study was limited to exploring relationships between PsyCap and newly graduated nurses' level of stress during their first year of practice. While there are other factors that contributed to the degree of stress a newly graduated nurse may experience, I did not control such factors as the environment, the leadership, institutional policies and the new nurses' past work experience in a stressful job. My goal for this study was explorative and I hoped to establish whether relationships exist between PsyCap and its components and the level of perceived stress experienced by the new graduate nurse.

The scope of this study was also limited to new graduated nurses with a maximum of 1 year working in the clinical area. I did not include new graduated nurses with more than one year of experience as other studies showed that the during the 4 months to 1-year period is associated with the greatest number of new graduate nurses leaving the profession or changing jobs. Finally, I measured perception of stress instead of a diagnostic level of stress such as cortisol salivary tests, as the goal of this study is explorative and correlation, as opposed to being a quasi-experimental study which beyond my scope.

Limitations

There were a number of limitations associated with this study. Obtaining the minimum sample size from a population of nurses with a maximum of 1 year of experience was a challenge. A small sample size can affect the statistical power of the analysis and the ability to generalize the findings. To ensure I obtained the required sample size to achieve statistical significance, I used the snowball sampling in addition to the Walden participant research pool and extended the period of data collection to ensure the sample size was achieved.

Another limitation as stated by Polit and Beck (2012), is that of the data collection instrument, which is a self-administered instrument, may be susceptible to self-selection bias. Although the sampling method included a prescreening to ensure only participants meet the selection criteria to participate, I was unable to control those who took the survey. This may have affected the results as true responses from the sample population may not be accurate. A third limitation would be the correlational nature of the study. As I used such a design, a cause-and-effect relationship cannot be established between PsyCap and the level of stress among new graduate nurses.

Significance

The shortage of nurses has been further compromised by increasing attrition rates among new graduate nurses. Many hospitals have implemented transition programs and enhanced environmental resources to assist new graduate nurses and prevent them from leaving. There are a vast number of studies examining the role of changes to external factors; however, this study provides information on the role internal factors play in

influencing perceived stress among new graduate nurses. Significant findings will provide insights to educators and nurse managers on developing programs to improve the PsyCap among new nurses. Understanding the effect of PsyCap on the new graduate nurse can contribute to positive social change by generating positive emotions, better coping and problem-solving skills, and overall better quality of nursing care.

Summary

In this study, I explored PsyCap to determine whether relationships exist between perceived stress and PsyCap as a whole and components of PsyCap among newly graduated nurses. Stress is integral in nursing; however, new graduates have been experiencing work-related stress which is responsible for more than 33% leaving the profession, which contributes to the nurse shortage. I conducted a quantitative study using two established reliable instruments to explore relationships. A sample of 144 new nurses with experience equal to 1 year or less responded to an online survey. In this chapter I discussed the definitions, limitations, and scope of this study. In Chapter 2, I will discuss an extensive review of the literature as it relates to PsyCap, work-related stress, the new graduate nurse, and the theoretical framework.

Chapter 2: Literature Review

Nurses account for the most significant number of workers in the healthcare profession, yet there is an ongoing nursing shortage. While new graduate nurses contribute the largest supply of nurses to relieve the nursing shortage (Haddad et al., 2020) the new graduate nurses' high attrition rate contributes further to the overall nursing shortage currently experienced worldwide. More than one quarter leave the profession within 1 year of practice, while more than half leave within 2 years of experience (Bong, 2019). With such negative effects forecasted, securing an adequate supply of nurses is of utmost importance.

The U.S. Bureau of Labor Statistics projected a shortfall of 11 million nurses by 2024 (Haddad et al., 2020), which causes a point of concern. The nursing shortage contributes to a decrease in the quality of care, specifically in areas such as increased frequency of medication administration errors, near misses, and sentinel events (Kim et al., 2016; Beietz, 2019). The shortage directly impacts the financial status of hospitals that have estimated turnover cost between \$37,700 and \$58 400 per nurse (NSI Nursing Solutions, Inc 2016). The new graduate nurses' high attrition rate contributes further to the overall nursing shortage currently experienced worldwide.

New graduate nurses have difficulty transitioning from student to registered nurse due to stressors in the workplace. Nursing is one of the most stressful professions worldwide, and they experience many events involving life and death situations. (Feddeh et al., 2020). Despite the stress, new nurses have been entering the profession; however, the rate of attrition is alarming. Ackerson and Stiles (2018) stated that the U.S. national

average 1-year turnover rate among all newly licensed RNs is 17.1%, and the 2-year turnover rate is 33.5%. The stressful transition is associated with a reduced quality of life for the new nurse, poor patient outcomes, and a high turnover rate among new nurses (Cochran, 2017; Wakefield, 2018).

Historically, the new graduate nurse faced many challenges when entering the profession. High turnover rates are associated with the work environment, emotional exhaustion, and moral distress among new graduate nurses (Bong, 2019; Krautscheid et al., 2017; Sasso et al., 2018). The term *transition shock* (Duchscher, 2008) describes the process of understanding the difference between training and actual practice in the profession. In this shocking stage, the new nurse may experience emotional withdrawal, feelings of rejection, and hostility, as well as physiological symptoms such as fatigue and illness (Wakefield, 2018). Bakker et al. (2003a) confirmed this state using the JD–R model to link heavy workload or job demands to health impairments such as fatigue and physical exhaustion.

Personal, behavioral, social, and environmental factors cause stress in the new graduate nurse (Olvera Alvarez et al., 2018). Some well-noted sources of stress are inherent to the work environment, such as workload, social acceptance, high acuity patients, and moral distress (Frogeli et al., 2019; Haplin et al., 2017). However, the new graduate nurse's disposition can also account for the decision to stay or leave. An individual's modifiable features, such as optimism, hope, resilience, and efficacy, coined as PsyCap (Luthans et al., 2007), have shown positive associations with WE and better-coping strategies (Cruz et al., 2018; Zhou et al., 2017). However, the relationship

between PsyCap and stress among new graduate nurses is not well understood. In light of the nursing shortage faced by the nursing profession, healthcare institutions, and the nation, it is imperative to retain as many new graduate nurses as possible.

It is essential to understand the factors that contribute to how new graduates cope with the challenging environment that they must practice. The purpose of this quantitative study was to explore the relationship between the components of PsyCap (efficacy, optimism, hope, and resilience) and the perceived level of stress among newly graduated nurses with a maximum of 1 year of practice. In this chapter I will present an overview of the literature search strategies that I used; the theoretical framework that I used for this study; and finally, an in-depth literature review in which I focus on new graduate nurses, stress, and PsyCap.

Literature Search Strategy

I conducted a comprehensive review of the literature using the following databases: Medline with Full Text, Academic Search Complete, PsychInfo, Education Source, Business Source Completer, and APA PsycArticles CINAHL Plus, and Google Scholar databases. The period searched ranged from 2015 to 2020. The types of evidence included in this literature review came from published studies, statistical data from government statistical publications, nursing foundation websites, and nursing council boards' websites. I used the search terms *new nurse or new graduate nurse or novice nurse or new registered nurse and PsyCap and perceived stress*. This search yielded no results. The key search terms *new nurse or new graduate nurse or novice nurse or new registered nurse and PsyCap* yielded 15 articles from peer-reviewed journals. The

keywords *new nurse or new graduate nurse or novice nurse or new registered nurse and perceived stress* yielded 12 articles. Key search terms were *a new nurse or new graduate nurse or novice nurse or new registered nurse, Job Demand -Resource Model, personal disposition, and personal resources*; which yielded five peer-reviewed English language articles; however, only four possessed some similarity this study. Overall, there are 42 articles in this literature review.

Theoretical Framework

The JD–R model was developed by Demerouti et al. (2001) and revised by Schaufeli and Bakker (2004) and then again by Xanthopoulou et al. (2007 & 2009). I used this model to frame my study. The JD–R model originated from the job demand, job decision, and mental strain model developed by Robert Karasek, in 1979. According to Karasek (1979), the job demand, job decision, and mental strain model was inspired by a study involving Whyte's restaurant workers who experienced severe strain symptoms related to heavy customer demands that they could not control. The model posits that mental strain relates to the interaction between job demands and job controls. Job demands refer to stress sources (stressors) such as workload demands present in the work environment. Job control refers to the range of decisions each worker has during the job demands, and mental strain is the difference between job demand and job controls. Therefore, the job demand, job decision, and mental strain model assumes that jobs with low job controls or the ability to influence decisions and heavy job demands such as workload are associated with high mental strain levels and job dissatisfaction.

From 2001 to 2004 many new concepts contributed to the development of JD–R model. Demerouti et al. (2001) expanded the job demand, job decision latitude, and mental strain model by Karasek (1979) to define burnout, describe the work environment, (job demand & job resources) and include human disposition (personal resources). Demerouti et al. (2001) defined burnout as a prolonged state in which work-related stress results in exhaustion which may be demonstrated as demotivation, and employees feeling less than confident and generative in their jobs. Demerouti et al. (2001) described the characteristics of the work environment to consist of two categories; the job demand (bad things such as heavy workload, role conflicts, and mental demands) and the job resources (good things are referred to a set mentors and team support). A formula that supports either positive or negative effects is described by job demands leading to burnout and resulting in unattained goals, versus job resources that encourages engagement and job satisfaction resulting in the attainment of goals. The stimulation of personal growth and development suggests the need for changes in personal disposition, which lead to the further expansion of the model. Later, Schaufeli and Bakker, (2004) added WE and work exhaustion to the psychological states.

WE is directly related to job demand, personal resources and the ability to manage stress. The individual who experiences WE is highly motivated and energized with a sense of worth and meaning to his organization (Schaufeli & Bakker, 2004). However, if the job demands are more than the job resources, individuals may enter a state of work exhaustion expressed as severe fatigue, depletion of energy, and health problems (Schaufeli, 2017). Demerouti et al. (2001) defined personal resources as the

psychological characteristics of individuals that enable them to maneuver the stressors in their environment successfully. Lazarus and Folkman (1984), authors on stress, believed that stress occurred when individuals lack the resources to manage a problematic event. In 2007, Xanthopoulou et al. conducted a study and found that personal resources mediated the relationship between job resources and WE.

The JD-R model can be used to develop the equation among the concept of job demand, job resources, personal resources and stress. Further studies by Xanthopoulou et al. (2009) suggest that personal resources were reciprocal with job resources and WE over time. According to Demerouti and Bakker (2011), research supports the notion that personal dimensions and PsyCap (optimism, efficacy, hope, and resilience) may be the key to understanding the variation in perceived stress symptoms as well as the desire to quit one's job. The critical theoretical proposition in the JD-R model is that job demands (such as heavy workload, shiftwork, long hours, and problems communicating with others), job resources (mentorship, training, and development), and personal resources such as PsyCap influence job-related stress (Xanthopoulou et al., 2007). Personal resources contribute significantly to increase or decrease the effect of job demand and job resources. Personal resources influence how one may cope and interact with one work environment (Xanthopoulou et al., 2007).

Psychological Capital

PsyCap is a major human resource concept used to assess and enhance job and personality. The construct of PsyCap was first introduced by Luthans et al. (2006) and consists of four malleable traits: hope, optimism, efficacy, and resilience. Hope is finding

alternative pathways to meeting goals; optimism is always having a positive view of the expected outcome; resilience is the ability to recover after adverse events; and efficacy is the confidence one has during the completion of a challenging task (Luthans et al., 2015).

Self-efficacy is a positive psychological construct supported by theory and research. Luthans et al. (2015) developed and defined self-efficacy with some influence on Bandura's theories (1997, 2005 & 2008). Self-efficacy refers to the individual's confidence in accessing physical and cognitive resources to complete a given task (Stajkovic & Luthans 1998b). Self-efficacy is defined by Bandura as the belief related to a specific context, and self-efficacy is the perception of the process or outcome based on one's abilities (Bandura, 1997).

Many factors can contribute to the development of efficacy in an individual. Bandura (1997) suggested that efficacy develops when an individual completes a challenging task. Efficacy increases their confidence and ability to succeed when they attempt the task again. An individual will increase self-efficacy by learning through observing or modelling when one sees a task accomplished by another individual. Self-efficacy can also be developed by encouragement and feedback from respected or relevant individuals such as leaders when the individual completes a task. For example, leaders influence self-efficacy by supporting the psychological and physiological aspects of the individual to prevent emotional exhaustion and depersonalization.

Luthans et al. (2015) used the theory of hope by Synder et al. (1996) to conceptualize hope as a personal resource in PsyCap. Hope is based on two components; the agency which is the willpower and the pathways to meet a goal. The agency

represents the individual who is determined to achieve a goal, by following a pathway. Pathways based on Synder's theory of hope is based on the individual's ability to find the required pathways to meet the goal. However, when pathways become blocked, the willpower motivates the individual to keep going by finding alternative pathways to achieving the goal.

An individual's mental perspective can affect the outcome of a situation. Scheier and Carver (1985) described optimistic individuals as those who anticipate good things would happen to them. Scheier and Carver (1985) used an expectancy perspective in which to achieve the desired good outcome, the optimistic individual will make the extra effort to ensure the best outcome is achieved. Initially, Scheier and Carver (1985) considered optimism to be only innate and trait-like, but later both theorists agreed that an individual can be converted to optimism through developmental interventions, therefore supporting optimism as having state-like features.

Resilience is vital for beginners who may be faced with stressful events along their pathway to success. Luthans et al. (2015) and Youssef et al. (2007) referred to resilience as an unexplainable method of coping with change despite multiple diverse and challenging events. Resilience is also known as the ability to bounce back after adversity. Resilience is demonstrated when the individual recovers quickly from adversity as opposed to the individual who is devastated and fails to recover and move on after a devastating event. Many studies have also supported the development of resilience over time (Babanataj et al., 2019; Forbes & Fikretoglu, 2018; Johnson et al., 2020; Magtiba et al., 2017).

Application of the Model

Four articles published between 2012 and 2020 used the JD–R model to study personal resources among nurses. Glover et al. (2018); Spence Laschinger et al. (2012); Wang et al. (2017). and Yang & Gui (2019), used the JD–R model to frame their studies in the area of personal resources among nurses. However, only Wang et al. (2017) used a sample exclusively of nurses with a maximum of one year of experience. Wang et al. conducted a study to explore the association of occupational stressors, perceived organizational support, and PsyCap and its components among Chinese female nurses using the JD–R model framework. The authors of this study provided empirical evidence to support the JD–R model concerning work enhanced engagement among female Chinese nurses. The findings supported the reciprocal effect discussed within the JD–R model among job resources, personal resources, and WE, and significant results revealed a positive association of PsyCap, hope, and optimism with vigor, dedication, and absorption among Chinese nurses.

Glover et al. (2018) also used PsyCap as a personal resource in the JD–R model. The purpose of the study was to determine whether personal resources directly influenced the perception of job demand, job resources, and outcomes. The findings supported the model where job demands and job resources mediate the relation of PsyCap with well-being and engagement. In other words, job resources predict personal resources and WE, and personal resources and WE predicts job resources. This study's relevance is the use of PsyCap as a global construct that represents the personal resources that was used in my research.

Spence Laschinger et al. (2012) conducted a similar study using the JD–R model to determine the predictors of stress among new graduate nurses' workplace and well-being. The purpose was to use the JD–R model to understand how job demand, job resources, and personal resources (using PsyCap) influenced the new graduate nurse's experiences of burnout, WE, health, and job outcomes. The findings supported the hypothesized model, which states that job demand (workload, bullying) predicted burnout and health problems. Job resources (supportive practice, environment, and control) predicted WE and decreased turnover rates. Personal resources (PsyCap) influenced both burnout and WE. This study is most relevant to my research as it partly mirrors my study by using the JD–R model, new graduate nurses, and PsyCap as a predictor of stress. The JD–R model was also used to define and explain the relationships between the variables.

Yang and Gui (2019) conducted a quantitative study to determine factors influencing burnout in 167 nurses using the expanded JD–R model. The results indicated that burnout was positively correlated with job demand but negatively correlated with resilience and social support. Resilience represented the personal resource component of the JD–R model, as was also done in studies by Glover et al. (2018); Spence Laschinger et al. (2012). and Wang et al. (2017). The findings of the study confirmed the propositions of the expanded JD–R model.

Chaleoykitti and Thaiudom (2017) studied the PsyCap as a personality trait that could be developed. They used PsyCap to represent the concept of personal resources within the JD-R model. An experimental approach was used to understand the effect of a program aimed at developing PsyCap on retaining professional nurses at a hospital.

Forty nurses in Southeast Asia were randomly divided into two groups. The experimental group received a program to develop the five components of PsyCap (efficacy, hope, optimism, resilience, and hardiness) over a 2-day (16-hour) period, while the control group received no program. After two weeks, the authors sent a follow-up questionnaire to all participants. The results indicated that retention rates for those who received the PsyCap development training were significantly higher than those who did not. The study findings demonstrated that training aimed at developing PsyCap may improve an essential organizational outcome, specifically, nurse retention.

Rationale

The JD–R model is also well established and validated meta-analytically and longitudinally as an excellent framework to research occupational well-being in a wide range of organizations in the field. The model's scope is broad and not restricted to any specific industry or setting (Schaufeli & Taris, 2014). The JD–R model's addition, including personal resources, is significant as my study focuses on other personal factors that may affect stress. Xanthopoulou et al. (2007) noted the complicated interaction between individuals and their environment and emphasized the cognitive processes and individual characteristics that may influence stressful events. Many studies have used some version of the JD–R model to explore nurses' stress, burnout, or WE. The JD–R model connects job demand, job resources, and personal resources to understanding the WE or work exhaustion an employee will experience. My study explored PsyCap as a personal resource within the framework of the JD–R. Thus, the study examined the effect of PsyCap on new nurses' perceived stress (job demand) within their first year of

experience. Therefore, the JD–R model was used in my study to define the variables (PsyCap and perceived view of stress) and to explain the proposed relationship between PsyCap and its components and the perception of stress among new graduate nurses.

Literature Review

This section consists of a review of literature and theory related to the PsyCap and nursing outcomes, PsyCap and work-related stress among nurses, PsyCap and the new graduate nurse, and the individual components of PsyCap (efficacy, hope, resilience, and optimism) and work-related stress among nurses. I have identified a few themes that will shape the presentation and discussion of the evidence.

PsyCap and Nursing Outcomes

If PsyCap can be linked to increases in job satisfaction and WE, then the nursing outcomes such as burnout, intent to leave and psychological distress, can be reduced. Researchers have investigated the relationship of PsyCap to WE (Boamah & Laschinger 2015; Bonner 2016; Shahpouri et al., 2016 & Yim & Yoo, 2018), job satisfaction (Zhou et al., 2018), organizational commitment (Kim & Yoo 2018 & Yim et al., 2017), and intent to leave (Dwyer et al., 2019 & Yim et al., 2017). Nurses affected by job-related stress have also experienced burnout (Kim & Kweon, 2019) and mental health issues (Asheghi et al., 2020; Estiri et al., 2020; Zhou et al., 2018) such as psychological distress (Brunetto et al., 2016) anxiety and depression (Baezzat et al., 2020). PsyCap should be an essential concept used in every human resource department to encourage WE.

Job-related stress has been linked to a reduction in the quality of patient care and an increase in institutional costs related to high turnover; among nurses (Boamah &

Laschinger 2015; Brunetto et al., 2016; Maloney et al., 2017; Shahpouri et al., 2016; Yim & Yoo 2018). A few of those studies have included or focused on the new graduate nurse (Boamah & Laschinger 2015; Dwyer et al., 2019; Kim & Yoo, 2018; Yu & Lee 2018). Terms such as high energy, dedication and absorption in one's work have been linked to high WE. Schaufeli and Bakker (2004) stated that WE is developed when job resources such as supportive supervisors and opportunities to excel are present.

There is evidence to support a link between PsyCap and WE and the length of experience among nurses. Bonner (2016) conducted a study to evaluate the relationship between WE and PsyCap levels in 137 registered nurses (RNs) who worked at a teaching hospital in London. The participants' level of clinical experience ranged from less than two years to greater than 20 years. The aim of the study was to assess whether PsyCap levels were positively correlated with WE, and whether age, gender, job band level, length of experience practicing as a qualified nurse, and the highest level of academic study achieved affect PsyCap and WE in nurses. The findings indicated a positive correlation between WE and PsyCap scores. New graduate nurses with less than two years of nursing experience displayed significantly lower PsyCap scores than specialist nurses and advanced practice nurses with more years of work experience. The findings of this study are important because not only do they indicate that higher levels of WE are associated with higher levels of PsyCap, but that nurses such as new graduates with little experience tend to lack PsyCap compared to their more experienced colleagues.

In 2015, Boamah and Laschinger conducted a longitudinal study among new graduate nurses to determine whether work empowerment and PsyCap were indicators of

WE. Boamah and Laschinger defined work empowerment as access by employees to information, support, resources, and opportunities that make work meaningful. The study was done in 2012 at an acute care hospital in Ontario Canada. Two surveys were done one year apart among new graduate nurses. The findings indicated that both PsyCap and work empowerment contributed independently to WE. This study is important as it supports PsyCap as an antecedent to WE. This means that PsyCap is needed to some extent to foster WE among new graduate nurses.

Interventions to improve PsyCap in new graduate nurses could indirectly lead to reductions in turnover through improvements in WE. Kim and Yoo (2018) explored the influence of new graduate nurses' PsyCap and WE on their intent to remain in the profession. This cross-sectional design study took place at three University hospitals in South Korea. The sample consisted of 156 new graduate nurses with clinical experience from three months to one year. The findings revealed a significant correlation between PsyCap, WE and new graduate nurse' decision to remain. In a previous study by Shahpouri et al. (2016), explored the mediating role of WE in the relationship between job resources and personal resources among 208 female nurses from a hospital in Alzahra. The authors used the latest version of Bakker and Demerouti's JD-R model, which includes job demand, job resources and personal resources. The findings revealed similar results to Kim and Yoo (2018). Personal resources affected the intent to remain, directly and indirectly through WE, but only indirectly as a mediator through job resources. These studies are important as they demonstrate how developing personal resources, such as PsyCap, in new graduate nurses may contribute to improved retention.

Dwyer et al. (2019), studied 136 newly licensed graduate nurses, who had more than six months of clinical experience but less than three years, the researchers found burnout present in 51% of the participants. The data collection took place on Facebook from January 2016 to February 2016. The study aimed to explore the impact of intrapersonal (PsyCap), interpersonal (authentic leadership), and organizational influences (structural empowerment) on new graduate nurses' burnout and turnover intention. The findings revealed a significant negative relationship between PsyCap, authentic leadership, structural empowerment, and burnout and turnover intent. Interpersonal, intrapersonal, and organizational influences were positively associated with burnout and turnover.

The above studies were all done in various countries with different political, cultural and social influences, but the findings were consistent in terms of PsyCap influencing WE and as work becomes more meaningful there is a less tendency for the nurses to leave. In four of the studies, the participants were new graduate nurses, however, the operational definitions varied. Bonner (2016) and Boamah and Laschinger (2015) both classified a new graduate nurse as having less than two years of clinical experience, whereas Kim and Yoo (2018) classified the new graduate as having three months to one year of experience, and Dwyer et al. (2019) defined them as having more than three months but less than three years. Dwyer et al. (2019) excluded nurses with previous work experience because of its potential influence on the results.

Boamah and Laschinger (2015) conducted a longitudinal study using two surveys which were done one year apart. Boamah and Laschinger (2015) study found that

PsyCap and work empowerment independently affected WE but that both predictors combined produced a greater influence. Similarly, Kim and Yoo (2018) linked PsyCap to stress, burnout and intention to leave. The results of these studies suggest that PsyCap has a role in predicting the level of WE displayed by the new graduate nurse which affects their intention to leave. In all the studies the sample sizes were small which can affect generalization of the findings however, despite the varied locations (Canada, England, Iran and South Korea), and cultural influences in which these studies were conducted, the link between PsyCap and WE was consistent.

Based on the findings of these studies, PsyCap precedes WE, but having organizational or job resources such as mentoring and supportive environments may augment its effect on burnout and intent to leave. Therefore, in cases where little or no organizational support or job resources are present, new graduate nurses with low levels of PsyCap and low WE may be prone to experience burnout and the desire to quit. Therefore, in the absence of high levels of PsyCap, a supportive work environment can be useful in reducing burnout and intent to leave.

PsyCap can influence nursing outcomes, namely job satisfaction, organizational commitment, psychological distress, and intent to quit. Brunetto et al. (2016) explored the impact of individual and organizational resources by surveying 243 nurses across five hospitals in Australia. A quantitative study was done during 2013, to determine the impact of personal resources (PsyCap) and organizational resources (management support) on intention to quit. The findings indicated that both resources represented 45% of the support for job satisfaction, and 52% for organizational commitment. PsyCap and

psychological distress were negatively associated, while PsyCap and affective commitment accounted for 44% of the variance of nurses' intent to quit. Similar findings were obtained in a larger sample size of Chinese nurses. Zhou et al. (2018), investigated the mediating effects of organizational commitment and job burnout on the relationship between PsyCap and anxiety among 1354 female Chinese nurses from two tertiary care hospitals. Organizational commitment is a concept that has been frequently studied in relation to turnover and retention of nurses; it is defined as the employees' acceptance of the organizations' goals, their willingness to put effort into meeting those goals, with a strong desire to stay with the organization (Porter et al. 1974, in Yahaya & Ebrahim, 2015, p. 199). The authors found that increases in PsyCap led to increases in organizational commitment and increases in organizational commitment led to decreases in job burnout and anxiety. This study is important as it demonstrates a direct relationship between PsyCap and organizational commitment. Nurses with high levels of PsyCap experience less psychological distress and therefore high PsyCap may be linked to greater job satisfaction which can result in greater organizational commitment which ultimately reduces the intent to quit.

Personal resources (PsyCap) are considered innate and stable, but developable. Nurses who present with high PsyCap would have the confidence, willpower, and the ability to bounce back from uneventful situations and have a good outlook on life despite challenges. These traits support mental health and enable the nurse to mitigate stress and prevent the symptoms of emotional exhaustion and anxiety. While there are many studies presenting evidence of association between PsyCap and stress, no studies were found to

measure the direct levels of perceived stress a new graduate nurse experiences in relation to the level of PsyCap, hence the reason for this study. The goal was to identify the nature of the relationship between PsyCap and stress which is known to influence outcomes such as burnout, intent to leave, mental and health conditions, and the risk for compromised nursing care.

As healthcare organizations battle with high turnover rates among nurses, understanding how PsyCap can influence the factors associated with turnover, can provide some insight on how to reduce the exodus. High turnover rates among nurses are due to stress, high patient acuity and increased workload (Roush et al., 2021). The new graduate nurse turnover rates have been as high as 35% with losses to organizations ranging from 5.2 – 8 million dollars per year in Canada (Boamah & Laschinger 2015). Roush et al. (2021), like Xanthopoulou et al. (2007) found significant associations between PsyCap, job resources, and WE which ultimately influence the new graduate nurses' intention to quit or stay. Yim and Yoo (2018) also found that PsyCap and WE influenced Korean new graduate nurses' intentions to stay in the profession. In Australia, Brunetto et al. (2016) conducted a quantitative cross-sectional study and found that PsyCap and organizational resources explained more than 50% of the variance in retention in the profession. PsyCap reduced the perception of psychological distress, and nurses became more engaged in their work; they were less occupied with the exhaustion and physical stress experienced during the work. The resultant effect was mentioned was increased job satisfaction and reduced intention to leave. Whether, the studies were done

in Canada, Australia or Korea, PsyCap reduced psychological distress and intent to leave, while improving WE.

As previously mentioned, Shahpouri et al, (2016), showed that personal resources affect the turnover intention directly, and indirectly through WE. A study done by Moloney et al. (2017) developed a turnover intention model by examining the effects of job demands, job resources, personal demands, and personal resources on burnout and WE and the intention to leave the organization profession. They did a cross-sectional design survey to gather data from 2,876 RNs working in New Zealand between 2014 and 2015. The key finding was that although higher workload and higher work-life interference were the strongest predictors of intention to leave, self-efficacy contributed significantly to reducing the nurses' intent to leave the profession. Recommendations were made to enhance job resources and personal resources, focusing on nurses' self-efficacy.

These studies clearly indicate the influence of PsyCap and WE on nurses' decision to quit. As nurses become more engaged in the work, the perception of stress is reduced and in turn the desire to leave is reduced. Efficacy (a component of PsyCap), which is the individual's perception of confidence and ability to execute a task, was identified as an important factor in making the decision to remain. In the new graduate nurse, low efficacy may be a source of stress that contributes to turnover rates. There is a need for further study on the role of efficacy and the other components of PsyCap in the new graduate nurses' perceptions of stress in new graduate nurses to fully understand the association.

PsyCap and Work-Related Stress in Nurses

Work-related stress occurs among all types of nurses and has been linked to burnout (Kim & Kweon, 2019), mental health issues, such as anxiety, depression (Baezzat et al., 2018; Zhou et al., 2018), psychological distress (Brunetto et al., 2016), and health issues (Asheghi et al., 2020; Estiri et al., 2016). Yim et al. (2017) studied the mediating role of PsyCap in the relationship between occupational stress and turnover intentions among 447 nurses from five hospitals in South Korea. Although the findings did show low levels of PsyCap among nurses with less than 15 years of experience, the results were not specific to new graduates. A statistically significant positive correlation between occupational stress and turnover intentions was found, and PsyCap was negatively associated with occupational stress and turnover intentions. This study supports the role of PsyCap as an essential factor in reducing occupational stress among nurses and reducing the desire or intent to leave.

Kim & Kweon, 2019 also investigated the mediating effect on PsyCap in the relationship between job stress and burnout among psychiatric nurses in South Korea. The 108 nursing participants came from three psychiatric hospitals. The data was collected between August 18th and September 15th, 2018. The findings supported PsyCap as a partial mediator of stress and burnout among Psychiatric nurses. PsyCap was a significant contributor to reducing stress and burnout. This study supports the role of PsyCap in reducing stress and burnout which contribute to nurses' intentions to quit.

The level of work-related stress experienced by nurses has been linked to mental health conditions, psychological distress, and anxiety; creating a healthy working

atmosphere can reduce anxiety levels and health-related conditions. Estiri et al. (2016) explored the effect of PsyCap on mental health and the mediating role of job burnout among 384 nurses in an Iranian public hospital setting. There was a statistically significant relationship between the three variables. As PsyCap increased job burnout decreased, and as PsyCap increased mental health increased. This study adds to the evidence of the benefits of increasing PsyCap on the factors associated with nurse turnover such as burnout and mental health issues.

Zhou et al. (2018) studied PsyCap, organizational commitment, job burnout, and anxiety among Chinese nurses. The authors distributed questionnaires to 1354 female nurses from a hospital in China. The results of the study on the serial-multiple mediation of organizational commitment and job burnout in the relationship between PsyCap and anxiety were found to be statistically significant. PsyCap was sequentially associated with increasing organizational commitment and then PsyCap was associated with decreasing job burnout and anxiety. Despite the setting in which these studies were done, the role of PsyCap has been consistent with reducing stress, decreasing anxiety, and burnout, and increasing organizational commitment, and job satisfaction, which in turn improves mental health and the overall atmosphere of the work environment.

Baezzat et al. (2018) conducted a study in Lorestan Province among 178 female nurses, to determine the mediating role of hospital stress and anxiety in the relationship between PsyCap and depression. The results showed that each component of PsyCap had a significant indirect negative effect on depression and anxiety. Hospital stress was found to be statistically significant, with a positive and indirect impact on depression.

Therefore, the findings support that there is evidence to support the collective and individual construct of PsyCap in reducing work-related stress, anxiety, and depression among female nurses. As I look at the effect of each component of PsyCap on work-related stress, my goal is to determine whether there is evidence to support differential effects on stress among the components of PsyCap.

Asheghi et al. (2020) published a study on the role of PsyCap as a mediator between job stress, burnout and mental health among 250 nurses from hospitals and medical centers in Iran. Asheghi et al. (2020) conducted structural equation modeling and obtained a positive and significant relationship between job stress and burnout. The findings also reveal that PsyCap acts as a mediator to reduce job stress and burnout and to improve mental health.

A consistent trend is observed in the studies as it relates to PsyCap and job stress and mental health among nurses is that it lowers the nurses' perception of stress, thereby reducing mental and physical exhaustion which leads to burnout, intention to leave and mental illness. PsyCap independently and indirectly contributes to the wellbeing of the nurse and provides a buffer and protector from stress which affects burnout anxiety and mental health.

PsyCap and New Graduate Nurses

The transition period of a new graduate nurse consists of many stressors that affect all dimensions of an individual. Newly graduated nurses experience mental and emotional distress (Spence Laschinger et al., 2012) difficulty dealing with ethical dilemmas (Bong, 2019; Zhou et al., 2017) mental and physical illness (Boamah &

Laschinger, 2016). These effects have contributed to many new graduate nurses leaving the profession (Yu & Lee, 2018) due to job dissatisfaction and mental strain (Kim & Yoo 2018), poor patient care (Boamah et al., 2018), emotional exhaustion, and burnout (Dwyer et al., 2019). While healthcare institutions try to support and retain the new graduate nurse by enhancing leadership and organizational resources, it is essential to determine the relevant evidence-based information to equip the new nurse to become engaged and remain in the profession. A few studies have provided evidence to support the value of PsyCap to new graduate nurses regarding nursing outcomes and work-related stress outcomes.

Kim & Yoo (2018) studied whether PsyCap would affect WE, which would then encourage the nurses to remain in South Korea. The participants were 156 new graduate nurses who answered a structured questionnaire on PsyCap, WE, and intention to remain. The authors found that PsyCap and WE influence the new graduate nurses' intentions to remain. Bonner (2016) also studied 157 RNs and found similar results as the sample consisted of nurses at all experience levels. A significant finding was that the more experienced nurses had higher levels of PsyCap than the younger nurses. This finding is significant as PsyCap can be developed among new graduate nurses to reduce the outcomes of stress.

Yu and Lee (2018) conducted a study in 2014 in Korea, which consisted of 371 new graduate nurses with less than 18 months of hospital work experience. Their turnover rate was 33.6% in 2012, and they cited high job stress, unsupportive work environments, job dissatisfaction, and burnout as reasons for leaving. Yu and Lee found

that one of the components of PsyCap (resilience) contributed positively and directly to employees becoming engaged in their jobs, resulting in less desire to leave.

Also, in a study done in the United States by Dwyer et al. (2019), which involved 136 newly licensed graduate nurses who had between 6 months and three years of clinical experience, 51% of the nurses were highly stressed out. The researcher used Facebook to collect data for one month and excluded nurses from outside of the United States who had other jobs or were licensed practical nurses. The study aimed to determine whether personal or job resources such as authentic leadership and workplace empowerment reduced burnout and turnover intention among new nurses. The findings revealed that all three areas reduced burnout and turnover intent. The findings tell us that PsyCap impacts the intention to leave, job satisfaction, and the stress level experienced by the new graduate nurse.

Boamah et al. (2016) surveyed new graduate nurses with less than three years of experience twice a year apart. They found that emotional strain and lack of support from more experienced nurses were the main reasons for leaving the profession. The researchers found that PsyCap significantly prevented the new nurses from leaving and experiencing intensive mental strain. Despite the overall eagerness as they entered clinical practice, half of them experienced high levels of emotional exhaustion and incivility during their first year of practice. Boamah and Laschinger (2015) also study 205 new graduate nurses to test a hypothetical model linking the perceptions of workplace empowerment and PsyCap to the new graduate nurse WE. The results

supported the model of work empowerment and PsyCap as strong predictors of WE independently and even greater WE when combined.

Although these studies (Boamah & Laschinger, 2015; Dwyer et al. (2019); Kim & Yoo (2018); Yu & Lee (2018) have been conducted mainly in Korea, Canada, and the United States, with different political and social climates, the findings suggest that in the absence of PsyCap, many new graduate nurses may become unhappy and leave the profession. Environmental and personal factors are required to assist the new graduate nurse during the transition process. The intent to remain is affected by the environment, job satisfaction, and PsyCap. Evidence provided by Boamah and Laschinger (2016) cites PsyCap as a predictor of job satisfaction and intent to remain, while Boamah and Laschinger also found PsyCap to be a predictor of WE, which influence job satisfaction and perception of stress experienced by the new graduate nurse. So both studies obtained the same findings.

Other factors, such as organizational commitment and authentic leadership, have also contributed to meeting the needs of the new graduate nurse, and the evidence supports the development of personal resources to curb turnover rates. PsyCap influences WE, which impacts the perception of stress experienced by the new graduate nurse and reduces the intent to leave. In addition, at least one component of PsyCap has shown a positive correlation between WE and job satisfaction. This positive correlation finding is significant as each component of PsyCap can be used to address specific stressors. In the next section, I will review the evidence on the individual components of PsyCap and work-related stress among nurses.

Individual Components of PsyCap and Work-Related Stress in Nurses

Efficacy and Work-related Stress

Low efficacy levels in newly graduated nurses may contribute to increased stress levels as the new graduate nurses strive to develop mastery of cognitive and technical skills. New graduate nurses experience work-related stress as they lack experience and mastery during the transition (Frögéli et al., 2019). Efficacy refers to confidence in skills and the ability to use cognitive resources or take action to complete a task successfully (Stajkovic & Luthans, 1998b). Efficacy can influence the competencies that persons develop and the interest they pursue. Some studies have shown the benefits derived from implementing mentoring programs, such as increased self-efficacy, reduction of high turnover rates, mental and physical health problems, and a high incidence of errors due to job-related stressors (Edwards et al., 2020; Lau et al., 2015; X. Wang et al., 2017). A few studies have shown a significant relationship between self-efficacy and work-related stress (Mahdizadeh et al., 2016; Chen et al., 2019, & Zaki, 2016).

An association between efficacy and stress can occur among nurses in different settings. Mahdizadeh et al. (2016) found a significant negative relationship between job stress and self-efficacy during a study that comprised 424 Iran nurses from 2015-2016. The results were similar to a study by Chen et al. (2020) as they surveyed 1029 young Chinese nurses and found that self-efficacy reduced stress and anxiety among young nurses. The findings tell us that increases in job stress reduce the nurse's ability to function competently in the workspace and vice versa. The lack of efficacy would contribute to work-related stress.

Also, Zaki (2016) conducted a similar study to assess job stress and self-efficacy among 98 Psychiatric nurses working in two mental hospitals in Egypt. The data was collected from July 2015 to Sept 2015. Zaki (2016) found a statistically significant correlation between stress and the efficacy of psychiatric nurses. Notably, statistically significant correlations were present between nurse stress and age, efficacy, age, years of experience and nurses' stress. These studies' findings tell us that there is a link between efficacy and job stress among nurses despite the settings or country in which the studies occurred.

All of the studies discussed were conducted between 2015 and 2017 in different countries and have significant relationships between efficacy and job stress among nurses. There were significant reductions in depression and anxiety due to the presence of nurses with high efficacy. Efficacy was linked to age and years of experience among new Psychiatry nurses; however, due to the small sample of 98 nurses, this is a weakness to being generalized. However, Chen et al. (2020) studied a larger sample of young nurses, which provided significant findings related to the lack of self-efficacy being a source of stress in young nurses. Therefore, the significance of these studies is that they provide evidence to support the role of efficacy and stress among nurses.

Resilience and Work-related Stress

Resilience is needed by nurses who encounter many disappointments and challenges daily. The ability of nurses to withstand stress continually and function beyond was noted by Garcia-Izquierdo et al. (2018) and Mroz (2015). Four studies will be discussed here regarding resilience and job stress among nurses.

Ren et al. (2018) studied 1356 RNs from 11 general hospitals in China. The study aimed to determine the influencing factors of resilience. The data was collected from nurses with at least one year of experience from January to April 2015. Their findings revealed a significant relationship between resilience and job stress, self-efficacy, coping mechanisms, and educational levels. Babantaj et al. (2019) conducted a quasi-experiment on 30 critical care nurses in Iran's intensive care unit (ICU). The study aimed to determine the effect of resilience training on ICU nurses' occupational stress and resilience levels. The nurses who completed five 90 to 120-minute sessions on resilience training completed a pre and post-test. The data was collected between April 2015 and February 2016, and the findings showed a significant decrease in occupational stress with significant increases in the mean score of resilience.

The findings were similar to studies done at the Mayo Clinic in Minnesota by Magtibay et al. (2017) and Jafarizadeh et al. (2016) at a Tekab City, Iran hospital. Magtibay (2017) conducted research to assess blended learning efficacy in decreasing stress and burnout among nurses using a blended stress management and resilience training program. The participants were fifty nurses who participated in direct care with transplant patients and nurses in leadership positions. The training consisted of pre and post-testing for 12 modules at intervals presented face-to-face and online. The findings showed a significant reduction in stress and increased resilience levels.

Jafarizadeh et al. (2016) also provided interventional training, which consisted of five sessions on 1-hour, twice a week, in groups of 30 nurses at a time from a sample of 60. This study aimed to determine the effect of resilience training intervention on

occupational stress among nurses. After analyzing questionnaires, pre-test, and post-test scores, Jafarizadeh et al. found significant differences in the level of occupational stress and its components between the pre-test and post-test among all the participants.

Three of the studies reviewed (Babantaj et al., 2019; Magtibay et al., 2017 & Jafarizadeh et al., 2016) conducted quasi-experimental studies to determine the impact of resilience on stress, and they all found that resilience training resulted in either a decrease in stress or a significant difference in the pre and post scores. Although these studies contained small sample sizes, which may reduce generalization, the combined population ranged from nurses who worked in critical care, transplant units, and leadership positions. These studies also provided evidence to support the malleable features of resilience as a component of PsyCap. The non-experimental study by Ren et al. (2018) consisted of a much larger sample size and comprised nurses from various hospitals with years of experience from one year. The findings are significant as resilience decreases job stress.

Hope and Work-Related Stress

Only a few current studies were found when searching for evidence linking hope and work-related stress among nurses; however, the concept of hope was explored among student nurse interns and workers from various areas. Some studies have classified hope as a protector against stress. In contrast, others have obtained significant results in improving job satisfaction and lower levels of perceived stress (Seek Lee & Jang, 2018) and well-being (Mousa et al., 2017)).

Seek Lee & Jang (2018) investigated the role of hope and job satisfaction between job stress and turnover intention in 362 workers from 27 workplaces in Korea. The

findings showed that those with high levels of hope were associated with workers being more satisfied and less likely to leave their jobs. Similarly, Mousa et al. (2017) studied the effect of hope on 174 nursing interns in a clinical setting. The study investigated the relationship between perceived stress, emotional intelligence, and hope among nursing interns. Mousa et al. also found that hope was positively related to lower perceptions of stress and healthier thought processing. This study is significant as it again provides evidence to support the role of individual components of PsyCap having a positive influence on stress and intentions to leave.

This study's findings tell us that increased hope levels can positively influence healthy functioning and the level of perceived work stress experienced. Therefore, despite focusing not explicitly on the nursing population, the studies provided evidence to support hope associated with better coping and reduced perception of stress, reducing the intent to leave.

Optimism and Work-related Stress Outcomes

Work-related stress among nurses has affected work life, such as patient care, emotional and physical exhaustion, and the nurse's health. The research studies I encountered related to optimism and the outcomes of work-related stress among nurses provided significant associations between them. Some of the studies regarding optimism and work-related stress in nursing revealed a positive association between optimism and quality of life (Cruz et al., 2018), health (Malagón-Aguilera et al., 2020; Kim et al., 2016), and the quality of health care provided to patients (Jaworski et al., 2020). In some studies, optimism and burnout had a significant relationship (Chang & Chang, 2015;

Malagón-Aguilera et al., 2020), while another study revealed that optimism is a modifiable trait through training and education (Jahromi et al., 2017).

Chang and Chang (2015) conducted a cross-sectional survey on 314 staff nurses in a General Hospital in Taiwan from June 2009 to September 2009. The study aimed to investigate three symptoms of burnout (emotional exhaustion, depersonalization, and diminished personal accomplishment) and the buffering effect of optimism and proactive coping. The study findings revealed that higher levels of proactive coping and optimism were associated with lower burnout and noted optimism to have the most substantial relationship.

Aguilera et al. (2020) also proposed the question of dispositional optimism and burnout among nurses working in a long-term health facility in Spain. The study included 156 nurses who worked at 11 long-term health facilities from May 2014 to February 2015. The findings revealed lower levels of emotional exhaustion, the absence of burnout, and a better health perception among those with greater dispositional optimism levels.

It is important to note that another study by Kim et al. (2016) found an association between optimism and health. This study by Kim et al. (2016) aimed to evaluate the association between optimism and cause-specific mortality in women. The investigation began in 1979 with 121,700 female RNs between the ages of 30 and 55. The participants received questionnaires about their health and health behaviors every two years, which provided updated health information. The findings revealed significant associations

between optimism and decreasing mortality risk in cancer, heart disease, stroke, respiratory disease, and infection.

Two studies supported optimism and quality of life (Motamed-Jahromi et al., 2017) and optimism, work-life satisfaction, and the effect on quality nursing care (Jaworski et al., 2020) among nurses. Motamed-Jahromi et al. (2017) conducted a quasi-experimental study that focused on the effect of positive thinking training provided through a social media application and its influence on the quality of life and work-life among nurses. The sample consisted of 100 nurses selected from two hospitals and randomly divided into two groups. The interventional group received positive thinking training material over three months via a social media application. The findings revealed significant differences between the mean scores for the pre and post-test for the interventional group for the quality of work-life (home-life; work design; work context, and work world). These study findings suggest that improving positive thinking can be enhanced through training and education.

In another study by Jaworski et al. (2020), their research aimed to determine whether optimism, job, and life satisfaction will influence rationing nursing care among Polish RNs. As previously mentioned, work-related stress outcomes affect the nurse's health, quality of life, and quality of care patients receive. The rationing of nursing care (Schubert, 2008) refers to withholding or failing to carry out nursing measures due to a lack of resources or time. Jaworski et al. (2020) stated that nursing care rationing was associated with low job satisfaction; elevated stress levels; increased risk of burnout; higher absenteeism; and a significant turnover of employees. In this study, they surveyed

1010 Polish nurses between January 2019 and June 2019 and found that nurses who were pessimistic possessed a higher risk of nursing care rationing than optimistic nurses. In a previous study by Motamed-Jahromi et al. (2017), Polish nurses who actively participated in positive thinking training displayed optimistic thinking and job satisfaction.

The overall notion from these studies suggested that optimism impacts the nurses' overall well-being. Since the degree of exhaustion and the nurses' perception of stress is reduced, the nurse will more likely experience job satisfaction. Stress affects well-being and health and ultimately affects the quality of patient care. Also noteworthy is that training and education can influence optimism, making it a malleable trait of PsyCap. Although each study contributed to evidence supporting optimism as an essential component of PsyCap, some key features were noted among them.

While most studies were descriptive and used self-administered surveys, one study used a quasi-experimental design. Motamed-Jahromi et al. (2017) conducted an interventional experiment; however, this study contained the smallest sample size, which can affect the generalization of the results. However, the study review by Kim et al. (2016) explored optimism and health among female nurses using a longitudinal design from 1979, but from 2004 to 2014, optimism studies began.

Although the authors admitted that confounding variables were a limitation, some adjustments were made to counteract the effect. Another limitation is the population sample that only consisted of white females. While females represent a significant part of

the nursing population, a more accurate representation could have included males, as the other studies included males and females.

The overall finding for the individual components of PsyCap and job stress has led to the following conclusions: Optimism creates a sense of well-being, as nurses with high levels of optimism will always see positive outcomes despite the process. Hope helps reduce nurses' stress perception by equipping them with better coping skills as they seek new ways to solve problems. Resilience reduces job stress as they learn, and note the operative word learn, to bounce back after unfortunate events; therefore, building resilience will reduce job stress. Efficacy may be lacking in the new graduate nurse as age and length of experience in building confidence may be a factor in the new graduate. Thus, they may experience high-stress levels. A salient point to note is the malleable or developable nature of all the components of PsyCap; therefore, increasing levels in a specific component can be considered if other components show high values.

Summary and Conclusions

The literature review provided the foundational evidence to support the need for the current study. The JD–R model forms the framework for understanding how the variables in this study were defined and the proposed relationships between them. The variables of interest included PsyCap and work-related stress. The significant stress outcomes highlighted in the literature include the intention to remain, burnout, mental and psychological illness, and patient care outcomes. These outcomes affect the lives of nurses, their families, and their patients. The need to have an adequate supply of nurses within our healthcare system is essential to maintain and improve the quality and safety

of care. Due to the growing nursing shortage, it is essential to retain new graduates. Numerous studies have supported the role of PsyCap (efficacy, hope, resilience & optimism) as a significant personal resource that helps nurses to mitigate the job-related stressors associated with nursing. Many studies also strongly support that PsyCap can be developed. There are differences in levels of PsyCap among new graduate nurses compared to their more experienced counterparts, which may contribute to the high turnover rate among new graduate nurses.

This study addresses the gap in the literature regarding the relationship of PsyCap to work-related stress among new graduate nurses. The study adds to the body of knowledge by examining the relationship of each component of PsyCap to stress and the overall effects of PsyCap on stress among new graduate nurses. The results of this study may contribute to the development of future outcomes studies and help administrators within healthcare systems to develop programs that improve retention among new graduates. In the next chapter, I will discuss my research methodology and the rationale for using this design in my study.

Chapter 3: Research Methodology

Introduction

The demand for newly qualified nurses must be supported as the aging nursing population departs and further contributes to the predicted nursing shortage globally. Nursing is a stressful occupation, and being a newly graduated nurse contributes to the sources of stress which have led the new graduate nurse to experience burnout (Kim & Kweon, 2019), mental and physical illness (Baezzat et al., 2018; Zhou et al., 2018) and ultimately, leave the profession (Dwyer et al., 2019; Yim et al., 2017). The purpose of this study was to explore relationships between personal resources (efficacy, optimism, hope, and resilience) and the perceived level of stress among newly graduated nurses with one year or less of clinical experience.

This chapter describes the methodology, research design, and rationale for choosing the design. I describe the target population, sampling procedure, and the data collection process. In addition, I have included measures and instruments, analysis plans, threats to validity, and ethical considerations.

Research Design and Rationale

In this study, I used a quantitative research methodology, and the research design was non-experimental and correlational. The independent variable was PsyCap (efficacy, optimism, hope, and resilience), and the dependent variable was the perceived level of stress. A non-experimental design allowed the participants to experience stress in their natural settings. Gray et al. (2017) stated that a correlational design is better suited when there is a need to address the gap in the literature and explore the topic with a focus on

advancing knowledge in the area. While these studies have explored PsyCap and nurses and stress (Boamah & Laschinger, 2015; Bonner, 2016; Dwyer et al., 2019; Kim Yoo, 2018), the gap exists for new graduates with less than one year, therefore identifying relationships between the PsyCap and stress among newly graduated nurses with less than one year of experience would add to the literature and contribute to positive social change.

A correlational design can determine whether relationships exist between PsyCap and perceived levels of stress. Although other variables may influence perceived stress among new graduate nurses, I initially used this correlational design to determine the strength and direction of the relationship of PsyCap to stress.

To answer RQ 1, I used correlation analysis to determine the extent to which a relationship exists between PsyCap and its components and the level of perceived stress experienced by the participants. Regarding RQ 2, I used multiple regression analysis to determine the strength of the relationships between the independent and dependent variables. The data collection instrument consisted of surveys with closed-ended questions. Surveys are beneficial as they are used to accurately generalize a large population (Gray et al., 2017).

Methodology

Population

The population included all newly graduated nurses with less than or equal to 1-year clinical experience working in a hospital setting. The underlying population is the population of English-speaking new graduate RNs worldwide.

Sampling and Sampling Procedures

I used a nonprobability sampling strategy to access the target population. The sampling was not restricted to one location. Convenience sampling offers the fastest and most inexpensive method of acquiring participants; although convenience sampling increases the number of confounders, this can create avenues for further studies (Gray et al., 2017). The inclusion criteria included English-speaking RNs with one year or less of clinical experience in a hospital setting. RNs who were licensed practical nurse (LPN) was excluded from the study.

Faul et al. (2009) stated that a linear regression model requires an empirically valid sample size; therefore, I used the G* Power version 3.1.9.7. analysis to calculate the minimum number of participants that would be required. Based on the guidance of Cohen (1988), I used a priori power analysis under multiple linear regression, with a medium effect size of .15, an acceptable power level of .80, and a projected alpha level of .05, the minimum sample size needed to achieve validity was $N= 85$ participants.

Procedures for Recruitment, Participation, and Data Collection

In the recruiting process, I posted recruitment notices on Facebook and Instagram. I also used the Walden participants' pool to advertise for participants. I also used snowball sampling to ensure that the minimum sample size was attained. Participants were encouraged to forward the study information to others who were interested in the study. I also used Amazon Mechanical Turk as a means of data collection to meet the sampling requirement. The recruitment notice contained links to the informed consent, a screening questionnaire, and the study surveys via the Survey Monkey platform. The data

was downloaded from the platform once the data collection was completed, and the data collection period lasted approximately two months.

I used a demographic survey to collect data on participants' age, gender, marital status, educational level, work area, experience in nursing (months), hospital ownership type, and shift. I chose the demographic factors based on their presence in two similar studies, one by Feddeh and Darawad (2020) and the other by Zhou et al. (2018). The demographic survey was used to describe the sample and compare the sample composition in this study to that of prior studies.

When potential participants clicked on the survey link, the screening questionnaire opened. Those who passed the screening questionnaire by meeting the inclusion/exclusion criteria proceeded to the surveys, and those that did not were thanked for their time, and the survey closed. The informed consent opened, and potential participants were asked to agree to the consent by checking a box labeled "I agree." The consent statement contained information about their right to exit or discontinue the survey at any time without any consequences. The purpose of the research, the estimated time to complete the survey, and foreseeable risks and discomforts were addressed in the consent statement. I also mentioned that discomforts might include unpleasant memories of stressful events they have experienced and possible fatigue from the time taken to participate in the survey.

I distributed the survey using the Survey Monkey software (Momentive Inc., n.d.). I also sent the surveys to the population via a link and QR code placed on the flyer shared on social media. The software allowed only one response per participant;

however, participants could edit their responses before submitting the survey. To ensure anonymity, I disabled email tracking and Internet Protocol (IP) addresses on Survey Monkey. I made no attempts to contact participants after they completed the survey for follow-up questioning to maintain anonymity.

If someone did participate in this study, a summary of the results would be accessible via a secure link using Dropbox. Upon completion of the study, the summary will be uploaded for them to view at their convenience. The survey consisted of a demographic questionnaire and two established instruments that measured perceived stress and PsyCap.

Instrumentation and Operationalization of Constructs

I used four instruments in this study; a screening questionnaire, a demographic survey, and two published instruments to measure the study variables PsyCap, and perceived stress. I designed the screening questionnaire to capture the inclusion criteria and determine eligibility for the study. I described my participants' characteristics using the demographic survey. I used the Nursing Stress Scale (NSS) developed by Gray-Toft and Anderson (1981) to measure perceived stress, and PsyCap was measured using the PsyCap Scale developed by Luthans et al. (2007).

The Nurse Stress Scale

The NSS was developed to measure stressful situations based on seven significant sources of stress in the physical, psychological, and social environment. Permission to use the NSS was granted and can be found in Appendix A. The sources of stress measured in the NSS were as follows; (a) death and dying, (b) conflict with physicians,

(c) inadequate preparation, (d) lack of support, (e) conflict with other nurses, (f) workload, and (g) uncertainty concerning treatment. In developing the NSS, the authors administered it to 122 nurses across five hospital units. The following three studies were conducted over the past five years, and the NSS was the instrument used to measure stress. Guo et al. (2018) measured perceived stress among community nurses; Lawrency (2018) measured stress management among novice nurses; and Brand et al. (2021) measured stress levels among neonatal intensive unit nurses.

I used the NSS as it was deemed more appropriate compared to the other scales. I chose the NSS over the perceived stress scale (PSS) (Cohen et al., 1988) as the factors addressed were closely related to the sources of stress experienced by nurses. The PSS only provides a general outlook on stress which occurred within the last month. The NSS consists of 34 items, whereas the expanded nurse stress scale (French et al., 2000) contains 57 items which may prolong the time for participants to complete the survey.

I used published values to determine whether the NSS could measure what it was designed to measure. The factor analysis showed alignment between the seven significant sources of stress in the hospital environment and the conceptual factors of stress. Test-retest reliability for the full Scale was 0.81, and 4 measures of internal consistency of the NSS were obtained: Spearman-Brown coefficient of 0.79, a Guttman split-half coefficient of 0.79, a coefficient α of 0.89 and a standard item α of .089, Graft-Toft and Anderson (1981) stated that all proved to be reliable. Graft-Toft and Anderson (1981) achieved validity of the NSS when they conducted correlation studies with factors hypothesized to cause stress, such as trait anxiety, state anxiety, job satisfaction, and nursing turnover.

The findings supported significant correlations between the NSS and the sources of stress mentioned previously in this section.

The NSS is scored on a 4-point Likert-type scale with scores from 0 (*never*), 1 (*occasionally*), 2 (*frequently*), and 3 (*very frequently*); and consisting of 34 items representing workplace stressors related to the nursing environment. The NSS measures the frequency of stressful occurrences. The corresponding scores represent the level of perceived stress. There are seven areas (subscales) that focus on sources of stress (four factors focus on the psychological environment, one on the environment, and two on the social environment). These subscales identify specific sources of stress; therefore, the total scores for each subscale can be obtained by adding all the responses for each subscale. For this study, the stress variable was measured using the total score for the NSS, which is obtained by adding the seven subscale totals. A high total score would indicate a high frequency of stressful occurrences. The total score for all 34 item responses ranges from 0 to 102. Three sample items from the NSS are as follows; "*Criticism by a physician,*"; "*Fear of making a mistake in treating a patient,*"; "*Not enough time to complete all nursing tasks.*" The participants responded by using the 4-point Likert Scale with scores ranging from 0 (*never*), 1 (*occasionally*), 2 (*frequently*), through 3 (*very frequently*) to represent how often they found these situations to be stressful.

The Psychological Capital Scale (PCQ-24)

Luthans et al. (2007) developed the PCQ-24. The survey was appropriate for my study as it represents a measure for the dependent variable PsyCap. I obtained permission

to use the PCQ, and the permission document is included in Appendix B. The PCQ-24 measures an individual's level of positive psychological development. The PCQ-24 consists of items taken from four scales previously developed to measure hope (Snyder et al., 1996), efficacy (Parker, 1998), resilience (Wagnild & Young, 1993), and optimism (Scheier & Carver, 1985). PsyCap and its components (hope, optimism, resilience, and efficacy) were measured using the PCQ-24 instrument, which consists of a 24 items questionnaire using a 6-point Likert scale with responses from 1 (*Strongly disagree*) 2 (*Disagree*), 3 (*Somewhat disagree*) 4 (*Somewhat agree*) 5 (*Agree*) 6 (*Strongly Agree*).

Published values for reliability and validity proved that the instrument had acceptable standards in both areas. The Cronbach alphas for three of the subscales (hope, efficacy, and resilience) during the development of the PCQ were over .70, with optimism scoring .69. However, the internal consistency reliability for the overall survey ranged from 0.88 to 0.89, which is well above satisfactory standard (Luthans et al., 2007). Luthans et al. (2010) published internal validity values from newer studies with values greater than .70 in all four scales. The reliability alpha of the composite PsyCap construct was greater than .90. Even more recently reported internal consistency for PCQ and its subscales using Cronbach alpha was found to be .93 (Estiri et al., 2016), .93 (L. Wang et al., 2017) and .84 (Li et al., 2019).

I calculated the overall score by adding all the item responses in the PCQ. The range of scores for the subscales is from 6 through 36, while the scores for the overall Scale are 24 through 144. Question items 13, 20, and 23 are scored in the reversed order; so one is scored as six; two is scored as five; three is scored as four; four is scored as

three; five as two; and six as one. Each components of PsyCap have items assigned, so the subscale scores represented each component of PsyCap. The efficacy items are from 1 through 6; hope items from 7 through 12; resilience items from 13 through 18; and optimism items from 19 through 24. An example of an item from the Efficacy scale of PCQ-24 is as follows; *“I feel confident analyzing a long-term problem to find a solution”*; An example of an item from the Hope scale of PCQ-24 is as follows; *“There are lots of ways around any problem”*; An example of an item from the Resilience scale of PCQ-24 is as follows; *“I usually take stressful things at work in stride.”*; An example of an item from the Optimism scale of PCQ-24 is as follows; *“I always look on the bright side of things regarding my job.”*

Researcher Developed Instruments

Two instruments were developed; one was used to screen the participants before allowing them to begin the survey. The questions were based on the inclusion and exclusion criteria. The second instrument was developed to obtain a description of the participants or the demographic survey.

Screening Questionnaire

The screening questionnaire appeared before the consent page, consisting of three questions to determine the participant's suitability. If the participant met the criteria, they were allowed to proceed to the next page. The questions in this questionnaire are attached in Appendix C.

Demographic Survey

The demographic survey consisted of eight questions. The factors addressed in these questions were chosen based on two previous studies on nursing participants and stress (Rosnawati et al., 2021). The questions focused on age, gender, marital status, educational level, work area, experience in nursing (months), hospital ownership type, and shift; including these questions allowed for the comparison of characteristics of the sample to those of previously published research. The questions in this survey are attached in Appendix D.

Operationalization

Perceived Stress

In this study, I defined perceived stress as the degree to which events in a person's life are assessed as stressful, unpredictable, and uncontrollable (Cohen, Kamarck, & Mermelstein, 1983; Phillips, 2012). Perceived stress was measured using the NSS (Gray-Toft & Anderson, 1981). The total score was obtained by adding all the scores for each item. A higher score indicates a higher frequency of stressful occurrences.

Psychological Capital (PsyCap)

Luthans et al. (2007) described PsyCap as a composite construct of four state-like traits. According to Luthans et al. (2007, p.3), PsyCap is defined as "an individual's positive psychological state of development and is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals

(hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success". The variable PsyCap was measured using the PsyCap Questionnaire (PCQ-24). The 24 items in this questionnaire measured the components of PsyCap (hope, optimism, efficacy, and resilience). Each component has six items; the responses were totaled and represented a subscale of the comprehensive questionnaire. Each subscale was added to provide the overall score for the PCQ. A more significant presence of PsyCap and its components was indicated among participants who obtained high scores on the overall scale, ranging from 24 to 144. Each component of PsyCap represented the subscale scores which indicated the extent of each component present in the participant. The scores ranged from 6 through 36, with higher scores indicating a greater extent or presence.

Data Analysis Plan

The study followed a quantitative approach; therefore, I used IBM SPSS v27 Statistics software to conduct the analysis.

Data Cleaning and Screening

I did anticipate missing data and managed it to prevent the reduction of my sample size, which can affect the statistical power. Therefore, increasing the target sample size beyond the computed power analysis provided a buffer for the missing data. Based on the type of missing data, Little et al. (2012) recommend sensitivity analyses to determine the significance of the results after using the imputation of the mean or median to replace missing data. Only one participant refused to state his marital status; all other questions were answered; therefore, imputed means were not conducted.

An outlier is a value in a sample data set that is extremely low or high in relation to the values in the data set (Gray et al., 2017). An outlier's presence can affect the distribution curve's shape and add bias to the results (Fields, 2015). To determine the presence of outliers, I used the Box plot in SPSS v27. The outliers were removed.

These steps were taken to ensure the data met the underlying assumptions of Pearson correlations, including the normality of the data distribution and the presence of a linear relationship between the variables. Based on the suggestions by Field (2015), I examined the histograms of the data, the z-values for skewness and kurtosis, and I observed the Q-Q plots to see whether the dots fell along the line to determine the normality of the DV. I also ran the Shapiro-Wilk test in SPSS and obtained a p-value above 0.05, indicating a non-normal distribution. Given a non-normal distribution of the variables, I used Spearman's *rho* to analyze the relationship between the variables rather than Pearson's *r*.

The underlying assumptions of multiple regression analysis are a normal distribution of the DV, a linear relationship between the IV and DV, the absence of multicollinearity, and homoscedasticity. To determine whether multicollinearity is present, I examined the variance inflation factor. Mertler and Vannatta (2017) state that multicollinearity is present when the VIF result is > 10 . To determine normality, linearity, and homoscedasticity, which is the equal variance of both variables concerning the regression line (Gray et al., 2017), I observed scatterplots of the residuals for clustering at the top or bottom of the plot indicating non-normality at the right or left of the plot indicating a non-linear relationship, and for a cone-shaped distribution indicating

heteroscedasticity (Mertler & Vannatta, 2017). Based on the need to resolve non-normality, multicollinearity, and heteroscedasticity, I used square-root data transformations as suggested by Field (2015) and Mertler and Vannatta (2017).

This study aimed to determine whether there is any relationship between PsyCap and its components and the level of perceived stress experienced by new graduate nurses. The independent variable is PsyCap, and the dependent variable is the perceived level of stress. The research questions are as follows:

RQ1: What is the relationship between each component of PsyCap (efficacy, resilience, hope, and optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice?

H₀₁: There is no relationship between any component of PsyCap (efficacy, resilience, hope, and optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice.

H₁₁: There is a relationship between at least one component of PsyCap (efficacy, resilience, hope, and optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice.

RQ2: What is the composite effect of PsyCap on perceived stress among new graduate nurses with a maximum of one year of clinical practice?

H₀₂: PsyCap has no effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice.

H₁₂: PsyCap has a significant effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice.

A Spearman's rho correlation analysis was used to answer the question of the relationship between each component of the independent variable (PsyCap) and the dependent variable (perceived stress levels of the new graduate nurse) since the distribution of both the IV and the DV was not normal. A normal distribution would allow using the Pearson correlation coefficient; a non-normal distribution would require using Spearman's rho. The r-squared or rho described the strength of the association between each component of PsyCap and the perceived stress score. A larger value closer to 1 suggests a stronger relationship between the IV and the DV than a smaller value closer to 0.

Then multiple regression analysis was used to answer the second research question regarding the composite effect of PsyCap on perceived stress. For interpretation of the multiple regression analysis, the F-statistic was used to determine the significance of the predictive model, and the unstandardized beta (*b*) coefficients of each predictor were generated to determine the amount of change in the DV (perceived stress) based on a unit of change in the independent variable (PsyCap), and R^2 was computed to describe the proportion of the variance in the DV that can be explained by the IV (Gray et al., 2017). The internal consistency reliability using Cronbach's alpha for each subscale and the overall survey was generated and compared with previous studies.

Threats to Validity

The types of validity threats will be discussed as they relate to this study and what was done to mitigate them.

External Validity

Studies that do not use random sampling or are experimental are at risk for diminished external validity (Gray et al., 2017). I used convenience sampling to access participants. To increase the external validity of the findings, I only recruited participants from English-speaking countries worldwide. The demographics showed a diverse sample, so the findings were generalized and not listed as a limitation.

Internal Validity

Internal validity assures that the relationship between the IV and DV is true and not influenced by methodological errors (Patino & Ferreira, 2018). In this study, there were several threats to internal validity. Sampling errors occur when the data are collected from individuals not belonging to the population of interest (Khanal, 2017). , hence, a screening questionnaire was used to confirm the eligibility of participants.

Another threat to internal validity would be using the wrong instrument to measure the concepts of interest (Khanal, 2017). I used two instruments with proven reliability and validity in published research studies to reduce the possibility of such an error. The internal consistency reliability of each instrument in this study was reported. The measurement of stress may be affected by other variables. Individuals may be exposed to other forms of stress, which can influence perceived stress. The time when the survey took place may or may not be one in which the nurse is experiencing a high level of stress.

Construct Validity

The PCQ-24 and the NSS instruments have satisfactory published values to address construct validity. Reported internal consistency for PCQ and its subscales were measured using Cronbach alpha and found to be .93 (Estiri et al., 2016), .84 (Li et al., 2019), and .93 (L.Wang et al., 2017). The Cronbach alpha for all subscales was greater than .70. The NSS, which measured the frequency of stress, had excellent reliability and validity scores using Cronbach alpha. Porcel- Graves et al. (2020) and Zhu et al. (2020) obtained values greater than .90 in two studies. Based on these reports, I did not foresee any problems with these instruments.

Statistical Validity

Statistical validity did not threaten the study's validity since I obtained the calculated sample size. I surpassed the minimum sample size of at least 85 participants (as calculated by the G*Power analysis) with adjustments in my proposed recruitment strategy.

Ethical Procedures

Ethical procedures were maintained and will be discussed in this section. Gray et al. (2017) state that the participant has the right to anonymity and the right that the data will be kept confidential. Recruitment was done via ads on social media platforms (Facebook and Instagram), Walden Participant Pool, and Amazon Mechanical Turk platform. The ads contained links to a Survey Monkey platform where the questionnaire was done. No emails were linked to survey responses via the Survey Monkey platform. The Survey Monkey platform uses SOC-accredited data storage centers with data

encryption. Survey Monkey also has ISO 27001 certification and is HIPAA compliant (Momentive Inc, 2021). A pre-screening was done based on the inclusion criteria, and if the participant met the criteria, they proceeded to the consent page. If the participant did not meet the criteria, they were thanked, and the survey closed. If the criteria were met, they proceeded to the consent page, and after providing their consent, the survey opened for their participation.

Electronic data files containing the responses were stored on my personal computer with username and password required for access and backed up on a secured and password-required cloud storage with access to my research Chair and myself. I will maintain data storage for five years as per Walden University's research policy.

Participants responded by checking the requested box to indicate consent. The consent included a brief introduction of myself as a doctoral student at Walden University, and I provided information about the purpose, benefits, risks, and approximate time it will take to participate in the study. I also informed participants that they could withdraw at any time. If they did participate in this study, a summary of the results would be provided via a secure link using Dropbox™ for viewing at their convenience. My contact information was also provided if a participant needed to ask questions. A copy of the consent form can be found in Appendix E.

Summary

I used a quantitative non-experimental correlational research design to answer the research questions in this study. Recruitment was done using social media platforms; the Walden Participants' Research Pool and the Amazon Mechanical Turk platform. The data

was collected over two months. I used the Survey Monkey platform to develop and administer the surveys. A convenience sample of 953 responses was collected. The NSS was used to measure perceived stress, while the PsyCap Scale was used to measure PsyCap among the participants. Two other instruments were used to screen the participants for the inclusion criteria, and the other was used to gather the demographic data on the participants.

The data was analyzed using the IBM SPSS v27; however, data cleansing focused on missing data, removing outliers, and ensuring that the data met the underlying assumptions of multiple regression analysis. I used Spearman's rho to answer RQ1, while multiple regression analysis was used to analyze RQ2. External validity was addressed by recruiting a diverse sample, while a screening questionnaire was developed to confirm eligibility and reduce internal validity. The other two instruments are published and validated with acceptable internal consistency and good reliability and validity scores. The statistical threat was reduced using the G*Power analysis to ensure I obtained the minimum sample size for statistical significance.

The ethical guidelines were used to apply for IRD approval following Walden University's policy to store the data in a data file on a computer or cloud storage with the required password and Id- login access for five years. Consent to participate required a physical check box to be checked after the participants read an overview of the study, the process to withdraw, and the consequences of the study. This chapter marks the end of the methods section; chapter four will provide the results and presentations of the data collected.

Chapter 4: Results

Introduction

I conducted this quantitative study to explore the relationship between the components of the independent variable PsyCap, (efficacy, optimism, hope, and resilience) and the dependent variable, which was the perceived level of stress measured by the NSS among newly graduated nurses with a maximum of one year of practice. The research questions were:

RQ1: What is the relationship between each component of PsyCap (hope, efficacy, resilience & optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice?

H_{01} : There is no relationship between any component of PsyCap (hope, efficacy, resilience & optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice.

H_{11} : There is a relationship between at least one component of PsyCap (hope, efficacy, resilience & optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice.

RQ2: What is the composite effect of PsyCap on perceived stress among new graduate nurses with a maximum of one year of clinical practice?

H_{02} : PsyCap has no effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice.

H_{12} : PsyCap has a significant effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice.

In this chapter, I will discuss the data collection, recruitment process, and response rate. The descriptive statistics will also be discussed, followed by a brief overview of the sample demographics. I will discuss how the sample demographics represent the larger population, the process of cleaning the data and testing for assumptions before using the statistical tests to answer each research question.

Data Collection

I obtained approval from the Walden University Institutional Review Board (IRB) in April 2022. I commenced data collection in May 2022, and I completed data collection in August 2022. I used the Survey Monkey platform to develop the questionnaire and posted the survey on Facebook. I also used the Walden Participant Pool. After one month, I collected 84 responses, one short of my minimum required sample size. I then requested an amendment to my study from the IRB, which was approved on July 6th, 2022, to recruit participants via the following avenues:

Allnurses.com website (a social networking site for nurses), emails were sent on two occasions to the Florida RN database (a public database of all the nurses licensed within the state of Florida), and Amazon Mechanical Turk (a research recruitment platform which pays eligible participants a minimal incentive for answering surveys). One week after posting the recruitment materials to the additional resources, I received no responses from Allnurses.com and the Florida RN database; however, I received 853 responses from the Mechanical Turk research participant site and 16 more responses for the questionnaire posted to Facebook. The total number of responses to the recruitment materials was 953; however, only 148 were found to be eligible for the study based on

the inclusion/exclusion criteria, exceeding the minimum sample size needed for the study, which was 85 participants.

Demographic Characteristics

Before analyzing the data to answer RQ1, I examined the data for missing data and outliers. Regarding missing data, only one participant refused to answer one of the demographic questions; no data was missing from the PsyCap and NSS questionnaires. I examined box plots to determine the presence of univariate outliers for each subscale of the PsyCap questionnaire and the overall score of the NSS. I removed 15 outliers from the dataset resulting in a final sample size of 133.

I explored the sample demographics before and after removing outliers using descriptive statistics, and they were similar. In the initial sample of 148 prior to the removal of outliers 25 to 34 age range represented slightly more than half of the population (51.4%, $n = 76$). There were more men (52.7%, $n = 78$) than women in the sample ($n = 148$), and most of the participants were married (68.9%, $n = 102$). During their clinical experience, those who worked in only one area represented a significant part of the population (86.5%, $n = 128$), while 13.5% of the participants worked between two and seven work areas. The med-surgical area was the most popular work area accounting for (55.4%, $n = 82$), while psychiatry contained the least work area (1.4%, $n = 2$). More than (87%, $n = 130$) of the participants earned a bachelor's degree, while only 1.4% possessed a diploma ($n = 2$). Most participants worked at government-owned hospitals (53.4%, $n = 79$). The mean period of clinical experience within the sample was 7.22 months ($sd = 3.1$). One participant refused to provide information on the shift or shifts

they worked; therefore, based on a sample of 147, the day shift was the most prevalent shift worked by the participants (52%, $n = 77$).

After removing 15 outliers, the remaining sample was 133; the demographic statistics were similar to those before removing the outliers. The age range remained slightly more than half of the population (53.4%, $n = 71$). As with the demographics prior, the male gender represented more than half of the sample (51.9% $n = 69$), and similarly, 68.4% ($n = 91$) were married. The clinical experience period 5 and 6 months were nearly equal at 15%, $n = 20$, and 15.8%, $n = 21$, respectively. The med-surgical area remained the most popular work area representing 56.4%, $n = 75$, and psychiatry remained the least represented (0.8%, $n = 1$). The bachelor's degree was the most prevalent among the respondents at 89.5%, $n = 119$, with nurses working in government-owned hospitals representing the largest proportion of the sample, 53.4 %, $n = 71$. Table 1 describes the distribution of the demographic characteristics before and after removing the outliers.

Table 1

Description of the Sample Before and After the Removal of Outliers

Demographics	Before ($N = 148$) %(n)	After ($N = 133$) %(n)
Age		
18-24	10.1(15)	9.8(13)
25-34	51.4(76)	54.1(72)
35-44	20.3(30)	16.5(22)
45-54	13.5(20)	14.3(19)
55+	4.7(7)	5.3(7)
Gender		
Male	52.7(78)	51.9(69)
Female	47.3(70)	48.1(64)
Marital Status*		
Single	30.4(45)	30.8(41)

Demographics	Before (<i>N</i> = 148) %(<i>n</i>)	After (<i>N</i> = 133) %(<i>n</i>)
Married	68.9(102)	68.4(91)
Work Area**		
Med-Surg	55.4(82)	56.4(75)
Pediatrics	18.2(27)	18.0(24)
ED	14.2(21)	13.5(18)
Outpatient	12.8(19)	13.5(18)
ICU	10.1(15)	9.8(13)
OR	8.1(12)	8.3(11)
Labor and Delivery	2.0(3)	2.3(3)
Psychiatry	1.4(2)	0.8(1)
Number of Work Areas		
1	86.5(128)	87.2(116)
2	8.8(13)	7.5(10)
3	2.7(4)	3.0(4)
4	1.4(2)	1.5(2)
≥5	0.7(1)	0.8(1)
Degree Level		
Diploma	1.4(2)	1.5(2)
Associates	10.8(16)	9.8(13)
Bachelors	87.8	88.7(118)
Hospital Ownership		
Government	53.4(79)	53.4(71)
Private	46.6(69)	46.6(62)
Shift(s) Worked***		
Day	52.0(77)	52.3(69)
Night	12.8(19)	12.0(16)
Both	34.5(51)	35.3(47)
Experience (in months)		
<1-month	2.0(3)	2.3(3)
1	0.7(1)	--
2	4.7(7)	4.5(6)
3	5.4(8)	5.3(7)
4	3.4(5)	3.8(5)
5	14.9(22)	14.3(19)
6	14.9(22)	15.8(21)
7	6.8(10)	6.8(9)
8	13.5(20)	11.3(15)
9	3.8(10)	7.5(10)
10	7.4(11)	7.5(10)
11	7.4(11)	8.3(11)
12	12.2(18)	12.8(17)

Note. *None of the participants indicated that they were separated or divorced. **Participants were allowed to choose multiple work areas. ***One participant refused to answer (Before $n = 147$; After $n = 132$).

Other studies examining PsyCap among new graduate nurses had demographic characteristics similar to this study. One study by Hussein et al. (2017) reported a median age of 23 years. Dwyer et al. (2019) reported a mean age of 28.3 years, and Cline et al. (2018) reported that 77% of participants in their study ranged between 20 to 30 years. In my study, data were collected on age as a categorical variable; 63.2% of participants ranged between 18 and 34 years, suggesting congruence with prior studies. The educational level of participants in this study was similar to that of prior research. The findings of this current study revealed that 89.5% of participants possessed bachelor's degrees, and prior studies reported that 87.5% (Dwyer et al., 2019) and 97.1% (Cline et al., 2018) of new graduates who participated in their studies possessed bachelor's degrees. However, the sample for the current study differed from prior studies regarding the proportion of men within the sample. Prior studies reported that between < 1% to 22% of their participants were male (Cline et al., 2018; Dwyer et al., 2019; Hussein et al., 2017; Zhou et al., 2021) of their participants were male. However, the sample for this study was 51.9% male. Thus, the sample obtained for the current study was representative of the greater population of new graduate nurses with regard to age and educational attainment. However, there was an overrepresentation of men in the sample compared to the greater

population of new graduates, which continues to be overwhelmingly female (Campaign for Action, March 9th, 2022).

Results

Table 2 provides descriptive statistics for the variables of interest based on the final sample (n=133), and Table 3 provides descriptive statistics for the components of the independent variable.

Table 2

Descriptive Statistics for the IV, PsyCap and components, and the DV, NSS (N = 133)

	N	Range	Minimum	Maximum	Mean	Std. Deviation
PsyCap Total score	133	87	43	130	97.86	22.36
PsyCap Efficacy score	133	15	21	36	28.97	3.23
PsyCap Hope score	133	15	21	36	28.62	3.27
PsyCap Resilience score	133	14	19	33	25.95	2.61
Nurse Stress Total score	133	38	91	129	107.38	8.71

Results for Research Question One

RQ1: What is the relationship between each component of PsyCap and perceived stress among new graduate nurses with a maximum of one year of clinical practice?

H_0 1: There is no relationship between any component of Psychological Capital (efficacy, resilience, hope, and optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice. H_1 1: There is a relationship between at least one component of Psychological Capital (efficacy, resilience, hope, and optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice.

Prior to conducting the analysis for RQ1, I tested the underlying assumptions for Pearson correlations. To test the assumption of normality, I checked the values for skewness of the IVs and the DV. The values for skewness of the IVs were all between $-.5$ and $.5$, indicating symmetrical distributions (*Efficacy* = $.267$, *hope* = $.314$, *resilience* = $.175$, *optimism* = $.144$). However, the skewness of the NSS scores was -1.034 , indicating asymmetrical data. Examination of the histogram (Figure 1) and Q-Q plots (Figure 2) for the NSS scores did not support a normal distribution; this was also confirmed by the Shapiro-Wilk Test ($p < 0.001$).

Figure 1

Histogram of the Dependent Variable, NSS Total Score (N = 133)

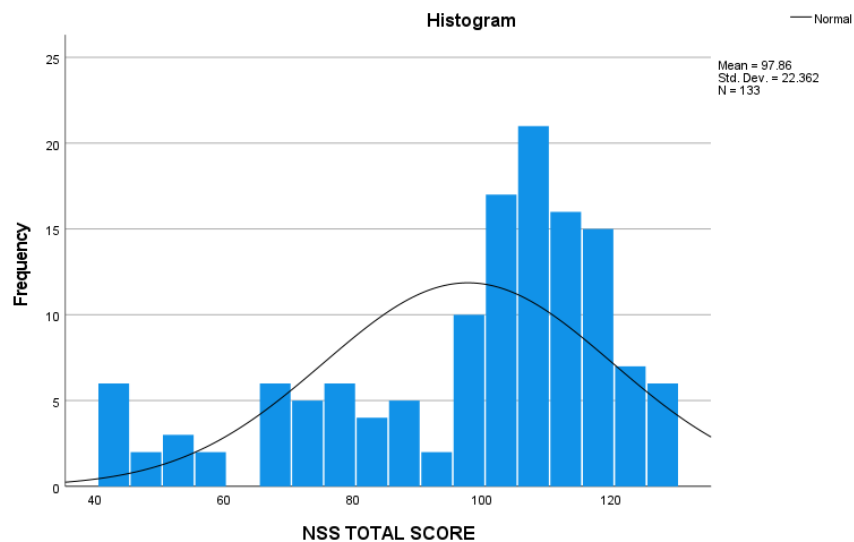
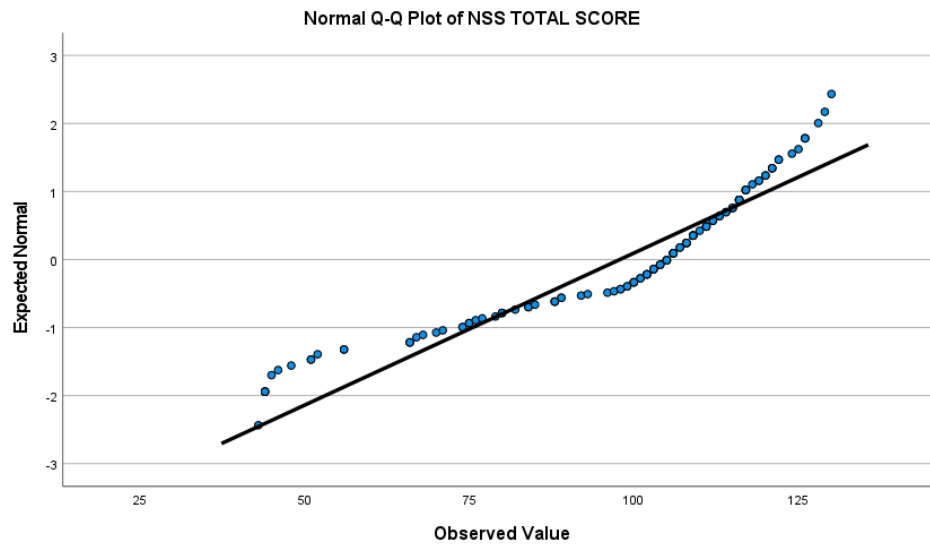


Figure 2

Q-Q plot of the NSS Total Score (N = 133)



Next, I tested the assumption of the linearity in the relationship between the IVs (efficacy, resilience, hope, and optimism) and the DV (stress). I could not identify linearity using scatterplots, as seen in Figures 3 through 6. As a result of this analysis, a Spearman's rho (non-parametric) correlation was calculated to answer RQ1.

Figure 3

Scatter plot of PsyCap Self-Efficacy and Total NSS score (N = 133)

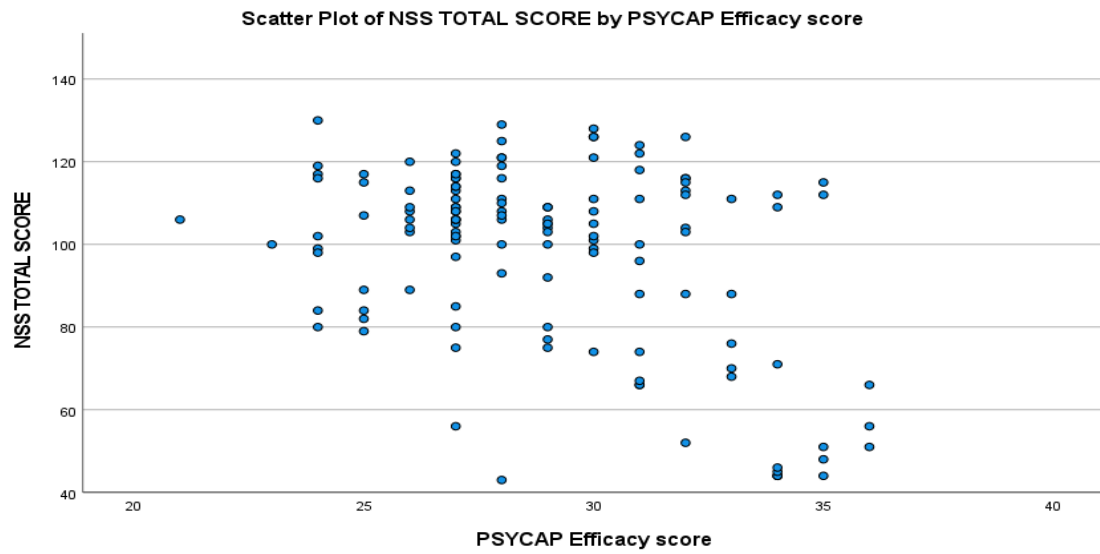


Figure 4

Scatter plot for PsyCap Hope scores NSS Total scores (N = 133)

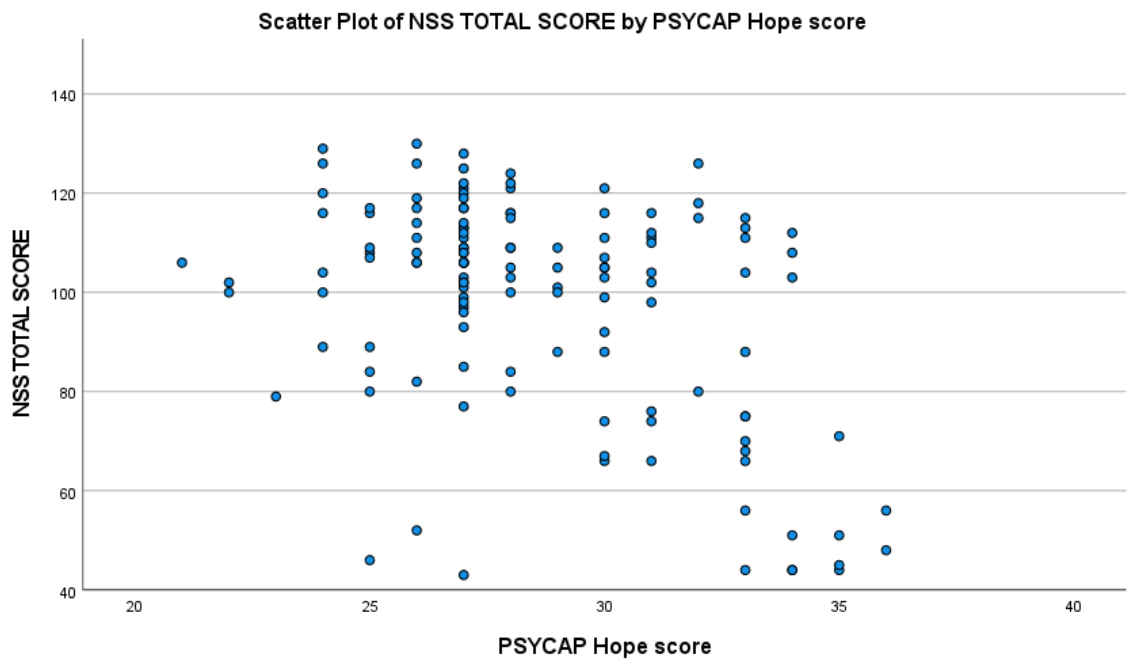


Figure 5

Scatter plot for PsyCap Resilience scores NSS Total scores (N = 133)

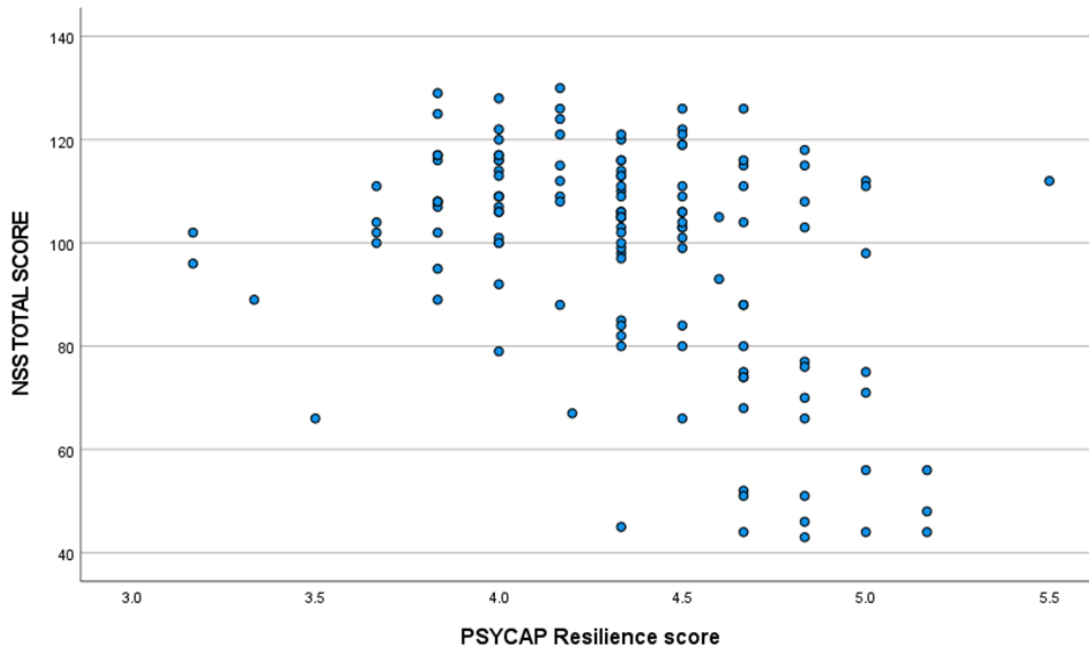
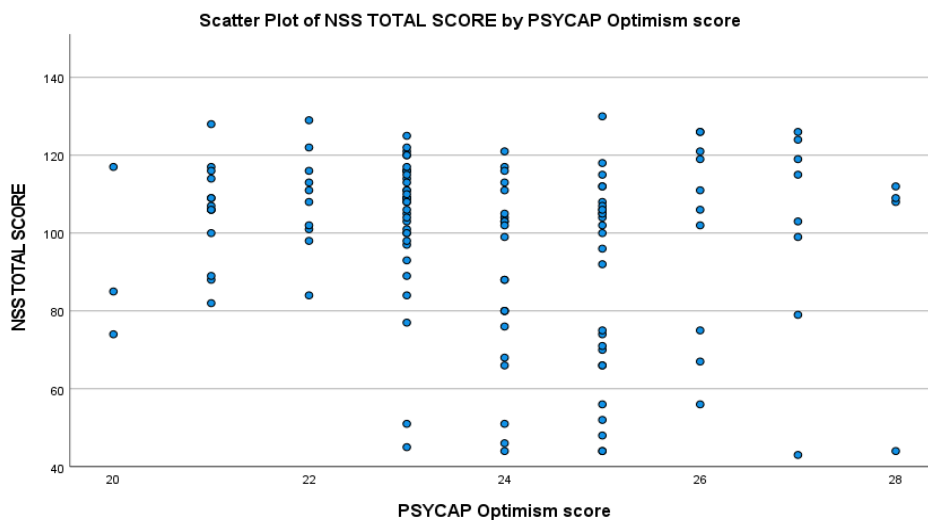


Figure 6

Scatter plot for PsyCap Optimism scores and NSS total scores (N = 133)



Using Spearman's *rho*, I determined whether there was a significant relationship between the variables and the strength and direction of the relationship despite the presence of non-normal, non-linear data. All the relationships were negative; as one variable increased, the other decreased, as seen in Table 3. Efficacy, hope, and resilience were moderately associated with perceived stress ($p < .001$), but there was no statistically significant relationship between optimism and perceived stress among the new graduate nurses. Based on the results, I rejected the null hypothesis and concluded that there is enough evidence to suggest a moderate relationship between three of the components of PsyCap (efficacy, hope, resilience) and perceived stress among nurses with one year or less experience.

Table 3

Results of Spearman's Rho Correlation Analysis between each Component of PsyCap and NSS Total Scores (N = 133)

PsyCap Component	Correlation Coefficient (<i>rho</i>)	Significance (2-tailed) <i>p</i> - value
Efficacy	-.255*	<.001
Hope	-.332*	<.001
Resilience	-.330*	<.001
Optimism	-.137	.115

*Significant correlation.

Results for Research Question Two

RQ2: What is the composite effect of psychological capital on perceived stress among new graduate nurses with a maximum of one year of clinical practice?

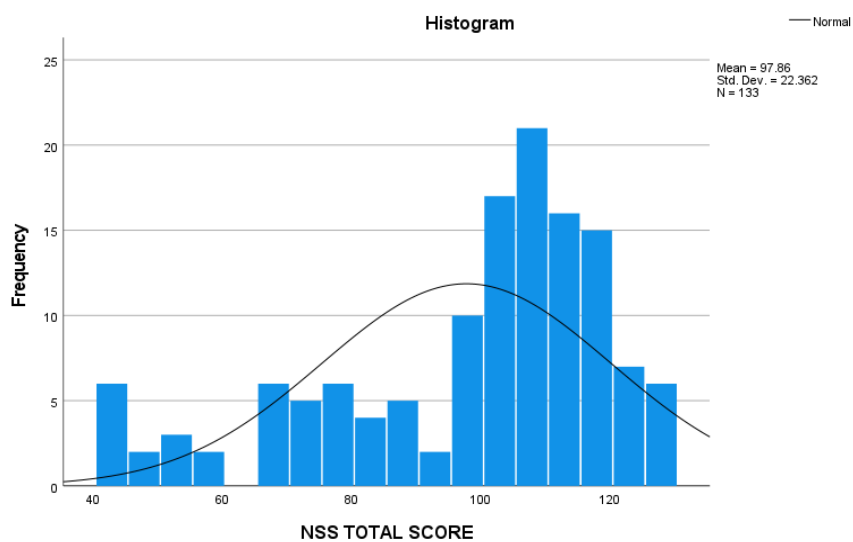
H_02 : Psychological capital has no effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice.

*H*₁₂: Psychological capital has a significant effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice.

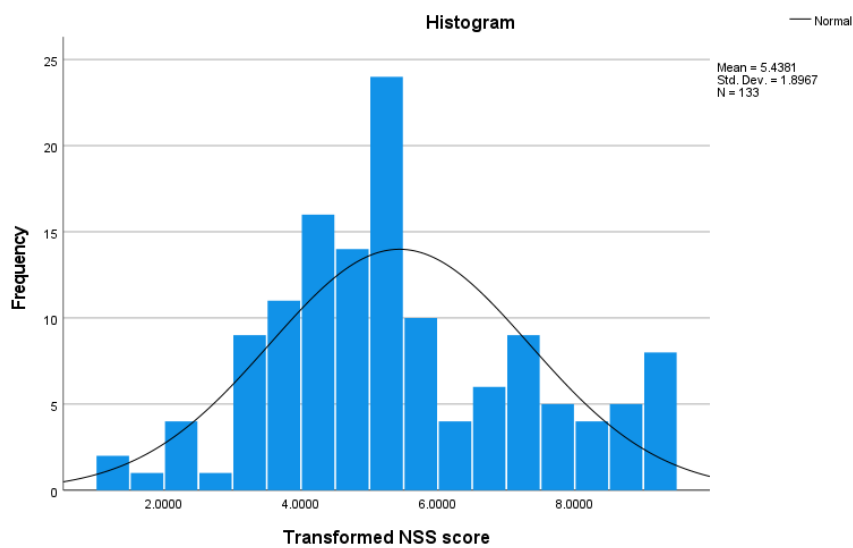
Before addressing RQ2, I tested the assumptions for multiple linear regression, including normality, linearity, homoscedasticity, and multicollinearity. After checking the underlying assumptions to answer RQ1, I found that the DV, NSS, was not normally distributed. Therefore, a square-root transformation was applied to the NSS scores to better approximate a normal distribution using the formula indicated by Mertler and Vannatta (2017): Square-root (131 - NSS score). Figure 7 contains a comparison of the histograms of the NSS scores before and after the transformation. The mean transformed NSS total score based on 133 completed surveys was 5.44, the range was 8.38, and the standard deviation was 1.89.

Figure 7

Histogram of the Distribution of the Total NSS Scores before Square-root Transformation (N=133)

**Figure 8**

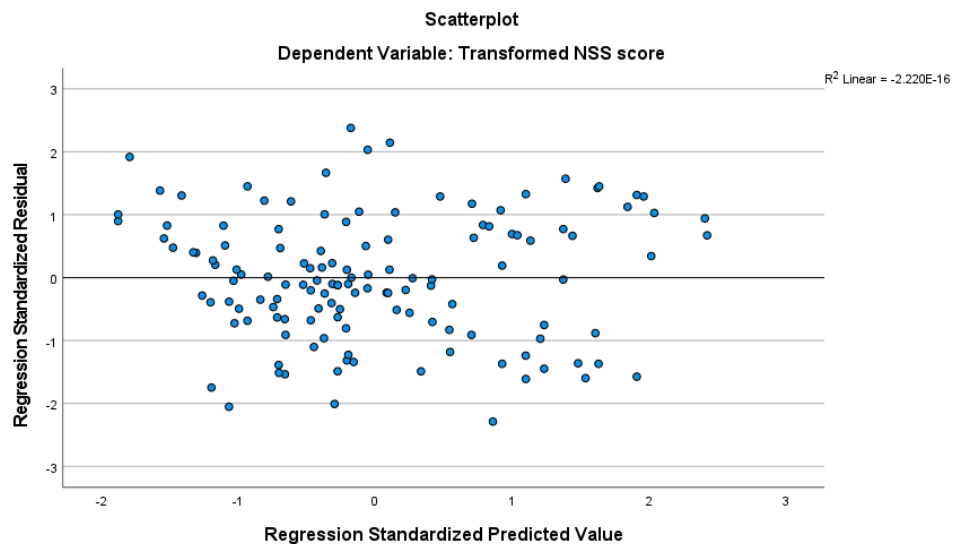
Histogram of the Distribution of the Total NSS Scores after Square-root Transformation (N=133)



After transformation of the NSS scores, a scatterplot of the standardized residuals against the standardized predicted values was produced see Figure 8. The plot did not exhibit clustering at the top or bottom nor on the left or right. The data distribution was not substantially curved, indicating that the underlying assumptions of normality, linearity, and homoscedasticity were met (Mertler & Vannatta, 2017). The assumption of no multicollinearity between the independent variables was confirmed by all VIF scores being less than 10 (Table 3).

Figure 9

Scatterplot of the Standardized Residuals against the Standardized Predicted Values of the Transformed NSS Total Scores (N = 133)



I then conducted stepwise multiple linear regression analysis to answer RQ2. Stepwise multiple linear regression is superior to other methods (i.e., enter, forward, backward) because it evaluates the contribution of each independent variable in relation to the others, leaving only those that contribute substantially to the dependent variable

within the model (Mertler & Vanatta, 2017). The results of the ANOVA were significant, indicating that the observed data was a good fit for the model containing all the components of PsyCap ($F(1, 132) = 28.48, p < .001$). The R^2 value of .179 indicated that 17.9% of the variation in the transformed NSS total scores could be explained by at least one of the components of PsyCap (IV). Further examination found that hope was the only component of PsyCap that was a significant predictor of the NSS total score ($\beta = .245, p < .001$). Square-root transformations result in a reversal of the sign of the coefficient; thus, the sign of the coefficients should be interpreted in reverse (Tabachnick et al., 2007). Therefore, the results of the analysis are interpreted as, for every 1-unit increase in PsyCap hope score, the NSS total score decreased by .245. Therefore, I rejected the null hypothesis that PsyCap has no effect on perceived stress among new graduate nurses with a maximum of one year of clinical practice. The other components of PsyCap were not significant predictors of the NSS total score and were excluded from the model, as shown in Table 4.

Table 4

Components of PsyCap that were Non-Significant Predictors of the Total NSS Scores (N = 133)

Model	Beta	<i>t</i>	<i>p</i>	Partial Correlation	VIF
PsyCap Efficacy	.127	1.107	.271	.097	2.103
PsyCap Resilience score	.155	1.618	.108	.141	1.485
PsyCap Optimism	-0.018	-.215	.830	-.019	1.126

Note. Dependent variable: Transformed NSS score; the sign of the beta coefficients should be reversed for the purposes of interpretation.

Summary

In this chapter, I presented the statistical analysis results from the survey data. I tested two hypotheses to provide answers to two research questions. Descriptive statistics provided insight into the population under study. After removing the outliers, I used 133 complete surveys in the data analysis.

Spearman's *rho* was used to answer RQ1, while stepwise multiple linear regression was used to answer RQ2. The results supported the rejection of the null hypothesis for both research questions. For RQ1, the results indicated a significant relationship between three components of PsyCap, namely, efficacy, hope, resilience, and perceived stress among new graduate nurses. As efficacy, hope, and resilience increased, perceived stress decreased. Therefore, I rejected the null hypothesis that there is no relationship between any component of Psychological Capital (efficacy, resilience, hope, and optimism) and perceived stress among new graduate nurses with a maximum of one year of clinical practice. To answer RQ2, I conducted a stepwise multiple linear regression. The model containing the components was a good fit for the data, and one of the components of PsyCap, namely hope, and was a significant predictor of perceived stress. Increasing hope was associated with significant decreases in perceived stress. Therefore, I rejected the null hypothesis and concluded that PsyCap had an effect on perceived stress among new graduate nurses with a maximum of one year of clinical

practice. In Chapter 5, I will present an interpretation of the significant findings of this study, discuss its limitations, and make some recommendations for future studies on this topic and what these results mean for social change.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

In my study, I used a quantitative correlational research design to address a gap in knowledge regarding the relationship of PsyCap to stress among new graduate nurses.

The purpose of this quantitative study was to explore the relationship between the components of PsyCap (efficacy, optimism, hope, resilience) and the perceived level of stress among newly graduated nurses with a maximum of 1 year of practice.

I used a quantitative design to obtain objective measurements to determine the presence or absence of a relationship between the personal resources (PsyCap) and the level of perceived stress the new graduate nurse experiences. The significant findings of my study indicated that three out of four components of PsyCap (hope, efficacy, and resilience) had a negative association with perceived stress and that hope was the only significant predictor of perceived stress among new graduate nurses. In this chapter, I will provide the interpretation of the findings, the limitations of the study, and some recommendations and implications for positive social change.

Interpretation of findings

The study results showed a moderate relationship between three components of PsyCap (hope, efficacy, and resilience) and perceived stress among new graduate nurses with one year or less experience. The results also showed that PsyCap composite was a significant predictor of perceived stress but only one component of PsyCap, hope was a significant predictor of perceived stress among new graduate nurses with one year or less experience.

Several studies have confirmed the relationship between PsyCap and stress among nurses from varied settings and with varied years of experience. Yim et al. (2017) explored the role of PsyCap, occupational stress, and turnover intention among 447 nurses in South Korea with 15 years or fewer of experience and found a significant negative correlation. Kim and Kweon (2019) also found PsyCap to partially mediate stress and burnout among 108 nurses at a psychiatric hospital in South Korea. Asheghi et al. (2020) studied 250 nurses at hospitals in Iran and found that PsyCap acted as a mediator to reduce job stress and burnout and improve mental health.

While my study also indicates a relationship between PsyCap and stress among nurses, my study has expanded the body of knowledge by examining the relationship of each component of PsyCap to stress. Hope, efficacy, and resilience were all significantly associated with perceived stress. While other studies addressed only the composite effect of PsyCap, in my study, I was able to expand the knowledge on PsyCap and stress by identifying hope as the only significant predictor of stress.

The JD-R model developed by Xanthopoulou et al. (2007/2009) shows that increases in personal resources reduce the job demand or perceived stress experienced by the employee. I found similar findings from my study results, as the correlation was significantly negative meaning that new graduate nurses with higher levels of hope, efficacy, and resilience experienced a lower level of perceived stress. Based on the regression analysis results, the more hope a new graduate nurse has, the lower the perception of stress will be.

PsyCap, the construct developed by Luthans et al. (2007), comprises four components (efficacy, hope, optimism, and resilience). It is the personal resource used in the JD-R model to reduce the effects of job demands. These components of PsyCap are described as malleable, meaning they can be developed in individuals over time. The JD-R model with PsyCap as the personal resource formed the theoretical framework for measuring perceived stress among new graduate nurses. My study has provided further empirical data to support the conceptual model of PsyCap as a significant predictor of perceived stress among new graduate nurses. Therefore new graduate nurses with higher levels of PsyCap (resilience, efficacy, and hope) are more likely to have lower levels of perceived stress.

I developed the second research question to determine the composite effect of PsyCap on perceived stress among new graduate nurses. The results indicated that the predictive model for perceived stress containing all four components of the PsyCap construct as predictors was a good fit for the observed data. However, the only component that was a significant predictor of perceived stress was hope. I rejected the null hypothesis and concluded that there was a relationship between PsyCap and perceived stress. Increases in hope would decrease the level of perceived stress experienced by the new graduate nurse.

While there is little literature on the association of hope and perceived stress among new graduate nurses, studies such as Seek Lee & Jang, (2018) confirmed this finding among general workers in Iran. Moussaet et al. (2017) studied 174 nursing interns and confirmed this result; they found that hope was positively related to lower

perceptions of stress and a better thought process. Several other studies supported the other components of PsyCap as valid (efficacy, optimism & resilience) predictors of perceived stress among nurses (Jaworski et al., 2020; Magtibay et al., 2017; Mahdizabeh et al., 2016) although they were not significant contributors in the model in my study. My study confirms the findings of previous studies on the relationship between PsyCap and perceived stress among new graduate nurses (Boamah & Laschinger, 2015; Dwyer et al., 2019; Kim & Yoo, 2018; Yu & Lee, 2018). My study findings also expand the previous knowledge by revealing hope (a component of PsyCap) as the only significant predictor of stress among new graduate nurses. The ability to understand which components of PsyCap may be associated with new graduate nurses' ability to manage stress can be used to alleviate the effects of stressors.

Limitations of study

The limitations I anticipated in Chapter 1 were using a self-administered data collection instrument and the study's correlational nature. The second limitation related to the number of males seen in the demographics of the sample population. Reviewing statistical data and the sample demographics for other similar studies, the males only represent an average of 10% of the population (Campaign for Action, March 9, 2022). There was an overrepresentation of the male gender in my study (52.7%) compared to their numbers in the general population of nurses; this may have affected the results.

Recommendations

Future research should include a larger sample size that is more representative of the underlying population of new graduate nurses in the United States.

Future research of an experimental or interventional nature would contribute to our understanding of the possible cause-and-effect relationship between PsyCap and perceived stress among new graduate nurses. Longitudinal studies are recommended to determine the development of PsyCap throughout the transition period of the new graduate nurse. Luthans et al. (2007) posited that the PsyCap construct is malleable, meaning it can be developed or taught. Further studies using a mixed methods design can also provide validity to the responses by determining the presence of bias and falsehood while gaining a better understanding of the effect of PsyCap on perceived stress among new graduate nurses. Intervention studies that aim to strengthen PsyCap among new graduate nurses would help confirm this notion and allow for follow-up on the long-term effects of such programs on perceived stress and other vital outcomes among new graduate nurses, such as turnover.

Implications

The findings of this study revealed that a significant moderate relationship existed between three components of PsyCap and perceived stress and that 17.9% of the variance in perceived stress was explained by at least one component of PsyCap. Based on the regression model, every 1-unit increase in hope resulted in a .245 decrease in perceived stress. There are a few implications for positive social change for the population of new graduate nurses.

The problem of stress has been deemed to be prevalent in this profession, as 34% of nurses leave the profession due to stress (Alvarez et al., 2019). As the new graduate nurse transitions from student nurse to registered nurse, they experience challenges and

diversities that prompt their intentions to leave. Ackerson and Stiles (2018) stated that the US national average 1-year turnover rate among all newly licensed RNs is 17.1%, and the 2-year turnover rate is 33.5%. Boamah et al. (2018) and Dwyer (2019) found that stress has affected the new graduate nurse's psychological, biological, and overall quality of life.

Each component of PsyCap offers malleable traits that can be used to mitigate the effects of stress. As new graduate nurses enter the nursing profession, their future expectations may be influenced by their present experiences. These stressors are seen as obstacles to achieving their goals, so many may drop out or leave. However, Synder et al. (1996) stated that hope is the willpower and the determination to find the pathway to attain one's goal, even when the pathway becomes blocked. Resilience, which is the ability to bounce back after failure, is essential for beginners (Luthans et al., 2007), while efficacy, which is strengthened by practice, experience, and mentoring (Bandura, 1977), is crucial to cultivate meeting one's goals, becoming proficient and having a sense of direction, and purpose.

The impact of the study can have positive social change implications for the new graduate nurse if educators can focus on developing resilience, efficacy, and hope among nursing students through changes in course design. Even during the first year as a registered nurse, the effect of intent to leave and the physical and mental effects on the new nurse can be reduced if administrators and educators continue to develop and evaluate these components of PsyCap.

Whether the PsyCap construct is used as a composite or individual component, there is sufficient evidence to indicate changes in the level of perceived stress experienced by new graduate nurses. The theoretical implications of my study findings suggest the need to investigate both the composite and individual components of PsyCap to provide more focus on the predictors of stress as it relates to the new graduate nurses.

The findings of this study support a recommendation for change in practice in terms of nursing education. Including a teaching curriculum that supports the development of PsyCap during nursing school that includes periodic scenario-based evaluations to determine changes in the level of PsyCap may assist new graduates in adjusting to the demands of clinical practice while managing stress.

Conclusion

The purpose of this quantitative study was to explore the relationship between the components of PsyCap (efficacy, optimism, hope, resilience) and the perceived level of stress among newly graduated nurses with a maximum of 1 year of practice. In this study, I aimed to determine the relationship of each independent variable, efficacy, optimism, hope, and resilience, to the dependent variable of the perceived level of stress experienced by the new graduate nurses. Another purpose of this study was to clarify the nature of the relationships and the composite effects of the components of PsyCap (Luthans et al., 2007) on perceived stress among new graduate nurses, specifically those with one year or less experience.

The study's findings revealed a moderate relationship between three components of PsyCap using Spearman's rho correlation and the composite effect of PsyCap was a

significant predictor of perceived stress among new graduate nurses with 1 year or less experience. While many studies were done to determine stress factors and methods of coping, only some have covered PsyCap and the new graduate nurse with one year or less experience. This study's findings will be beneficial by providing support for previous studies, bringing clarity to the role of PsyCap and the relationship to perceived stress, and extending the knowledge in the area of the new graduate nurse. The study findings are also significant in recommending strategies to improve the mental and physical well-being of the new graduate nurse.

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Appendix B: Psychological Capital Questionnaire Research Permission

Rita Jarvis-Isaac

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Psychological Capital Questionnaire Research Permission

Fred Luthans, Bruce J. Avolio, & James B. Avey

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Appendix C: Pre-screening Questionnaire

Please answer the following questions by checking the appropriate answers

1. Are you a registered nurse? Yes No
2. Were you a Licensed Practical Nurse prior to you becoming a Registered nurse?
Yes No
3. Do you work in a hospital setting? Yes No.
4. Is your length of clinical practice as a Registered nurse equal to 1-year or less?
Yes No

Appendix D: Demographic Survey

Can you circle the appropriate answers?

1. What age range, do you fit in?

18-24 25-34 35-44 45-54, 55 and above

2. What is your gender?

Male Female Other

3. Can you indicate your marital status?

Single Married Separated/ Divorced

4. Please indicate your Work area:

Medical/ Surgical

Pediatrics

Outpatient Clinic

Labor & Delivery

ICU

Operating Room

Emergency Department

Psychiatry

Other_____

5. Can you indicate your period of clinical experience in nursing (months)?

6. Please indicate your degree

Associates degree Bachelor's degree Diploma

7. Can you indicate your Hospital ownership type;

Government Private

8. Which shift do you work?

Day

Night

Both