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The Relationship between Nursing Faculty Stress and Gratitude Journaling

Kathleen L. Whalen

Submitted as Partial Fulfillment for the Doctor of Nursing Practice Degree

Regis University

April 8, 2022

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Executive Summary

Problem: The National League for Nursing (NLN) has reported a national shortage of nursing faculty. Some of the factors involved are limited qualified faculty, schools' inability to offer competitive wages, and faculty leaving due to stress or retiring. Concordia University St. Paul (CSP) has experienced a turnover in nursing faculty. The PICO question of this project is, "Will full-time nursing faculty in a prelicensure nursing program report a decrease in their perceived stress level as measured by the Perceived Stress Scale-10 (PSS-10), after they implement gratitude journaling over a 6-week period, compared to their pre-intervention status?"

Purpose: Due to the faculty stress and turnover at CSP, a quality improvement project was developed for faculty in dealing with their perceived stress. This can be a small part of the solution to the nursing faculty turnover and stress at CSP.

Goals: The goal of this study is to analyze whether the use of gratitude journaling will show a difference in the perceived stress levels of the faculty and if there is a correlation between journaling and perceived stress levels.

Objective: The objective was to measure the change in perceived stress of participants using the PSS-10 scores before and after six-weeks of gratitude journaling.

Plan: A literature review was conducted to identify factors of why nursing educators were leaving academia. An emergent theme was stress as a major factor in burnout which caused faculty to leave. Many stress relieving measures have been studied and the research focused on gratitude interventions. Research articles showed that the Perceived Stress Scale-10 was an appropriate tool to use to measure perceived stress. A gratitude journal was developed and printed by the author. After IRB approval was granted, full-time faculty at CSP were invited to participate. Those agreeing were emailed the pre-intervention survey that included demographic data and the PSS-10 scale. The journals were mailed to faculty which they completed over 6 weeks with a couple of email reminders to continue to journal. After six weeks, the post-intervention survey was emailed which added questions regarding frequency of journaling. After the surveys were completed, the data was collected and coded. The PSS-10 has four questions that are reverse scored, and this was coded for those questions to reach the appropriate total score.

Outcomes and Results: The study was a pre-test posttest design. Categorized as a univariate study, the independent variable is the intervention of the gratitude journaling. The dependent variable is the change in the PSS-10 score from the pretest to the posttest groups. 17 participants started the study and 13 completed the study. In analyzing the data, a paired samples t-test showed that the mean total scores of the PSS-10 from the pre-aggregate to the post-aggregate data were not significantly different. The data was noteworthy in that the full-time faculty did not complete the journal on average of once a week. A comparison of the mean total score of the pre-interventions and post-interventions PSS-10 total scores was not statistically significant but trending in the right direction. This also showed that most of the participants were in the medium stress level category. The data lend support to the evidence that faculty have heavy workloads and are not able to complete the journals. It is recommended that future studies use a shorter period of four weeks of journaling for better participation.

Acknowledgements

Completing a DNP project like this cannot be done alone. I would like to give thanks to the faculty at Regis University that have guided me and given constructive feedback on my work. My chair, Dr. Lora Claywell has been the guiding factor for the project and has been a positive influence. Dr. Cheryl Kruschke has also been a great encourager for this project and my education at Regis. My clinical mentor and best officemate, Dr. Giselle Ondetti has supported me through this from being admitted to the DNP program to the completion. The faculty at Concordia University St. Paul's nursing program were willing participants and have been encouraging me along the way. My husband, my family and my friends have encouraged me to press on, listened to my thoughts and ideas and gave comments as well. The highest level of gratitude goes to the Lord Jesus Christ for His guidance and direction for my life and in this program. He knows my future and knows what He has called me to do. This degree will help me to fulfill His calling of equipping the next generation of nurses to give quality, compassionate care.

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The Relationship between Nursing Faculty Stress and Gratitude Journaling

A Doctor of Nursing Practice (DNP) project has numerous steps in its development (Zaccagnini & Pechacek, 2021). It starts with an idea and a passion about a problem that could be studied and possibly solved. For this project, dealing with the population of nursing faculty and the faculty shortage started the journey. A literature review helped to identify the problem and what research had been completed previously. This uncovered interventions that had been studied and what the results had demonstrated but none included gratitude journaling for nursing faculty in dealing with the stress they experience. An appropriate research design and method set a foundation for collecting data and analyzing the results. This paper covers the problem recognition and definition, a review of the evidence, the project plan and evaluation to the analysis of the results and discussion of the clinical implications for the project.

Problem Recognition and Definition

Problem Statement

As early as 2002, the National League for Nursing (NLN) called the nursing faculty shortage a “looming crisis” (NLN, 2002, para 2). In their 2018-2019 faculty surveys, the NLN stated that the faculty shortage stems from the aging of nursing educators and unfilled positions due to a shortage of qualified faculty, and schools of nursing not being able to offer competitive salaries (NLN, 2020). Within this environment, nursing faculty members experience the demands of teaching, high workloads, service on committees, continued scholarly work, meeting the demands of students, and a poor work-life balance which causes high stress levels leading to burnout and job dissatisfaction (Thomas et al., 2019, Owens, 2017, Owens et al., 2018, Salvagioni et al., 2017). Bittner & Bechtel (2017) found nursing faculty are considering retirement sooner due to high workloads. With the COVID-19 pandemic, nursing faculty are

under more stress than before (Luckett, 2020). The stress of the job demands could cause them to leave the profession (Aquino et al., 2018) which will increase the shortage. Therefore, it is important to retain the current faculty and not lose new faculty once hired. During the year prior to the project, a university's nursing program experienced a high turnover in nursing faculty. Assisting this faculty group to develop tools to decrease their stress is one factor in the overall solution to retaining the nursing faculty and combating the shortage.

Project Purpose

Many ways have been developed to manage stress including healthy eating, exercise, meditation, hydration, etc. (American Holistic Nurses Association, 2021) and preventing burnout by declining extra work and setting clear limits (Thomas et al., 2019). Some research studies have focused on mindfulness (Halm, 2017), developing a program for wellness (Woods-Giscombe, 2020), and using a web-based stress management program called, BREATHE (Hersch et al, 2016). These are physical and mental interventions to deal with stress. Positive psychologists have been studying gratitude interventions that deal with the heart or emotional side of the person. No studies were found using an intervention of using a gratitude journal in dealing with nursing faculty's stress levels. The purpose of this project was to examine whether the use of gratitude journaling will show a difference in the stress level of the faculty and if there was a correlation between the intervention and the outcome. This quality improvement project was intended to help full-time nursing faculty to deal with stress they experience. The outcome of decreased stress can lead to a new tool for managing stress. In a small part, this could contribute to their job satisfaction and retention rates.

PICO Statement

The PICO question of this project is, “Will full-time nursing faculty in a prelicensure nursing program report a decrease in their perceived stress level as measured by the Perceived Stress Scale-10 (PSS-10), after they implement gratitude journaling over a 6-week period, compared to their pre-intervention status?”

Project Significance, Scope, and Rationale

The outcome of the study was to see if there was a change in the perceived stress level of the nursing faculty and whether there was a correlation between the intervention and the outcome. A decrease in stress shown in the statistical analysis, could demonstrate a positive change in the outlook of the nursing faculty members. As the faculty members perceive less stress, they can have more positive emotions in working with nursing students and increasing job satisfaction and retention rates. Even their families can be impacted by the decreased stress level.

The ramifications of this study can be broadened by looking at the faculty-student interactions. Many students have started to perceive themselves as customers of universities (Finney & Finney, 2010). They can feel entitled and complain about the service provided by the faculty. Educators that have positive outlook and perceive less stress can have more positive interactions with students. Educators can deal with student conflict in a positive manner, encouraging them to grow academically and intellectually curbing the entitled attitudes of students, rather than just leaving their faculty jobs behind (Zhu & Anagondahalli, 2017). These student-faculty relationships are reflected in student course evaluations which are used in faculty job performance reviews. The students’ view of the university is included in developing the ranking of universities (U.S. News & World Report, n.d.) which potential students use in

choosing an academic institution. Unhappy students can impede the future growth of the university with negative feedback.

The university can also be affected by nursing faculty members leaving academia. The financial cost to the university to replace faculty members is high. The cost of recruiting, orienting, and training another qualified nursing faculty member needs to be considered. The nursing program also loses knowledge and insight from departing faculty members. The remaining faculty are affected as well. They may have an added workload in needing to teach another class, work on another committee, and advise more students until a replacement has been hired. Losing a coworker can be a stressor for the remaining faculty and may make them evaluate their own commitment to the role.

Another aspect is the indirect influence on the health care of future patients that students will care for after they graduate. Even though many full-time nursing faculty members no longer have direct patient contact, they do influence these future nurses and how they will be caring for patients. The faculty can promote changes in healthcare in their content and curriculum. Nursing faculty members working in an environment with less stress can help them to be more effective.

Although the nursing faculty shortage and stress is a multifactorial problem, the scope of this project was focused on one academic institution's nursing program. The population of full-time nursing faculty was the focus of this quality improvement project.

Theoretical Foundation

Definitions of stress include “a state of mental or emotional strain or tension resulting from adverse or very demanding circumstances” (Oxford English Dictionary, 2021) and “exposure to stimuli appraised as harmful, threatening, or challenging, that exceeds the individual's capacity to cope (Biggs et al, 2017, p. 352). Different models of stress have been

developed to help deal with a person's response to stress. These range from stimulus-based stress models such as Holmes and Rahe's life events scoring (American Institute of Stress [AITS], n.d.), response-based models such as Selye's general adaptation syndrome (Higuera, 2018), and transaction-based models, such as Lazarus and Folkman's psychological stress and coping theory (Biggs et. al, 2017). This project used the transactional theory of stress and coping by Lazarus and Folkman (see Appendix A). This theory "argues that our experience of stress is ultimately a system of appraisal, response and adaptation" (Frings, 2017, para 1). The first part of the theory is *appraisal* when the person evaluates the stimuli and determines if it is a problem or not. This deals with the person's perception of the stimuli (Biggs et al, 2017). The second part of the theory deals with *coping* including two major styles: problem-focused coping (PFC) and emotion-focused coping (EFC). Using PFC, the person deals with the problem or stimuli to change it, thus causing a decrease in the amount of stress in the situation. EFC deals with how the person reacts to the stressor (Biggs et al., 2017). This can be done by denial, avoidance, or reframing what the stressor means. Once an action has been taken, the person would reappraise if this had the desired results. The person then adapts to the situation either positively or negatively (Frings, 2017).

The intervention of gratitude journaling for this project is emotion-focused coping by changing a person's perception of the stress of work. "The importance placed on appraisal ... emphasizes that it is the perception that the event is stressful, rather than the event itself, that determines whether coping strategies are initiated and whether the stressor is ultimately resolved" (Briggs et al., p. 352). When a person focuses on what they are grateful for, the stress is appraised as less important amidst several positive gratitude thoughts and emotions. It can also

help the person to choose to reframe their evaluation of the stressor and have a positive emotion-focused coping style.

Literature Review

In conducting the literature review, a variety of databases were used. The primary databases were CINAHL, Academic Search Premier, and APA PsycArticles, with some information garnered through ScienceDirect, and MEDLINE. The search terms used in researching the problem included self-care, stress, turnover, professional quality of life, nursing faculty, nursing faculty workload, nurse educator shortage, life balance, burnout, secondary stress, job satisfaction, work environments, nurses' stress, and work-related stress. The emergent theme of nurse faculty burnout became apparent with stress as a major factor in developing burnout. When researching interventions to decrease the stress, the search terms were stress management, self-care for faculty, gratitude, kindness interventions, gratitude interventions, and occupational health. The emergent theme for the intervention was gratitude interventions including journaling from the positive psychology field. For a tool to measure the change in stress the search focused on the Nurse Stress Scale and the Perceived Stress Scale. The nurse stress scale dealt with in-hospital nurses and was not as pertinent to nursing faculty so was eliminated as the project progressed. The Perceived Stress Scale (PSS) is a tool that was developed in 1983 and has been updated to the Perceived Stress Scale -10 (PSS-10). Articles related to the psychometric evidence of the PSS-10 were included.

In evaluating the articles, most were from 2015-2020 for current research in peer reviewed journals. The research produced 35 articles, 15 articles were eliminated, and 20 articles were included. The focus of the project was clarified with a change in the intervention and measurement tool as the project progressed. The articles were evaluated for the level of evidence

according to the seven levels of evidence by Melnyk & Fineout-Overholt (2005). These were also categorized by which part of the PICO the evidence supported (see Appendix B).

Articles Relating to the Problem

Ten articles dealt with a variety of facets of the problem identification. Several reiterated the presence of the nursing faculty shortage and the factors causing it. The shortage seemed to have caused more challenges and stress for faculty. This caused researchers to look at what the nursing faculty role entailed and why this position had so much stress. Researchers dealt with faculty burnout (Thomas et al, 2019) (Gardner, 2014), and the consequences (Salvagioni et al., 2017), workload issues (Bittner & Bechtel, 2017), work-life balance (Owens, 2017) (Owens et al., 2018), job satisfaction (Baker et al., 2011), professional quality of life, stress, and leaving academia (Aquino, 2018). These articles mainly focused on the challenges the current faculty are dealing with rather than solving the shortage, although some researchers proposed strategies to prevent faculty burnout and bring a work-life balance.

Articles Relating to the Intervention

Articles that dealt with interventions for stress were narrowed to six that dealt with the gratitude intervention. Using evidence-based interventions bring the current and scientific evidence into practice. Davis et al. (2016) conducted a series of meta-analyses of 26 articles to show that gratitude interventions were effective. The authors reviewed different studies and results on psychological well-being. This in-depth analysis lends support to the gratitude intervention for this project. O'Connell et al. (2018) completed a randomized controlled study looking at using three different types of journaling. The first was a daily gratitude journal that looked at events in the daily life of the person. The second was an interpersonal gratitude journal

that focused on being thankful for relationships. The last journal was used as the control and was just a neutral journal. The first two had prompts that people would follow for writing about gratitude in their life. Kerr et al. (2015) reviewed gratitude and kindness interventions that enhanced well-being. Kini et al. (2015) and Balconi et al. (2020) show the physiological effects of gratitude. O'Connell & Killeen-Byrt (2018) looked at physical health, stress, and gratitude.

Articles Relating to the Tool

Three research articles were included that focused on the Perceived Stress Scale-10. Lee (2012) completed a systematic literature review of articles on the psychometric evaluation of the PSS. The results of the 19 articles showed “internal consistency reliability, factorial validity and hypothesis validity of the PSS were well reported” (Lee, 2012, p. 121). Miller et al. (2020) used the PSS-10 to evaluate different dynamics of educator's stress. Taylor (2015) completed an ordinal confirmatory factor analysis on a sample of 1,236 participants. His “findings suggest that inferences made using PSS-10 results are valid (p. 90).

The nursing faculty shortage has many facets from the viewpoint of the nursing programs, current faculty, and potential new faculty. Evaluating the impact of an intervention to decrease stress on the faculty was one small piece of the puzzle to prevent the shortage from increasing. The literature review gave a glimpse into the problem, evidence-based interventions, and a valid, reliable instrument that was used in this study.

Market Risk Analysis

Strengths, Weaknesses, Opportunities, and Threats Analysis

A SWOT analysis was completed which gave a quick overview of the project's strengths, weaknesses, opportunities, and threats as shown in Table 1.

Table 1*SWOT Analysis*

Strengths A nursing program merged in May 2020 with a university in another state, so faculty have over a year of working together. State Board of Nursing approved until 2029 but capped number of students. Adjunct instructors hired into full-time positions.	Weaknesses Satellite faculty had recent turnover. New ABSN program launched in main state, requiring more staffing. New curriculum has challenges: developing and learning new material. CCNE accreditation and Higher Learning Commission accreditation completed.
Opportunities Planned in-person retreat for all full-time faculty in for summer 2021. Need for more nurses is growing. Educational partner markets outside local areas. Main site ABSN started summer 2021.	Threats Faculty are busy and may not wish to participate in the project. Faculty may leave the university before finishing the project. COVID-19 pandemic

The SWOT analysis begins with the section on strengths, including some important strengths for this project. The nursing program at the main campus was small with only traditional students and faculty that had worked closely together. In May of 2020, the university took over a nursing program from a university in another state when it closed. The program that closed had three tracks: a traditional track, a face-to-face accelerated Bachelor of Science in Nursing (ABSN) track and the online ABSN track with a total of around 500 students. This merger created a larger faculty group and student population and allowed the faculty to continue teaching and the students to continue their journey to becoming nurses, even though their

university had closed. At the time of the SWOT analysis, this new faculty group had been working together for over a year. The State Board of Nursing had given approval to the satellite program to 2029 but capped the number of new students starting each semester. Cohorts start three times a year: spring, summer and fall semesters. Previously, in the combined tracks, a cohort had up to 168 students. As the traditional and face-to-face ABSN tracks were eliminated the online ABSN cohorts had 128 students but was capped to 100. This stabilized the push for larger enrollment by the program's educational partner, which would require more faculty. Another strength during this time was that a few adjunct faculty transitioned to full-time positions. Their previous knowledge of the program and content was a strength to the program.

Weaknesses made an impact on the program which affected the DNP project. There was a significant amount of faculty turnover during the transition and the year following. Some faculty decided they did not want to transition to the new university, and others did not like the new environment so resigned. The main campus program was small with around 40 students and merging with the large program was challenging for the main campus faculty. A program that merges two different faculty groups in different states is challenging. Understanding who the decision makers were and how the roles fit was another challenge. Meetings were held virtually due to the COVID-19 pandemic but also because of the physical distance. Informal development of relationships between the faculty members was limited. Then a new curriculum had to be developed due to the merger of the programs. The Commission on Collegiate Nursing Education (CCNE) had made a virtual accreditation visit in the spring of 2021. This required faculty to understand the process and work on the self-study in the months before the visit. At the same time, the Higher Learning Commission (HLC) and the State Board of Nursing made their visits. This created increased stress on the group that was just adjusting to being one program. The

main campus was just starting their accelerated program which required more staff for skills labs, simulation, and clinical.

Opportunities were also present. A faculty retreat was planned so full-time faculty could meet in person in July of 2021. The satellite faculty could visit the main campus and develop and strengthen relationships with their counterparts. The groups needed to learn to be one faculty group. Since the didactic portion of the accelerated tracks are online, some faculty members live in other states as well. Faculty came from five states to meet at the main campus. Another opportunity involved enrollment. Many colleges and universities have difficulty with enrollment, but the need for nurses is high and many students are looking for a nursing program with openings. The program's educational partner widely markets so there are enough students to fill the spots. With the start of the accelerated track at the main campus, more students can start on their journey to becoming a nurse.

The threat to the project is the workload on the faculty. With continued expansion and some faculty leaving, the workload is higher. There is still a challenge of recruiting faculty to fill spots in the face-to-face areas of skills labs and clinical, for the expanding student population. Faculty may not wish to be a part of the project or may leave the university before the project is completed.

Driving and Restraining Forces

As seen in the SWOT analysis, there are many driving forces for the project. The number of stressors that the nursing faculty have faced and continue to face increase the need for a stress management tool. During the spring and summer of 2021, the change in didactic faculty created a shuffling of what classes each instructor would teach. Some of the faculty moved from adjunct

status to full-time with a change in roles and learning the organization. Faculty were developing and learning new classes as a new curriculum was planned and started in January 2021. New courses were being built and the old curriculum will be phased out by May 2022. A new curriculum has its own challenges as it is the first time the class is being taught. Adjustments can be made, and the class improves with each semester. Of the eleven full-time faculty from the satellite site, only five continued to the main program. The main site faculty has experienced more turnover since January of 2022 and are experiencing the challenge of the growing ABSN track with the need for more staff. The structure of staffing has changed with some faculty having a leadership role over sections in both sites. The Chief Nursing Administrator has stepped down into a faculty role and the director for the satellite ABSN program has stepped up into that position. So, there was an opening for the director in Oregon. This does bring some instability as the leadership is rearranging. The retreat for full-time didactic faculty to meet in the summer of 2021 at the main campus happened and was a step toward stronger relationships. The skills lab, clinical, and simulation faculty were represented by one of their leaders. The administration is committed to making the program work and want to facilitate collegial relationships between the two sites and all the faculty.

The restraining forces for the project are a lack of participation or inconsistent use of the gratitude journal because the nursing faculty were busy with the usual workload and were developing or working with the new curriculum which causes extra time and effort to be spent in preparation. Some faculty may leave the university thus decreasing the sample size. This project was also completed during the COVID-19 pandemic which created another layer of stress.

Needs, Resources, and Sustainability

The need for this quality improvement project was for faculty to deal with the stress they are experiencing. An appropriate tool such as gratitude journaling can assist with the faculty's perception of the stress. As they manage their work stress, they choose to continue as a nursing faculty, creating a stable staffing pattern. With high turnover, there is a loss of knowledge base, more workload for others until a replacement is found, and instability as instructors may need to teach courses that they are unfamiliar with.

The resources needed for this project were emails, the Google forms, the gratitude journals, and the IBM SPSS to run the statistical analysis. The Google forms used for the surveys were free with a Google account. The DNP student and the nursing faculty use Google as a platform for email and documents. The gratitude journals were printed and mailed to the faculty which was covered by the DNP student.

To sustain this quality improvement, nursing faculty may incorporate gratitude journaling as a part of their stress management and may look for other new ways to deal with stress. The sustaining force of this project is not only for the DNP student to complete it but also because the DNP student believes in the mission of the project. Overall, the need to maintain stable staffing and for full-time nursing faculty to deal with stressors are important sustaining forces. The nursing faculty shortage is an issue without an overnight solution. It will take some time to overcome this shortage (NLN, 2020).

If the project is ever to be replicated the cost of the journal publishing could increase hindering a researcher who is looking for a low-cost intervention. While not expensive, some interventions may cost less or are free. The study could be repeated in a couple of years to

include new faculty. The gratitude journal could be given to new hires to encourage gratitude journaling with the faculty or given to all faculty that did not participate to encourage journaling.

Feasibility, Risks, and Unintended Consequences

The feasibility of this project was limited by the amount of workload the faculty were experiencing. Although many expressed an interest in being a part of the project, not all that started finished. Filling out the journal on their own time could have been a hinderance. The risk and unintended consequences were that nursing faculty may focus on stressful factors of their work and life and have a negative emotional response. The university does have mental health counseling available free of charge if needed.

Stakeholders and Project Team

“Stakeholders are those individuals or groups who touch the project in some way or have an interest in the project outcome” (Moran et al., 2017, p. 130). The key stakeholders for this project on a micro level are the DNP student, the DNP clinical mentor, the DNP capstone project chair, the nursing faculty members that are participants in the study and the chief nursing administrator. As the focus expands, the dean of the College of Health and Sciences, the university administration, the nursing faculty members’ families, and the students will be affected. Eventually patients and employers that graduates of the nursing program interact will can be positively affected. The project team consisted of the DNP student, the DNP clinical mentor, and the DNP Capstone Project Chair. Others that have contributed were those completing the IRB requests at the university and Regis University.

Cost-Benefit Analysis

The main cost for this project was the printing and mailing of the gratitude journals. These costs were covered by the DNP student. The gratitude journal was printed by BookBaby.com for \$280 and mailing costs to individual participants was approximately \$50. This is reasonable since the setup and cover work was completed by the DNP student, her family, and a friend at a low cost of \$50. The other cost was for the rental of the IBM SPSS Statistics software for the statistical analysis for \$50. The PSS-10 is free for educational use. A budget was developed for the project (see Appendix C).

The benefits were numerous although not financial. For the DNP student the experience of publishing a book has been a great learning experience and completing the project is a major part of completing the DNP. The project itself can benefit the individual nursing faculty in dealing with their stress and hopefully improving their outlook toward their job and the students they are educating. The university may have less turnover in faculty which will help financially. “As of Jun 3, 2021, the average annual pay for a Nursing Faculty in the United States is \$68,850 a year” (ZipRecruiter, 2021). This does not include the cost for benefits. In addition, universities are paying for recruiting and then training once the new faculty is hired. Some turnover is expected as people retire or move but a higher-than-normal turnover rate, increases the costs to the university. Retaining nursing faculty can keep these costs in check. At the university the cost for onboarding a new faculty member is \$4,100 (D. Kerr, personal communication, April 6, 2022).

Project Objectives and Processes

Mission and Vision Statements

The mission of this project was to encourage gratitude journaling as a stress management tool for full-time nursing faculty at one nursing program. The vision is that nursing faculty will incorporate gratitude in dealing with stress, causing increased job satisfaction and increased retention.

Goal and Objectives

The major goal of the project is to determine if gratitude journaling for six weeks decreased full time nursing faculty's perceived stress. To meet this goal two objectives were identified. The first was to determine if there was a difference in the stress level of nursing faculty between the pre-intervention score and the post-intervention score on the Perceived Stress Scale-10. The second was to determine if there is a correlation between the intervention and the outcome of decreased stress.

Conceptual Logic Model

A logic model helps to visually plan the project that incorporates the challenges, resources and a timetable while also looking at the whole picture (Kellogg Foundation, 2004). The conceptual model for this DNP project shows various steps in the process to complete the quasi-experimental study from the PICO question (see Appendix D).

The inputs relate to the human or financial resources that were needed for the project. For this project, the researcher was a component but also the full-time nursing faculty to participate as they were the population of the PICO statement. The director and dean of the nursing program

were gatekeepers in allowing the study to take place as well providing lines of communication. This study mainly focused on using internet resources and communicating with emails. Dispersal and collection of pre-intervention and post-intervention surveys used the email system of the university between the DNP student and the nursing faculty. The intervention was completing a gratitude journal which was developed by the DNP student.

The next section deals with the activities that were completed to implement the study (W. K. Kellogg Foundation, 2004). The study involved using the Perceived Stress Scale-10 (PSS-10) to evaluate the change in perceived stress levels. Documentation was gathered to show permission of the use of this measurement tool in the study (see Appendix E). The gratitude intervention task was completion of journals with prompts. This required the writing of the journal and the directions, developing a cover (see Appendix F), researching a printing company, and putting it all together. Clear directions were also needed so that the participants would complete the intervention properly. A plan was made for requesting participants in an ethical manner. Mailers were purchased and journals were sent to all participants. The dispersal and collection of the pre-intervention and post-intervention surveys was through the university email system, with a link to the Google Forms. The responses were tabulated on a spreadsheet by Google.

The outputs were the data sets from the pre-intervention and post-intervention surveys which embedded the PSS-10, and the demographic data of the participants. From this data the analysis was completed and recorded.

The outcome was to show the “specific changes in the program participants’ behavior, knowledge, skills, status and level of functioning (W.K. Kellogg Foundation, 2004, p. 2). The proposed outcome was that a change will be demonstrated in the PSS-10 scores and that a

positive correlation between the gratitude intervention and the perceived stress will be demonstrated. There is not a benchmark of the number of points that the PSS-10 score should decrease to demonstrate significant change in the literature review currently. The statistical variance from the pre-intervention to the post-intervention will be evaluated. If the intervention is effective, this will give the new tool of gratitude to the nursing faculty to decrease stress. The impact would be a positive work environment where nursing faculty will not desire to retire early or leave academia to pursue other areas of nursing.

There are potential constraints that were also considered. A lack of participation due to time constraints, commitment to continue the journaling, and other reasons for not continuing with study. Gratitude journals become costly and have no funding could stop a future researcher using this intervention.

Project Processes

The intervention was a gratitude journal developed by the DNP student. It incorporated information of different journal types from the randomized controlled trials conducted by O'Connell et al (2018) and concepts from Emmons' research on the science of gratitude (2007). Eight different themes were provided with prompts and places to write for five days. Directions were included telling participants to write under whichever theme interested them or jumping from theme to theme. The cover title art was developed by a friend and the cover photo from the DNP's husband. The pieces were put together and printed by BookBaby.com.

The Human Resources Manager approved the university as a site for the study and approval was obtained from the Institutional Board Review (IRB). Regis University completed a form stating that Regis is relying on the other university's IRB to be the main IRB.

The project timeline for the study covered two months, starting in mid-September 2021 (see Appendix J). To start the process, emails to the full-time faculty members were sent through the university system, requesting participants (see Appendix G). One week was allowed for participants to respond. Once the participant group was identified, each participant was given a number which was used when completing the pre-and post-surveys. A link to the pre-intervention survey was emailed and the survey was completed on a Google form. Since the form takes less than five minutes to complete, participants were given three days. The directions and journals were sent using the U.S. Postal Service. The mail took a few days to be delivered as faculty live in six different states. The gratitude journal intervention covered six weeks. The journal entries take less than five minutes a day, but participants could take as much or as little time as they wanted. They could choose to write an entry once a week or up to seven days. Email reminders were sent every two weeks encouraging the continued journaling. At the end, a link to the Google form post-intervention survey was emailed with directions to complete in three days. Since both surveys take less than five minutes to complete, there was minimal subject burden. This phase was completed by mid-November. During January and February of 2022, the data was analyzed using the IBM SPSS.

Methodology and Measurement

Setting, Population, and Sampling

The setting for the study was online at the nursing program of a university. The participants completed the gratitude journals on their own time in whatever place they chose. The population for this project was full-time nursing faculty in the pre-licensure nursing program excluding the DNP student. Those faculty that are part-time or adjunct will not necessarily experience the same level of workload, expectations, and responsibilities as a full-time faculty

member and thus were excluded. The full-time faculty are not a vulnerable population and are an appropriate population to study. They were recruited by emails through the university system

The DNP student used a purposeful sample of all full-time nursing faculty, which amounts to total population sampling since the population is less than 100. “A power analysis can then be used to estimate the minimum sample size required” (Brownlee, 2018, para 24).

“Statistical power is a measure of the likelihood that a researcher will find statistical significance in a sample if the effect exists in the full population” (McHugh, n.d.-b, para 1). Using the tables in Polit 2010 (p.421), At the time of the study, there were 33 full-time faculty which included the DNP student so 32 invitations to participate were sent out. For 0.80 power, 26 participants would have provided power for the study. Only 17 agreed to participate and completed the first survey and only 13 completed the study. Therefore, only 0.40 power was achieved with this study. A larger sample size would have increased the likelihood that statistical power would be achieved.

Research Design

This project was quasi-experimental since the subjects were not put into randomized groups, nor was a control group included. It was categorized as a pretest-posttest design, which “look(s) at the outcome of interest before an application of the intervention and then after an intervention” (Terry, 2018, p. 76). Pretest posttest designs make it “difficult to attribute causation to the intervention when there is neither randomization nor a control group..... but this may be the “only practical method of assessing the impact of an intervention” (Terry, 2018, p. 76).

The comparison groups were the pretest group to the posttest group, although they are the same participants. The subjects were the participating full-time nursing faculty members.

Variables

For the study to be valid the variables need to be clearly identified and free from bias, including selection bias and gender bias, or confounding variables (Zaccagnini & Pechacek, 2021). The variables included the independent, dependent, and confounding variables. This study was categorized as a univariate study with the one independent variable which was the intervention of the gratitude journaling. The instructions for the gratitude journal were clearly defined so that each participant that completed the study understood what was asked of them. The reading level was simple but necessarily low since the faculty members all have a minimum of a master's degree. The dependent variable was the change in the PSS-10 score from the pretest to the posttest groups. The measurement of perceived stress of the nursing faculty is the primary outcome with a target of a decrease in the stress level.

Confounding variables can also impact the results of the study. The confounding or extraneous variables that were collected in the study included level of education as some have a master's degree and others have a doctoral degree; years of experience ranging from less than one year of experience to five or more years of experience; and the variable of male or female. These variables were collected in a survey before the start of the study using Google forms.

Other confounding variables could include changes in the faculty member's life that was not captured by the data collection. This could lessen the internal validity of the study as it cannot be determined that the intervention or another variable caused the difference (Cullen, 2011). A faculty member may have received a gift from a friend that changed their stress level. A large bill could have been paid off or incurred. Other events could have occurred such as their workload could be adjusted during the time of the study. Participants in the study were co-workers to the researcher. This may skew the responses on the PSS-10 questionnaire as they

want to “help” as seen in the Hawthorne Effect. Results were kept anonymous to mitigate this. With only a few male faculty members, they may have felt their responses were identifiable. The participants that volunteer may be different than those that do not volunteer. This project covered a six-week period, and some members did not complete the study. Many things can cause attrition that include work circumstances or changes in their life outside of work. It is difficult to identify what these variables were.

Measurement

The level of measurement will be on an interval scale. Although the PSS-10 is a Likert scale with no true zero and is an ordinal scale, researchers have been treating it as an interval level of measurement and using the associated statistical tests rather than the ordinal level statistics (Lambert, 2020). Following this precedent, the choice was made to use the PSS-10. Treating this as interval data with two groups, pretest and posttest, the paired samples t-tests were completed to show if there was a difference in the two groups (Lambert, 2020).

Protection of Human Subjects

Each study must follow ethical boundaries when conducting research and working with human subjects. The National Bioethics Advisory Committee sets forth standards about vulnerable populations (Block & Gordon, n.d.). The population of nursing faculty are not minors, impaired cognitively, mentally, or physically disabled, nor economically disadvantaged, so are not considered a vulnerable population. There may be some pregnant women and racial or ethnic minorities as part of this population but since the research is not done in person, the participant would need to identify themselves as part of this group. Since the whole group does not belong to these groups, additional protections or considerations were not needed (Block & Gordon, n.d.).

The faculty members were given autonomy to choose to participate and the allowed to withdraw at any time without any issues. Since the DNP student is a coworker, they may have felt pressured to participate but their participation was completely voluntary. The results were anonymous as each participant's information was de-identified.

Looking at the term beneficence, they were told briefly how the study would benefit them. Using a gratitude journal may help them gain a tool to decrease their stress. This study may be used in the future to help other nursing faculty so the participants may feel part of a bigger plan. Applying nonmaleficence to this situation, when the faculty were asked to complete the survey including the PSS-10, some negative emotions may have surfaced. This could have brought psychological harm to them and was taken into consideration. The university has mental health support available for staff.

The request for participation is generally written in simple clear language for most people to understand. As this population has at least completed their master's degree and many have completed a Ph.D. or Doctorate degree, this language was somewhat familiar to them. The explanation was at an easy, readable level. The responsibility for the researcher was to keep the information confidential, prevent coercion, or any harm to happen to the participants.

The approval for the project has come through the university. The Human Resources Department representative gave approval to use the university as a site for the project. The Institutional Review Board (IRB) granted approval of the project and Regis University's IRB has chosen to rely on that university's IRB. The DNP student passed Collaborative Institutional Training (CITI) courses as required by Regis and additional courses required by the university.

Instrumentation Reliability and Validity

To evaluate the change, the PSS-10 was used for both the pretest and posttest. Using the same tool more accurately evaluates their change in stress levels. This was built into the pre-intervention and post-intervention surveys using Google forms. Reliability is “the degree of consistency or dependability with which an instrument measures the attribute it is designed to measure” (Polit, 2010, p. 407). Validity is “the degree to which inferences made in a study are accurate and trustworthy” (Polit, 2010, P. 409). No tests were run for validity or reliability since data in the literature demonstrated the validity and reliability of the PSS-10. This was covered in the literature review.

Intended Statistics

After the post-intervention surveys were completed, the data was analyzed using both descriptive statistics and inferential statistics. For the descriptive statistics, demographic data was coded to a numerical scale. This included questions of male or female, what was the highest degree earned, and years of teaching experience. The post-intervention included questions of the average number of times the gratitude was completed during the six weeks, if the journal had been used at least once a week during the six weeks period.

The inferential statistical analysis looked at whether there was a difference in pretest and posttest scores and if there was a correlation between the intervention and the outcome. As a quantitative study, numerical scores from the Perceived Stress Scale-10 (PSS-10) were used. It has 10 questions with answers that are scored from 0-4. The final score is found following instructions for reversing response values of four items and using the sum from all items (Cohen, 1994).

Treating this as interval data with two groups, pretest and posttest, the paired samples t-test was completed to show if there is a difference in the two groups (Lambert, 2020). A second type of analysis was used to answer the question of whether there was a relationship between the independent variable and the dependent variable, so the Pearson's r correlation statistic was used (Polit, 2010). An analysis was also completed with the raw PSS-10 total scores.

Data Collection and Treatment Procedure

The coding on the preintervention survey included the demographic data. The distinction of male or female was coded with a 1 for male and 2 for female. Years of experience was 1 equals less than 1 year, 2 equals 1-3 years of experience, 3 was 4-5 years of experience and 4 equaled greater than five years of experience. The level of education was coded with a 1 for a master's degree, 2 for a Doctor of Nursing Practice degree, and 3 for a PhD degree.

The PSS-10 questions were on a 0-4 scale and were coded to remove the zero. Four questions required reverse scoring so that was accomplished first. Then the scores were adjusted where 0=1, 1=2 and so on. The final scores were also tallied using the coded scores. The postintervention survey followed the same scoring and coding for the PSS-10. Two other questions were included regarding if the participant wrote in the journal at least one time a week and the average number of times they wrote in the journal per week. The first was a yes equals 1 and the no equals 2. The average number of times equaled the number ranging from one to six times a week. The option for zero as an average was not given so the scores did not need to be adjusted. The raw total scores were also tallied after completing the reverse scoring for four questions as per the directions of the use of the PSS-10.

Project Findings and Results

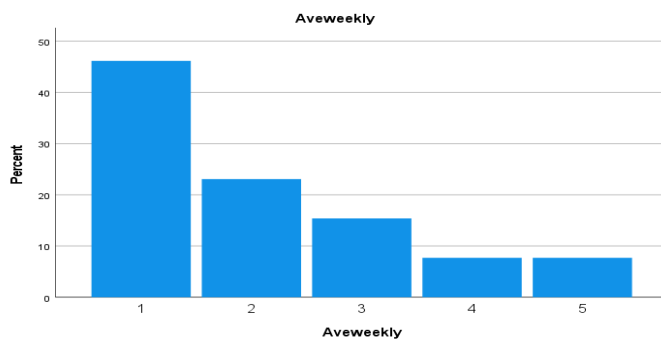
Demographics of the Sample

Invitations were sent to 32 full-time faculty with 17 responses. The participants were 5.6% male and 94.4% female. 66.7% have a master's degree and 33.3% have a doctorate degree. For years of experience, 50% had less than one year of experience, 16.7% had one to three years of experience and 33.3% had greater than five years of experience. These participants started the study and answered the preceding demographic questions.

Only 13 of these participants completed the study with the following questions on the post-intervention survey. In answering the question of whether the participant had written in the journal at least once a week, 30.8% had not written in the journal once a week. The next question asked the average number of times per week that the participant had completed the journal with the first answer starting at one time per week. This is a limitation in the study since there should have been an option for zero times per week. Those answering one time per was 46.2% but could include those that did not complete the journal at least one time per week. Those journaling two times per week were 23.1%, three times per week was 15.4%, four times per week was 7.7% and five times per week was 7.7%. This information is summarized in Table 2.

Table 2

Average Number of Times per Week the Journal was Completed



Objective One

The first objective was to determine if there was a difference in the stress level of nursing faculty between the pre-intervention score and the post-intervention score on the Perceived Stress Scale-10. The correlation of the pre-aggregate and post-aggregate had a p-value of .990 showing there was no statistical significance. This indicates that was no significant different in the stress level from before the journaling to after the journaling. The Paired Samples t-test statistics showed the mean total scores of the PSS-10 of 48.77 for the pre-aggregate data and 48.85 for the post-aggregate data.

The raw or uncoded PSS-10 total scores that had been reversed scored for four of the ten questions were analyze and placed into stress categories of low, medium, and high. The low scores were from 0-13, medium form 14-26, and high from 27-40 (State of New Hampshire Employee Assistance Program, n.d.). The pre-intervention faculty participants had three participants in the low category constituting 17.6%, eleven in the medium category constituting 64.7%, and three in the high category constituting 17.6%. The post-intervention participants had five in the low category constituting 38.4%, seven in the medium constituting 53.8%, and 1 in the high category constituting 7.7%. The mean total score of the pre-intervention participants was 18.64 with a standard deviation of 6.3551. The mean of the post-intervention participants was 15.77 with a standard deviation of 8.9368. Comparing these mean scores, the p-value was 0.3123 (MedCalc.org) which was not statistically significant but trending in the right direction. This data is summarized in Table 3.

Table 3*Stress Category Levels of Faculty Participants*

Stress Level Category	Pre-intervention # Faculty/ %	Post-intervention # Faculty/%
Low: 0-13	3 – 17.6	5 – 38.4
Medium: 14-26	11 – 64.7	7 - 53.8
High: 27-40	3 – 17.6	1 – 7.7
Mean Score	18.64	15.77
Standard Deviation	6.3551	8.9363

Objective Two

The second was to determine if there is a correlation between the intervention and the outcome of decreased stress. The t-test for paired samples evaluated the mean scores of the ten PSS-10 pre-interventions questions and the post-intervention questions and a correlation table was developed using the Pearson coefficient. The p-values of the paired samples correlations ranged from .060 – 1.00 showing that these changes in the mean scores were not statistically significant.

Answering the PICO Question

The PICO question was “Will full-time nursing faculty in a prelicensure nursing program report a decrease in their perceived stress level as measured by the Perceived Stress Scale-10 (PSS-10), after they implement gratitude journaling over a 6-week period, compared to their pre-intervention status?” The data was not statistically significant in showing that the intervention decreased the nursing faculty’s perceived stress. Although this was the major goal of the study, the data was noteworthy in that the full-time faculty did not complete the journal on average of

once a week. This data lends support to the evidence that faculty were busy and not able to complete the journals. Anecdotally, a participant did speak to the DNP student after the project was completed. She stated that she has started doing more journaling because of this project. Even though it was only one person, it did make a difference in her life.

Limitations, Recommendations, and Implications for Practice

Limitations

With this study, awareness of limitations is included. One limitation could be the intervention time of six weeks. This timeframe may have been too long, with participants forgetting about completing the journal. Email reminders were sent every two weeks but with the number of emails faculty receive, these could have been overlooked. The time frame could have been shortened to four weeks and weekly reminders could have been added rather than a reminder every two weeks.

The post-intervention survey asked a question of whether the journal had been completed at least once a week with possible answers of yes or no. The next question asked the average number of times the journal had been completed per week with answers ranging from 1-7. Zero was not an option but should have been included for appropriate answers. A participant answering that they did not complete the journal at least once a week did not have an appropriate answer option of zero or less than once a week for the second question. This limits the results.

There was an outlier for the post-intervention survey that scored a zero showing no perceived stress. This changed the overall total scores and should be factored in when looking at the results.

The participants had not been educated about the benefits of gratitude journaling before they started. The DNP student did not want to influence their ideas before starting. With more information about the benefits, the number of participants could have been higher or have helped the participants' motivation to continue.

The PSS-10 scale has been widely used but it cannot account for many other variables in a person's life. Some of the questions focus on personal stress and may not focus on work stress specifically.

Recommendations

A recommendation for a future study is that the journaling time be limited to four weeks with a specific dates and weekly email reminders. Educating potential participants of the benefits of gratitude journaling would also be recommended. In further studies, the correlation of years of experience or educational degree to change in stress levels could be evaluated. Another scale such as the Maslach Burnout Inventory – Burnout Scale (Maslach et al., 2016) could be incorporated.

Clinical Implications

This project was completed during the COVID pandemic when there was added stress and shortage of nursing faculty in the nursing program. Of the 32 full-time faculty that were asked to participate in September of 2021, four of them were no longer with the program six months later. The scope of this project was limited to one university and the sample size was small. More research needs to be completed to clearly see the results of gratitude journaling. Nursing faculty in this study had the highest percentage in the moderate stress level using the PSS-10. Since stress is one factor for faculty leaving academia, more research should be done to find ways to decrease stress.

Conclusion

In exploring the nursing faculty shortage through a literature review, the DNP project of evaluating the change in stress perception of nursing faculty after completing a gratitude journal was developed. This involved planning, implementation, and analysis of the data from the project. Although the results were not statistically significant for changes in perceived stress, this project added to the work of understanding what is needed to retain nursing faculty. Many of the participants were at the moderate level of stress which gives a glimpse of what nursing faculty are feeling. The amount of journaling by the participants was limited which could indicate that faculty are busy and not able to add one more task to their workload. More research will need to be completed on factors to deal with nursing faculty stress.

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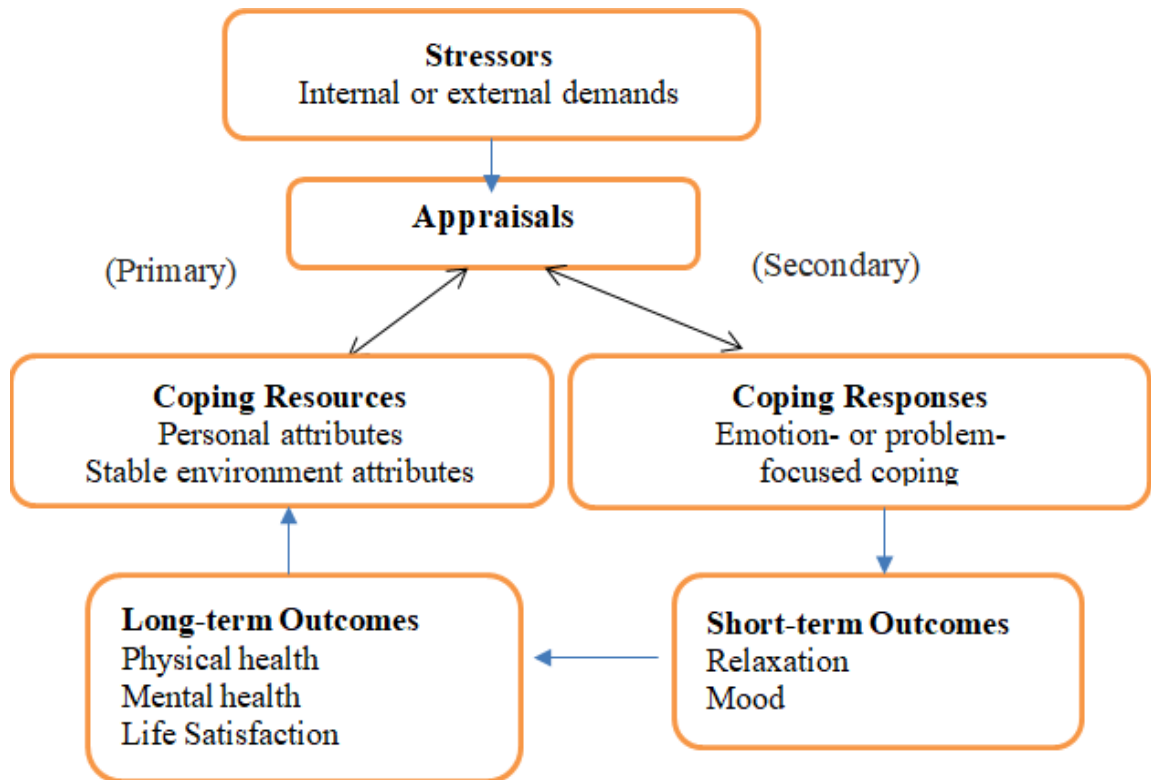
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Appendix A

Lazarus and Folman's Psychological Stress and Coping Theory



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Appendix B

Levels of Evidence for DNP Project

Level	Seven Tiered Levels	Number of articles	Part of PICO - number of articles
1	Systematic review and meta-analysis of random controlled trials (RCT's)	1	Intervention - 1
2	One well designed RCT	4	Intervention - 4
3	Well-designed controlled trials without randomization	1	Problem Identification - 1
4	Well-designed case-control studies	7	Problem - 4 Intervention -2 Evaluation tool - 1
5	Systematic reviews of descriptive and qualitative studies	7	Problem - 5 Evaluation tool - 2
6	Internal organization-quality/ risk management data	0	
7	Opinion of authorities or expert committees	0	
Total number of articles		20	

Reference

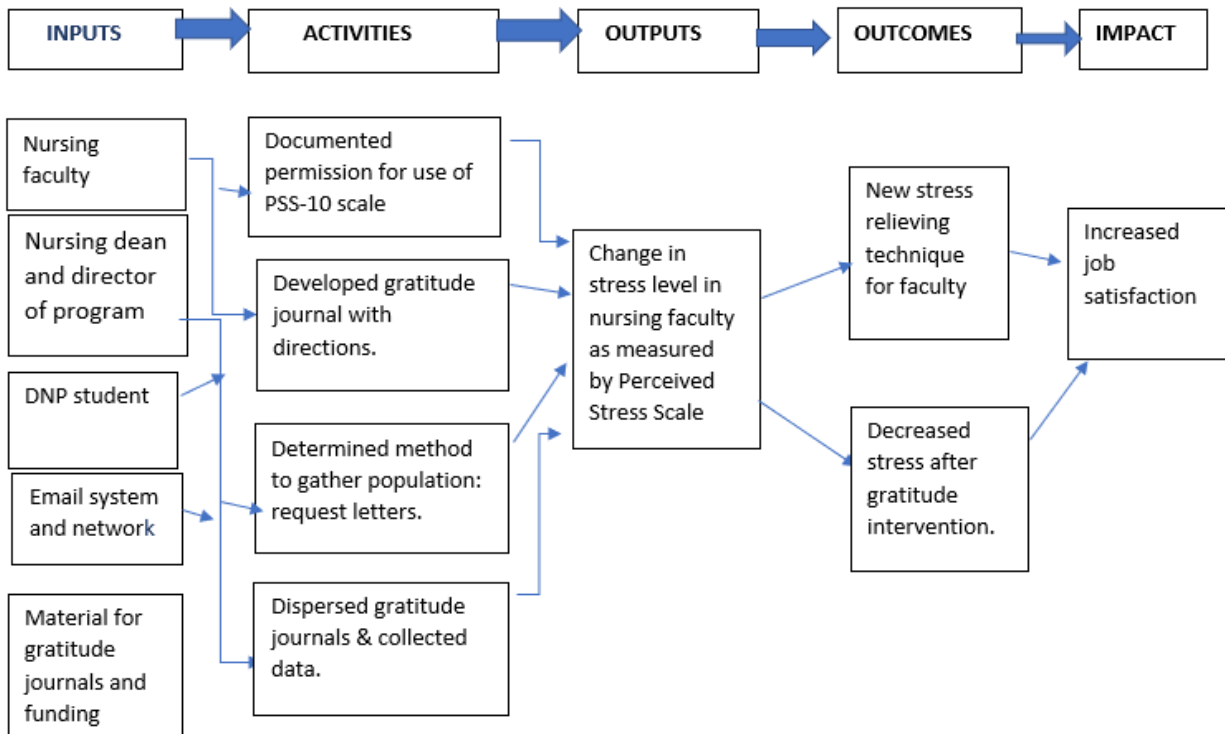
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Appendix C**Budget and Resources**

Resource Item	Cost for DNP Project	Cost to Replicate at Another Site
Gratitude Journal	\$280 for 25 copies	\$10 per copy
Cover Art	\$50	Not applicable
Individual Mailings	\$50	Variable
Shipping from book publisher	Included in the book cost	This may vary depending on the order
IBM SPSS Subscription	\$50	Variable
Total	\$430	Depends on size of group

Appendix D

Conceptual Model for DNP Project



Potential Constraints: Lack of participation due to lack of time, commitment, other reasons for not continuing with study. Gratitude journals become costly and have no funding.

Appendix E

Permission for use of the Perceived Stress Scale

PERMISSION FOR USE OF THE PERCEIVED STRESS SCALE

I apologize for this automated reply. Thank you for your interest in our work.


PERMISSION FOR USE BY STUDENTS AND NONPROFIT ORGANIZATIONS: If you are a student, a teacher, or are otherwise using the Perceived Stress Scale (PSS) without making a profit on its use, you have my permission to use the PSS in your work. Note that this is the only approval letter you will get. I will not be sending a follow-up letter or email specifically authorizing you (by name) to use the scale.

PERMISSION "FOR PROFIT" USE: If you wish to use the PSS for a purpose other than teaching or not for profit research, or you plan on charging clients for use of the scale, you will need to see the next page: "Instructions for permission for profit related use of the Perceived Stress Scale".

QUESTIONS ABOUT THE SCALE: Information concerning the PSS can be found at <https://www.cmu.edu/dietrich/psychology/stress-immunity-disease-lab/index.html> (click on scales on the front page). Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales. Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

TRANSLATIONS: The website (see URL above) also includes copies of translations of the PSS into multiple languages. These translations were done *by other investigators*, not by our lab, and we take no responsibility for their psychometric properties. If you translate the scale and would like to have the translation posted on our website, please send us a copy of the scale with information regarding its validation, and references to relevant publications. If resources are available to us, we will do our best to post it so others may access it.

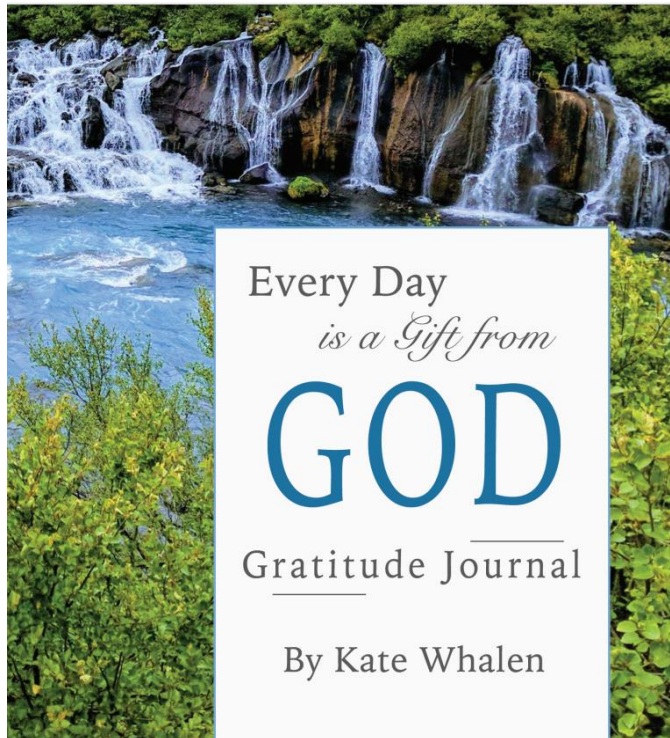
Good luck with your work.



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Appendix F

Cover of Journal



Appendix G

Recruitment Letter

Dear Full-time Nursing Faculty Members.

I am completing my Doctor of Nursing Practice at Regis University. For my project, I am recruiting full-time nursing faculty to complete a survey before and after an intervention. The intervention is a gratitude journal that participants would complete up to 5 times a week.

This journal will be a hard copy mailed to you which you will complete on your own time. Journal entries are only a few sentences long and take about five minutes to complete each time, but how much time you spend is entirely up to you. Only you will see this journal, but I will be sending reminders every two weeks to encourage you to continue to journal.

Data is generated by the Perceived Stress Scale (PSS-10) survey done both before and after the completion of the intervention. The PSS-10 is administered using Google forms and the results will remain confidential.

Your participation is completely voluntary, and you may stop participating at any time by stopping the intervention or not answering the surveys. There is not penalty nor hard feelings toward anyone for not participating.

For those that would be willing to participate, please respond to me.

Sincerely,

Kate Whalen

Appendix H

DNP Project Timeline

- **December 2020: SROL completed**
- **December 2020: PICO identified**
- **March 2021: Literature review using themes to support PICO completed**
- **March 2021: Wrote project proposal**
- **June 23, 2021: Defended proposal**
- **May 27, 2021: Site approval letter signed**
- **July 2021: Site IRB Approval**
- **September 2021: Regis University signs to rely on research site's IRB Review**
- **September 2021: Project starts: Recruitment with information letter**
- **October 2021: Intervention of Gratitude Journaling**
- **November 2022: Completed data collection**
- **February 2022: Analyzed data**
- **March 2022: Completed final project paper and presentation**
- **April 8, 2022: Defended final project**
- **April 2022: Uploaded final approved written project to library**