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A Recognition/Appreciation Intervention to Decrease Stress and Burnout in Nursing Faculty

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Problem: Nursing faculty at one public, four-year university, are at risk of stress and burnout that could lead to negative personal and system-level repercussions. Interviews with some nursing faculty at the university noted at least moderate stress. A literature review confirmed that recognition, appreciation, and support correlated with stress and burnout, leading to the PICO question: Compared to usual practice, will a meaningful recognition/ appreciation intervention decrease stress and burnout in nursing faculty at one four-year university?

Purpose: To determine if a recognition and appreciation program would impact the stress and burnout of nursing faculty at one four-year university.

Goals: The primary goal of the project was to cause a statistically significant decrease in the stress and burnout scores of nursing faculty at the university. A secondary goal was that 35 percent of nursing faculty would receive a form of appreciation through the project.

Objectives: To reach these goals, expected outputs included at least 15 nursing faculty completing the pre- and post- surveys, at least 20 faculty participating in the appreciation intervention and at least 25 faculty receiving a form of appreciation they found meaningful.

Plan: In addition to stress, interviews with some nursing faculty noted room for improvement in increasing recognition and recognizing deserving faculty. Faculty feedback about meaningful recognition strategies was used to guide development of the recognition program. The program was completely virtual due to COVID-19 and included virtual coffee breaks and lunch and learns, and sharing faculty activities and achievements through a newsletter, the School of Nursing Facebook page, and/or a university Professional Activities webpage. The Maslach Burnout Inventory-Educator Survey (MBI) and Perceived Stress Scale-10 (PSS-10) were selected to measure changes in burnout and stress before and after the program.

The project was presented to the Regis DNP project panel and IRB for approval. Once the project was approved, pre-intervention surveys opened from late August through early September 2020. The recognition program interventions began after the survey closed and continued through mid December 2020. The post-intervention survey was open from the end of November through mid December 2020. Collected data was analyzed during spring of 2021.

Outcomes and Results: Two of three objectives were met, but only one goal was partially met. Twenty-one nursing faculty completed the pre-survey, 16 completed the post-survey, and 21 faculty were a part of the interventions. Only 12 faculty identified that they received meaningful recognition. There were improvements to mean scores of eight of 10 PSS-10 questions, 19 of 22 MBI questions, and all three MBI categories between the pre- and post- surveys, though most were not statistically significant. A paired samples t test of the five pre- and post- surveys that could be paired found a decrease in one PSS-10 question regarding feelings that difficulties were mounting and could not be overcome ($t=6$, $p=0.004$). For more information, another paired samples t test was run with 16 pairs (the five pairs plus pairing the first 11 unpaired completed pre-surveys with the 11 unpaired post-surveys). This test found statistically significant changes in one PSS-10 question, two MBI questions, and the emotional exhaustion category of the MBI. Therefore, there were decreases in only some elements of stress and burnout in nursing faculty.

Acknowledgements

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In the 11th International Classification of Diseases, the World Health Organization (WHO) (2019) classified burnout as a phenomenon coming from uncontrolled stress in the work setting. Burnout includes three components- emotional exhaustion, depersonalization or cynicism, and decreased personal accomplishment (Maslach & Leiter, 2016; WHO, 2019). Studies have found that 22 to 43 percent of nurses, and 39 percent of nursing faculty, experience emotional exhaustion (Dyrbye et al., 2017; Yedida et al., 2014).This paper outlines the problem of stress and burnout in nursing faculty at one university, discusses the theory and literature connecting recognition to stress and burnout, describes a recognition and appreciation program implemented at the university and provides the results as to whether this intervention decreased nursing faculty stress and burnout.

Problem Recognition and Definition

Statement of Purpose

The purpose of this DNP project was to determine if implementation of a recognition and appreciation program impacted stress and burnout experienced by nursing faculty. This project emerged from the DNP student/investigator's observations of faculty stress, concern that prolonged stress would contribute to burnout, and concern that stress and burnout could have wide-ranging repercussions.

Problem Statement

Nursing faculty are at risk for stress and burnout. In a study of over 3000 full-time nursing faculty, Yedida et al. (2014) found 39 percent experienced emotional exhaustion. A study by Sarmiento et al. (2004) found moderate burnout levels among nursing faculty. Amongst

146 doctorally-prepared nursing faculty, mean scores across the sample indicated high emotional exhaustion, moderate depersonalization, and low decreased personal accomplishment (Aquino et al., 2018). In addition to demonstrating that nursing faculty experience stress and burnout, the literature also describes some of the consequences of this issue.

Stress and burnout can have several negative effects. In a study of nurses in California, 16.9 percent of nurses who took at least a year away from nursing noted job stress as the reason, while 62.1 percent of nurses who changed work hours cited job stress as important or very important to this change (Spetz et al., 2017). Feskanich et al. (2002) found that nurses experiencing minimal or severe work stress had an increased suicide risk.

Additionally, stress and burnout may exacerbate a shortage of nursing faculty. In 2018, over 75,000 applicants were denied entrance to a nursing program due to reasons including a shortage of nursing faculty (Rosseter, 2019). In addition to a present shortage, Yedida et al. (2014) found that about one-third of nursing faculty planned to leave nursing education in the following five years and emotional exhaustion was positively correlated with intention to leave nursing education. Flynn and Ironside (2018) found that emotional exhaustion made nursing education leaders three and a half times more likely to plan to leave education in the next year, while Aquino et al. (2018) found that emotional exhaustion and depersonalization correlated with nursing faculty planning to leave their job. Burnout has the potential to drive nursing faculty from academia, perpetuating the current faculty shortage and further inhibiting applicants from entering nursing programs.

California State University, Sacramento (Sacramento State), located in Sacramento, California, is a four-year public university with over 31,000 students (Forbes, n.d.). The School of Nursing (SON) offers multiple programs, including a Bachelors of Science in Nursing, a

Masters of Science in Nursing, and a School Nurse Credential (Sacramento State, 2019a). In the Fall 2020 semester, 64 faculty taught in the SON, including 24 full-time faculty and 40 part-time faculty (T. Altmann, personal communication, September 29, 2020).

Within the nursing faculty at Sacramento State, stress emerged as a potential issue. Nineteen current nursing faculty at Sacramento State were individually interviewed in the Fall 2019 and Spring 2020 semesters to elicit perceptions of stress and burnout within the faculty. Thirteen of the faculty considered there to be at least a moderate level of stress among nursing faculty. Interviewed faculty did not generally see burnout among nursing faculty, though one noted moderate burnout due to changes from the COVID-19 pandemic and two could describe past instances when a faculty member may have been experiencing burnout. It should be noted that most of these interviews occurred before the COVID-19 pandemic resulted in courses being moved online and several clinical sites no longer taking students. As a result of these events, faculty stress may have been even higher than these interviews indicated. Pandemic-related changes continued into the Fall 2020 semester. Besides skills labs and most clinical, courses were conducted online during the Fall semester and numerous incompletes from the Spring 2020 semester were still being completed during the Fall 2020 semester. This may also have impacted the level of stress experienced by faculty.

While burnout was not described as a common occurrence at Sacramento State in faculty interviews, it may still have been present, especially given the COVID-19 pandemic. In a study comparing Maslach Burnout Inventory (MBI) scores to a question asking clinicians and staff to self-identify their burnout level, only half of clinicians and three-fifths of staff meeting the study criteria of burnout via the MBI self-identified as burnt out (Knox et al., 2018). Kelly and Lefton (2017) found that critical care nurses with increased work stress had higher burnout. To this DNP

student/investigator's knowledge, burnout has not been previously measured in this population, so it cannot be assumed that lack of perceived burnout by nursing faculty indicates an absence of burnout in this group. Additionally, if Kelly and Lefton's (2017) findings hold true for this group, the presence of moderate levels of stress may indicate an additional risk of burnout.

Considering this evidence, an appropriate problem statement for this project is that nursing faculty, including nursing faculty at Sacramento State, are at risk of stress and burnout that could lead to negative personal and system-level repercussions.

PICO Question

Stress and burnout, particularly in nursing faculty, can be multifactorial. Studies of nursing faculty have found negative correlations between components of burnout and both life balance and empowerment and positive correlations between components of burnout and workload (Owens, 2017; Flynn & Ironside, 2018; Sarmiento, et al., 2004; Yedida et al., 2014). Thomas et al. (2019) described multiple factors that contribute to burnout in nursing faculty, including workload, university requirements outside of teaching, lack of balance between work and life, and lack of support.

Most of these factors, while vitally important, required an intervention well outside the time and scope of this project. However, one factor within the scope of this project was support. This investigator focused on a specific form of support- recognition and appreciation. A connection between support and recognition was found in the literature. In a qualitative study of how to manage burnout, Wei et al. (2020) noted, "Caring interpersonal relationship made individuals feel visible and valued at work" (p.49). Haizlip et al. (2020) found qualitative and quantitative data linking support to feeling valued and appreciated. Further, Garcia-Sierra et al.

(2016) found, “Through social support, work engagement can be increased and engagement can reduce the level of burnout, especially if work demands are high" (p. 786).

As no current benchmark of recognition among faculty at Sacramento State existed, this investigator interviewed faculty about recognition practices utilizing Likert scale questions from Ventrice (2009) and the Greater Good Science Center at UC Berkeley (n.d.). These tools were added to interviews conducted in the Spring 2020 semester. One interview was completed before the Greater Good Science Center granted permission to use their quiz, so eleven faculty provided information for those questions and twelve faculty provided information for the questions from Ventrice (2009). These interviews indicated that most faculty felt that they received appropriate and sincere appreciation. However, none of the faculty interviewed agreed that the most deserving teams or people received recognition and three faculty felt that their efforts were at least sometimes taken for granted. When asked if they received recognition at least weekly, only two faculty members agreed; the rest selected neutral, disagree or strongly disagree.

By considering the context of the project timeline and the experiences of nursing faculty at Sacramento State, an area on which to focus an intervention emerged. Given that nursing faculty at Sacramento State were experiencing stress and that there was some room for improvement in recognition, this led to the PICO question: Compared to usual practice, will a meaningful recognition/ appreciation intervention decrease stress and burnout in nursing faculty at one four-year university?

Project Significance, Scope, and Rationale

As previously noted, nursing faculty are at risk for stress and burnout and this could result in nursing faculty leaving their job. The current COVID-19 pandemic resulted in additional stressors that could further increase the stress experienced by nursing faculty.

Literature to be discussed later highlights the impact of recognition on stress and burnout. Therefore, a recognition intervention could contribute to decreased stress and burnout in this group of nursing faculty. Decreased stress and burnout could further result in preventing nursing faculty turnover.

This project was conducted with nursing faculty working in the School of Nursing at Sacramento State during the Fall 2020 semester. A total of 64 faculty, including this DNP student/investigator had assignments to work in stateside SON program in the Fall 2020 semester; this included 24 full-time faculty and 40 part-time faculty (T. Altmann, personal communication, September 29, 2020). This investigator was excluded from participation in the project. This setting was selected as interviews with nursing faculty demonstrated at least moderate levels of stress and room for improvement with recognition.

Theoretical Foundation

This DNP project utilized a theoretical model of burnout formed by Maslach et al. (2001). Maslach et al. (2001) described burnout as being comprised of three parts- emotional exhaustion, depersonalization/cynicism, and feelings of lacking efficacy/personal accomplishment. According to the authors, these three elements are interconnected. They describe that depersonalization often results as individuals pull away to deal with their emotional exhaustion (Maslach et al., 2001). In terms of decreased personal accomplishment, they cite studies indicating that this can happen after emotional exhaustion and depersonalization, or at the same time (Maslach et al., 2001). The experience of burnout can negatively impact an employee's health and work performance, and can lead to job turnover (Maslach et al., 2001). Maslach et al. (2001) described a job-person fit to understand the context in which burnout occurred; if there was a mismatch between the person and aspects of their job, they were at risk

for burnout. Community and reward were two of six work-life areas relevant to job-person fit, and within reward, lack of recognition was an element (Maslach et al., 2001). Expanding on the impact of recognition on burnout in this theoretical model, a review of the literature was conducted to determine if a connection between recognition and stress and burnout existed in the empirical literature.

Literature Review

A literature review was conducted utilizing CINAHL, MEDLINE, Academic Search Premier, ERIC, PsycARTICLES, and PsycINFO. Main search terms included "recognition," "burnout," and "nurs*." These terms resulted in 558 results. Additional terms, such as "meaningful recognition," "feeling valued," "university OR college," "appreciation," "faculty OR educator," and "reward" were also used to locate relevant articles, as were the addition of PubMed, Sacramento State One Search, and Google Scholar as reviewed databases. In general, there was a focus on articles published in the 2000s. Abstracts were reviewed for relevance to the PICO question. Cited articles were also reviewed if they seemed relevant to the search. In total, 39 articles were included in the systematic review table. A sample from the table is provided in Appendix A. Melnyk and Fineout-Overholt's (as cited in Houser & Oman, 2011) seven levels of evidence was used to grade the articles selected for the systematic review table. Of these 39 articles, only one was Level III: Quasi-experimental study. The vast majority- 31 articles- were Level IV: Non-experimental studies. There was one article that was considered Level V: Systematic review of qualitative study and six that were Level VI: Single qualitative study.

Empirical literature supports the existence of a relationship between recognition and stress and burnout that Maslach et al. (2001) theorized. Several studies showed a negative relationship between burnout and recognition (Kelly & Todd, 2017; Lee & Akhtar, 2011;

Calabro et al., 2019; Dixon et al., 2017). A negative relationship also existed between stress and recognition (Abualrub& Al-Zaru, 2008; Garcia-Herrero et al., 2017).

The literature also demonstrated a tie-in between social support and recognition. Perceived mattering, which included feeling valued and appreciated, had a positive relationship with support (Haizlip et al., 2020). In a qualitative study of techniques used by pediatric critical care nurses and physicians to prevent burnout, Wei et al. (2020) noted that work relationships, which include support, helped the medical professionals feel valued. In a systematic review of healthy work environments for nurses, Wei et al. (2018) noted that a work culture that included support was important for a healthy work environment. Further, they suggested that in developing a healthy work environment, organizations should take steps including helping staff feel that their work is important and appreciated (Wei et al., 2018).

Few studies highlight recognition in nursing faculty or faculty in general. Two qualitative studies noted a lack of recognition experienced by interviewed nursing faculty; one mentioned lack of recognition from other nurses (Corral-Mulato et al., 2010; McAllister et al., 2011). Feeling valued had a negative relationship with emotional exhaustion in assistant professors of pediatrics (Duke et al., 2020). Higher esteem and security rewards contributed to decreased mental health symptoms in university faculty, and a lack of recognition by coworkers was considered high risk for stress in university professors (Kinman, 2019; Biron et al., 2008).

More literature examined the impact of recognition on stress and burnout in nurses and healthcare workers. Several studies found a negative relationship between personal or professional recognition and burnout in nurses; Calabro et al. (2019) found that praise and recognition were the most important organizational factors to prevent burnout in nurses (Kelly & Todd, 2017; Lee & Akhtar, 2011; Dixon et al., 2017). McMillian et al. (2016) noted that reward,

which included recognition, was connected to burnout and independently predicted cynicism. Mattering, encompassing feelings of being valued and appreciated, was tied to lower burnout scores (Haizlip et al., 2020). Recognition was also negatively correlated with stress; in fact, in one study, recognition lowered the odds of stress around 21-22 percent, depending on the demands and control levels within the work setting (Abualrub& Al-Zaru, 2008; Garcia-Herrero et al., 2017; Isikhan et al., 2004).

Recognition by both coworkers and supervisors had an impact on stress and burnout. As previously noted, lack of recognition by coworkers was a high risk for stress in college professors (Biron et al., 2008).Haizlip et al. (2020) noted that recognition by peers led to nurses' feelings of mattering. Sandrin et al. (2019) noted that low supervisor recognition increased the effects of workaholism on emotional exhaustion. Lack of appreciation by a boss led to increases in stress scores (Isikhan et al., 2004). One study compared coworkers to supervisors, finding that coworker recognition was twice as likely to impact "positive psychological functioning" as recognition from a supervisor (Merino & Privado, 2015, p.1).

While there is a correlation between recognition and stress and burnout, few studies describe what nurses would consider meaningful recognition or investigate the impact of a recognition or appreciation intervention on stress and/or burnout. Three studies delved into recognition strategies to determine which would be considered meaningful by nurses. Ernst et al. (2004) found several types of recognition that studied pediatric nurses wanted, including individual feedback, letters from higher leadership, including the nurse in decisions, and recognition in a newsletter. Another study determined the top 10 recognition activities considered meaningful, including a pay raise, paid leave to attend classes, private feedback and a newsletter (Cronin & Becherer, 1999). Salvant et al. (2020) noted variations between

generations, with generation X and boomer nurses and support staff desiring written and public acknowledgement, and private verbal feedback, more than millennials. One element of written acknowledgement was unit and hospital newsletters, which averaged a 4.1/5 score with generation X and boomers in the study. Adams et al. (2019) included a kudos board and thank you card program as part of a larger cultural change toolkit; participant burnout scores decreased but the impact of the two recognition strategies alone on burnout was not investigated. Three studies utilized a DAISY award nomination or win as an indication of meaningful recognition; all three found an impact on burnout, though two looked at burnout as part of compassion fatigue (Kelly & Lefton, 2017; Kelly et al., 2015; Kelly & Todd, 2017).

The literature supports that recognition has an impact on burnout and stress in workers within several disciplines. Additionally, the literature indicates that support underlies recognition and appreciation. However, little of the literature focuses on the impact of specific recognition activities and only one or two strategies are investigated.

Market/Risk Analysis

Strengths, Weakness, Opportunities, and Threats

A SWOT analysis, or an analysis of strengths, weaknesses, opportunities and threats, ensures that factors within and outside of an organization are assessed (Fortenberry, 2010).An analysis of strengths, weaknesses, opportunities, and threats at Sacramento State related to this DNP project is provided in Table 1.

Table 1

SWOT Analysis

Strengths	Weaknesses
• DNP project mentor is chair of the department • DNP student/investigator currently a	• No direct funding for intervention • Some faculty indicate they are not motivated by recognition

nursing faculty member at Sacramento State • Faculty already show informal appreciation and recognition • Initial faculty support • Provided a chance for informal faculty interaction when working remotely	• Increased workload due to changes from COVID-19 pandemic • Lack of formal recognition program in SON • Mostly virtual for the Fall 2020 semester
Opportunities • COVID-19 pandemic	Threats • COVID-19 pandemic

This DNP project had several strengths. The DNP student/investigator was a current Sacramento State nursing faculty member, which may have assisted with buy-in for the project from faculty. The chair of the nursing department served as the DNP student's project mentor, which demonstrated leadership support for this project. Nineteen faculty agreed to be interviewed about stress, burnout, and recognition, showing at least initial support for the project. These interviewed faculty noted ways that they already provided appreciation and recognition to other faculty, indicating that the faculty did find value in providing recognition. Additionally, this project provided an opportunity for faculty to informally meet and check-in with each other as most work was being conducted remotely or off-campus during the Fall 2020 semester.

Weaknesses for this project included a lack of financial support for the project. The DNP student paid for MBI licenses utilizing a bulk and student discount. Additionally, at least two interviewed faculty noted that they were not motivated by recognition. In the Spring 2020 semester, several clinical sites stopped hosting students due to the COVID-19 pandemic. Over 200 student incompletes were completed in the summer and early Fall, but student progression schedules were altered during the Fall and subsequent semester. Additionally, most courses and activities at Sacramento State were held virtually in the Fall 2020 semester. The extra workload resulting from these factors may have led to faculty feeling that they did not have the time or

energy to participate in the intervention. Additionally, the SON lacks a formal recognition program, which would require the program for this project to be built from scratch.

The COVID-19 pandemic presented both an opportunity and threat to this project. It was an opportunity in that it changed the way the SON at Sacramento State operated, leading to a significant shift from in-person to virtual classes and faculty meetings. This altered the way support was provided by faculty and impacted the provision of recognition. Since these changes continued during the Fall 2020 semester, this presented an opportunity to address a unique need for virtual support, recognition and appreciation while faculty worked remotely.

The pandemic also presented a threat to this project. There was awareness throughout the Fall 2020 semester that clinical sites might be lost or difficult to secure, and that any approved in-person courses could be forced to transition to virtual at any point during the semester. One course did have difficulty securing clinical placements. Planning for worst case scenarios may have resulted in increased workload for faculty and may have caused them to feel that they were too busy to participate in this project.

Driving and Restraining Forces

Lewin posited that change occurs when the forces driving a change are greater than the restraining forces pushing back against change (Zaccagnini &White, 2017). Driving forces included the increased need for social support as faculty work moved online due to COVID-19, faculty dissatisfaction with some current recognition practices at the college and university level, and a lack of a formal recognition program in the SON. Restraining forces included the additional workload and stress resulting from changes caused by the COVID-19 pandemic, faculty who may not consider recognition important or motivating and faculty who may not want to actively participate within the SON.

Needs, Resources, and Sustainability

There were several needs in completing this project. A critical need was support and participation from faculty and leadership. As most of the faculty activities, including many courses and faculty meetings, were conducted online in the Fall 2020 semester, there was a need for technological tools that ensured delivery of the intervention. This included an online platform for faculty to meet and socialize in groups. There was also a need for technology that allowed faculty to communicate recognition information to this DNP student/investigator and for this DNP student/investigator to disseminate recognition in several settings.

Resources for this project included robust technological tools such as Microsoft 365, Qualtrics, and Zoom that were available at no cost to faculty through the university. This DNP student/investigator also interviewed and had access to a Sacramento State Information Technology consultant who had experience with several of the tools and staff recognition interventions (A. Stiffler, personal communication, May 21, 2020). As discussed in the strengths section of the SWOT analysis, there was leadership and initial faculty support for the project.

Sustainability of the recognition and appreciation program after the Fall 2020 semester was an important consideration. As noted in the SWOT analysis, one weakness of this project was a lack of funding for the recognition intervention. With budget challenges at the university, funding for this intervention in the future is unlikely. Therefore, careful consideration was given to using free or very low-cost recognition activities in the hopes of maintaining the program even if future funding was not provided.

An additional concern for sustainability is workload. Much of the work of implementing the recognition program, including collecting and disseminating faculty achievements, developing a newsletter, and organizing and hosting virtual events was completed by this DNP

student/investigator as part of her DNP project. This DNP student/investigator continued virtual coffee breaks and sharing faculty activities and achievements during the Spring 2021 semester as part of her required clinical hours. Sustainability beyond the Spring 2021 semester will require someone to volunteer to maintain the program, funding via stipend or unit release for faculty managing the program, or alterations to the recognition program that limits the workload of any one person. Alterations to the program are likely when Sacramento State returns to in-person classes and faculty activities and consideration of workload will be part of these alterations.

Feasibility, Risks, and Unintended Consequences

Several factors impacted the potential feasibility of this project, including the COVID-19 pandemic, costs, and faculty support, workload, and energy. With the transition to remote work during the pandemic, the recognition and appreciation program could include only virtual interventions. Additionally, as there was no funding, interventions needed to be no or very low cost to be included in the project. To gain faculty support, the interventions needed to provide desired recognition and appreciation. Also, the interventions could not be too time- or energy-consuming as faculty already had increased workload due to the pandemic.

There were also risks and possible unintended consequences associated with this project. There was a risk that the selected interventions would not provide the recognition and appreciation desired by nursing faculty. Also, provided recognition had the potential to cause embarrassment, particularly if a faculty who preferred private recognition received public praise. A potential unintended consequence for the project was that nursing faculty may feel less appreciated if they were not included in a SON specific recognition and appreciation program.

Stakeholders and Project Team

Stakeholders of this project included all nursing faculty who worked in the SON at Sacramento State during the Fall 2020 semester. While garnering feedback from all faculty was not feasible for this project, 19 current nursing faculty were interviewed. Faculty provided information about their perceptions of stress and burnout personally and amongst other faculty. Twelve of those faculty also provided valuable feedback about current recognition practices and completed an additional survey about what practices would be meaningful to them. This information helped in the formation of the recognition and appreciation program. The team for this project was comprised of the DNP student/investigator, the DNP Capstone Project Chair, and the DNP clinical mentor, who is the chair of the SON at Sacramento State.

Cost-Benefit Analysis

As noted previously, the literature confirms a negative relationship between recognition and stress and burnout (Kelly & Todd, 2017; Lee & Akhtar, 2011; Calabro et al., 2019; Dixon et al., 2017; & Al-Zaru, 2008; Garcia-Herrero et al., 2017). Additionally, several studies tied at least one aspect of burnout to turnover intention of nursing faculty or nursing education leaders (Yedida et al., 2014, Flynn & Ironside, 2018; Aquino et al., 2018). Therefore, the cost of not demonstrating recognition for nursing faculty is that they may leave their job.

While specific costs to replace one nursing faculty member cannot be located, the literature does provide some information to help estimate the cost of faculty turnover. Bland Jones and Gates (2007) noted that nurse turnover could cost at least 75 percent of a nurse's salary, and range well over 100 percent. Applying the 75 percent standard to the minimum annual salary for a tenure track nursing faculty member at Sacramento State, replacement of a tenure-track nursing faculty member could cost at least $54,351 (Sacramento State, 2019b).

The cost of the recognition and appreciation program was significantly less than this, creating the possibility for a significant return on investment. Much of the recognition and appreciation program used resources provided at no-cost to Sacramento State faculty by the university, including Zoom and Microsoft 365, that could be utilized to continue the recognition program in the future (Division of Information Resources and Technology, Sacramento State, n.d.). Virtual events, the newsletter, and submission of the faculty achievements to the School of Nursing Facebook page or university bulletin did not incur any costs. One of the instruments used to measure stress-the Perceived Stress Scale 10 (PSS-10)- is free for educational use. The one cost during the project implementation was 100 dollars for 50 remote MBI survey licenses, which included a 25 dollar discount for students using the instrument for research.

Cost considerations for this program in the future would include subsequent purchases of the MBI and payment for a faculty recognition coordinator. The MBI costs 2.50 dollars per test with a minimum of 50 (Mind Garden, n.d.). This cost would only be incurred in the future if these tools were used at designated intervals for benchmarking the continued impact of the recognition and appreciation program. While not incurred during this project, funding for someone to manage the program may be required for continuation of the program. The amount of release units or a stipend would need to be negotiated, but the cost of this would still be well below the cost incurred by turnover of faculty. A breakdown of project costs, and projected costs for replication are addressed in Appendix B.

Project Objectives

Mission and Vision

The mission of this DNP project was to decrease stress and burnout in nursing faculty through the implementation of a recognition and appreciation program. The vision of this project

was that resulting decreases in nursing faculty stress and burnout will decrease personal and system-level repercussions, including faculty turnover.

Goals

The primary goal of this DNP project was to see a statistically significant decrease in stress and burnout in nursing faculty at Sacramento State, ideally, through the implemented recognition program. Processes and outcomes were utilized to achieve this goal and are discussed as part of the larger logic model for this project.

Logic Model, Processes and Outcomes

A logic model served as a useful tool for crafting and implementing an intervention to address nursing faculty stress and burnout. Additionally, the logic model included specific outcomes with benchmarks and discussed the activities that made up the processes for achieving those outcomes. Appendix C provides the full logic model used for this project, but components of the model will be discussed here.

As part of this project, several assumptions were made. This included that nursing faculty at Sacramento State valued recognition and appreciation, wanted to receive it, and conducted work and activities that warranted recognition. There were also assumptions that nursing faculty at Sacramento State would choose to provide recognition to fellow faculty and that faculty would be able to use the online tools needed to participate in the virtual recognition activities.

Several resources were required for this project, including nursing faculty and supplies. Nursing faculty included both part-time and full-time faculty who could participate in the surveys and/or the recognition and appreciation intervention. Faculty to present at lunch and learns were also necessary. One faculty member- in this case the DNP student/investigator- managed logistics for the intervention, such as collecting information from faculty about

achievements, disseminating those achievements, and coordinating the virtual events. Supplies for the intervention included Sacramento State email, Zoom, Canva, and Microsoft Forms, and information about appreciation suggestions. The MBI and PSS-10, Qualtrics, and SPSS-27 were used for data measurement and analysis.

With the necessary resources, the DNP student/investigator completed several activities as part of the overall recognition/appreciation intervention. These activities included recruiting faculty to participate in the survey component of the project by taking the MBI and PSS-10 pre- and post- intervention. All faculty, regardless of participation in the surveys, were encouraged to actively participate in the recognition and appreciation program. Faculty used a Microsoft form to submit achievements and activities to the DNP student/investigator. In addition, the DNP student researched current faculty activities, such as upcoming presentations or recently published articles. With faculty permission, the DNP student/investigator included these achievements in a monthly newsletter and/or submitted faculty achievements to the SON Facebook page and the university Professional Activities page. The monthly SON newsletter developed by the DNP student/investigator included information about recognition and appreciation and ideas for appreciation that faculty could use on their own. One idea was a link to a website for sending free e-cards. Additionally, the DNP student/investigator organized and hosted virtual events including virtual coffee breaks one to three times a week and two lunch and learn/social hours.

These activities were developed to lead to expected outputs, including at least 15 nursing faculty completing the pre- and post-intervention MBI and PSS-10 and at least 15 to 20 faculty providing appreciation to other faculty. Through this, it was expected that at least 22 nursing faculty-about 35 percent- would receive a form of appreciation they found meaningful.

The outputs were expected to contribute to the larger outcomes of this project. One outcome was that at least 35 percent of faculty would receive at least one instance of recognition or appreciation by the end of the intervention. Novak (2019) noted an O.C. Tanner survey that found that 35 percent of workers had been recognized in the last year; this project sought to surpass this benchmark by accomplishing this in three months. Another desired outcome through this appreciation intervention was a statistically significant decrease in the stress and burnout scores of nursing faculty at Sacramento State from pre- to post- intervention. This outcome would particularly demonstrate whether the goal of this project had been achieved.

In developing the logic model and project, it was hoped that the project would prove beneficial and lead to continuation of the program beyond the three-month intervention period. In the long-term, the goal was that increased appreciation would lead to higher retention and sustained decreases in the levels of stress and burnout experienced by nursing faculty. In addition, the intervention would hopefully continue and expand through funding from the Dean's office to other departments within the university.

While successful implementation of the project was desired, potential constraining factors were considered. These included a one semester timeline for the intervention, a limited budget for supplies, and perceptions of faculty that they were too busy to participate in the appreciation interventions. Faculty may have also viewed that recognition or appreciation was not important, or that the strategies included in the intervention were not personally meaningful. Constraints from changes due to the COVID-19 pandemic included increased workload, little to no classes on campus, and limited informal interaction amongst faculty.

Project Plan and Evaluation

Population/Sampling Parameters

This DNP project was conducted in the SON at Sacramento State with nursing faculty. Inclusion criteria was nursing faculty scheduled to work in the stateside SON program at Sacramento State in the Fall 2020 semester as of the first day faculty returned to work- August 26th, 2020. Exclusion criteria was nursing faculty not scheduled to work in the stateside nursing program in the SON at Sacramento State in the Fall 2020 semester as of August 26th. This included any nursing faculty teaching exclusively in another department, such as nursing courses through the College of Continuing Education, and any current faculty not assigned to teach in the Fall 2020 semester. The DNP student/investigator was also excluded from participation in the study. Sixty-three nursing faculty met inclusion criteria, including 24 full-time faculty and 39 part-time faculty (T. Altmann, personal communication, September 29, 2020).

The choice to include faculty scheduled to work during the semester was made due to the COVID-19 pandemic. As a result of the pandemic, clinical placements were difficult to locate. While in the process of planning the intervention, there were still classes without secured clinical placements. If alternatives could not be located, it was possible that faculty scheduled to teach might not actually teach. However, some of these clinicals did not start until halfway through the semester and given the confidentiality of the surveys for this project, it would have been impossible to eliminate any pre-intervention surveys if a faculty's work assignment was eliminated mid-semester. Selecting the first day faculty return to work as a cutoff attempted to limit the amount of faculty included in the project who did not work during the Fall 2020 semester. To this DNP student/investigator's awareness, all faculty scheduled to work in the Fall 2020 semester did work during the semester.

Participation in a pre-and post-intervention survey to measure the impact of the recognition and appreciation intervention on stress and burnout was voluntary. Additionally, nursing faculty were not required to participate in the surveys in order to participate in the recognition and appreciation program.

Population size was an important aspect of determining sample size and type for this project. Brians et al. (2010, as cited in Terry, 2018) notes that a sample should only be used if more than 100 individuals are a part of the population being studied; if not, the entire population should be studied. This is a type of purposive sampling called total population sampling, which can be used when there is not a large population (Etikan et al., 2016). With 63 nursing faculty, this population falls under the suggested threshold. Therefore, a sample was not used and all nursing faculty working in the stateside SON program at Sacramento State in the Fall 2020 semester were included. Inclusion of the entire nursing faculty at Sacramento State had positive implications. Non-random sampling leads to a concern for researcher bias and a lack of representativeness (LoBiondo-Wood & Haber, 2013 as cited in Terry, 2018). However, including the entire population controlled for these concerns.

A power analysis was not conducted for this DNP project. Power analysis is commonly used to determine the sample size needed for a study (University of California, Los Angeles, Institute of Digital Research & Education, Statistical Consulting [UCLA], n.d.b). Since the entire population was eligible to participate in the project, determination of a sample size was not needed.

Project Methodology and Measurement

This DNP project was a pre-/post- interventional quality improvement project examining the impact of a recognition and appreciation intervention on the stress and burnout of nursing

faculty at Sacramento State (Thiese, 2014). As noted previously, all nursing faculty who worked in the stateside SON program at Sacramento State in the Fall 2020 semester were included in the project. A timeline for this project is provided in Appendix D. Faculty were recruited via an email sent to each eligible nursing faculty's university email address describing the project. A follow-up email was also sent and the DNP student/investigator also made an announcement about the project at the start of year SON retreat. An information sheet that outlined the project, time burden, risks, and confidentiality was provided at the start of the pre-survey. Participation in the surveys was voluntary and all survey data was collected through online questionnaires administered via Qualtrics.

The appreciation intervention was comprised of two main elements- virtual events that provided a chance for faculty support and recognition and a centralized process of disseminating achievements both among and outside the faculty group. Due to the COVID-19 pandemic, most courses and faculty work was conducted in the online setting. A mix of virtual events allowed faculty to provide the support the literature described as part of recognition and appreciation. Virtual events included combination lunch and learns/social hours where faculty presented their work to other faculty and coffee breaks. There were one to three virtual coffee breaks held each week during the project and two combination lunch and learn/social hours were held over the course of the semester.

To centralize the process of disseminating faculty achievements, this DNP student/ investigator solicited information on recent publications, awards, and activities from nursing faculty via a Microsoft Form that was available to faculty. This investigator also conducted online research of faculty activities and achievements and contacted faculty via email for permission to share the information. With faculty permission, these achievements were compiled

into a monthly newsletter sent to all nursing faculty, submitted to the university Professional Activities page available to all faculty at the university, and/or posted on the SON Facebook page. In addition to faculty accomplishments, the faculty newsletter presented suggestions for other ways faculty can show appreciation to each other, including information about how to send e-cards. While not the most popular recognition intervention in the literature, newsletters were noted by Ernst et al. (2004) as among the highest ranked recognition activities and in the top 10 desired recognition activities by Cronin and Becherer (1999). Newsletters also had an average score of 4.1/5 from generation X and boomer nurses and support staff in a study by Salvant et al. (2020). All nursing faculty, regardless of participation in the survey component of the project, were eligible to participate in the appreciation and recognition activities.

Measurement was an essential component to determining the success of the intervention on nursing faculty stress and burnout. The independent variable of this DNP project was the recognition and appreciation program implemented for nursing faculty. The dependent variables were stress and burnout, as measured by the 10-question version of the Perceived Stress Scale (Appendix E) and the 22-question Educator Survey version of the MBI (Appendix F), respectively. The PSS-10 generates a total score, while the MBI generates a score for each of three subscales- emotional exhaustion, depersonalization, and personal accomplishment. As previously discussed, the instruments were administered prior to and after the implementation of the recognition and appreciation intervention.

In addition to the independent and dependent variables, participation in the recognition and appreciation program and demographics were measured. Demographics included age, number of units taught during the semester, years teaching nursing, and tenure status (tenured, tenure-track [clinical or academic], or non-tenure track). Other demographics, such as gender

and race/ethnicity, were not included because responses to these questions, in combination with other demographics, could have allowed for deduction of specific faculty and prevented participant anonymity. Combinations of variables were analyzed by this DNP student/investigator to determine which variables could be included in the demographics questionnaire and maintain faculty anonymity. This reduced the demographics questions to those outlined above. These questions were sent to the chair of the nursing department at Sacramento State to confirm that individual faculty could not be deduced based on the answers. In the post-surveys, participating faculty were asked to indicate ways they gave and received recognition through the program and if the received recognition was meaningful to them. This information was used a means of confirming that faculty participated in the recognition and appreciation program and that the interventions were considered meaningful by faculty.

Protection of Human Rights

As this project includes human subjects, there were several important responsibilities to ensure their protection. These included ensuring confidentiality and preventing undue influence and embarrassment. Resnik (2016) notes that while employees are not considered a vulnerable population by federal standards, they are at risk of undue influence if there is direct pressure to participate in a project at their workplace, or even perceptions that they may be viewed negatively or punished for not participating in the project. This DNP student/investigator's DNP clinical mentor is chair of the nursing department, which could have led to perceptions of pressure if she encouraged faculty to participate in the project. Safeguards recommended by Resnik (2016), such as inclusion of clear language in the informed consent that participants can choose not to participate without penalty, limitation of supervisor-employee discussions about the research, and maintenance of confidentiality were incorporated into this project. An

information sheet provided at the beginning of the pre-survey informed faculty that participation was voluntary. All communication about the project and the program came from this DNP student/investigator, and careful consideration, such as discussed in regards to the demographics questions, was given to how to ensure confidentiality.

Within the intervention, efforts were taken to limit possible embarrassment and maintain confidentiality. Confidentiality was maintained through the use of a participant-generated passcode that was used when completing the pre- and post-surveys. This would limit connecting responses with an employee by name. To limit embarrassment nursing faculty may experience if they received a form of recognition they found embarrassing, the Microsoft Form faculty completed with their achievements and activities allowed for feedback about how the provided information would be disseminated.

As part of this project, this DNP student/investigator completed required Collaborative Institutional Training Initiative training (Appendix G), received a letter of support from the SON at Sacramento State (Appendix H) and submitted this project for Institutional Review Board (IRB) review. A decision tree through the Sacramento State IRB indicated that this project did not require review by the board and this decision was affirmed by the IRB administrator (Appendix I) . This project was also submitted to the IRB at Regis University and was considered to not meet the standard of human subjects research (Appendix J).

Instrumentation Reliability and Validity

The MBI and PSS-10 were appropriate instruments to measure burnout and stress, respectively. Cohen and Williamson (1988) found that the PSS-10 had a Cronbach's alpha of 0.78 and the PSS measured perceptions of stress. Maslach et al. (1997) noted acceptable Cronbach's alpha scores for depersonalization and personal accomplishment on the MBI (0.79

and 0.71, respectively) and good to excellent for emotional exhaustion (0.90); the MBI was also validated.

The MBI has been found as a valid and/or reliable instrument in a variety of disciplines, including with nurses in numerous countries (Pisanti et al., 2013; Langballe et al., 2006; Lee et al., 2013; Poghosyan et al., 2014). While research validating the MBI with nursing faculty could not be located, the MBI has been used as a measure for burnout in several studies of nursing faculty (Flynn & Ironside, 2018; Kizilci et al., 2012; Yedida et al., 2014). Hence, this increased confidence that the MBI was appropriate as a tool for measuring burnout in this faculty group. The PSS has also been found valid and reliable in a variety of countries and settings; however, some studies find the 10-question form of the PSS to be the most valid and reliable (Manzar et al., 2019; Lee et al., 2015). While only one study examining the validity and reliability of the PSS with nurses could be located, the PSS has been used in several studies of nurses (Sandhu et al., 2015; Mahon et al., 2017; Montanari et al., 2019).

Test-retest reliability is one limitation with using the PSS-10 and MBI for this three month project. A systematic review by Lee (2012) noted acceptable test-retest reliability of the PSS at up to four weeks; at six weeks, the r fell below acceptable levels to 0.55. The test-retest reliability of the MBI over several months is mixed. One study found test-retest reliability ranging from 0.27 to 0.57 on each of the three elements of burnout for nurses and from 0.55 to 0.72 for teachers across six months; the correlations were statistically significant in all three areas for both professions and the authors noted that scores were stable over the time period (Richardsen & Martinussen, 2004). Dignam and West (1988 as cited in Schaufeli et al., 1993) used a model and "found a 'true' autocorrelation of 0.80 of the composite emotional exhaustion and depersonalization score across a 3-month interval" (p.209). In discussion of four articles

about test-retest reliability, Schaufeli et al. (1993) notes, “In all studies, emotional exhaustion appeared to be the most stable burnout dimension, whereas depersonalization was the least stable dimension” (p.209). Based on this information, lack of high levels of test-retest reliability at three months could limit connecting changes in nursing faculty stress and burnout scores to the recognition and appreciation intervention.

Intended Statistics

As previously described, demographics questions regarding age, tenure status, years teaching nursing, and number of units taught by part-time faculty in Fall 2020 were included on the pre-survey. This data would be considered ordinal level data as responses can be ordered or ranked. For example, selection of teaching nursing five to ten years would be more than the less than five years option, but less than the more than ten years selection. Questions on the post-survey asked participants about the recognition they gave during the program, received during the program, and if the recognition received was meaningful. This would be considered nominal level data as selections cannot be ranked or ordered and no selection is better or worse than another. For nominal and ordinal level data collected as part of this project, frequencies and percentages were calculated.

The MBI and PSS-10 were used to measure burnout and stress, respectively, before and after the intervention. Both the PSS-10 and MBI utilize Likert scales. The PSS-10 uses a scale from zero to four with zero representing never experiencing certain feelings in the last month and four representing experiencing those feelings very often in the last month (Cohen, 1994). The MBI uses a zero to six range to indicate a frequency of experiences from never to every day, respectively (Mind Garden, n.d.). While this type of scale would be consistent with ordinal-level data, Bishop and Herron (2015) note that some have argued that Likert scales can produce

interval-level data. Polit (2010) also noted that psychosocial measures are often viewed as providing interval-level data. There does not seem to be consistency with the type of statistical test run with data from these tools in the literature. However, t-tests, usually used with interval level data, have been used in previous studies of the MBI and PSS-10 (Leung et al., 2010; Wong et al., 2018; Mahon et al., 2017; Brady et al., 2012; Montanari et al., 2019). For this project, it was assumed that the MBI and PSS-10 generated interval-level data. However, the MBI and PSS-10 provided ratio-level data because there is a true zero as indicated by the selection of never on each respective instrument.

Since the MBI and PSS-10 provide ratio-level data and the same group of nursing faculty were to complete the pre- and post- surveys, a paired samples t-test was an appropriate test to determine if any changes from pre- to post-intervention achieved statistical significance (Kent State University, 2020; Walker & Almond, 2010). Nursing faculty created a self-generated passcode on the pre-intervention surveys that they were also supposed to use on the post- survey. This was decided to allow for the data to be paired while still maintaining confidentiality. The paired samples t-test was run for all PSS-10 and MBI questions, the total PSS-10 score and each of the three subscales of the MBI-emotional exhaustion, depersonalization, and personal accomplishment. Initially, a multiple regression analysis using the information collected in the demographics survey was planned with dummy coding for categorical variables such as tenure status; however, as discussed in the project findings, this could not be completed (Pourhoseingholi et al., 2012; Polit, 2010; UCLA, n.d.a).

Data Collection and Treatment

As previously discussed, both the pre- and post- surveys were administered via Qualtrics. The pre-survey was open from August 26 to September 7, 2020. The post-survey was open from

November 30-December 11, 2020. Once data was collected, the DNP student/investigator scored the PSS-10 and MBI and recorded the scores. This included reverse scoring four PSS-10 questions and calculating the total PSS-10 score. With the MBI, total scores were calculated for each of the three subscales. All data was entered into Excel; responses to the demographics and recognition questions were coded for entry into Excel. Statistical tests were run using SPSS-27.

With the paired samples t-test, considerations were given to the risk of missing data. Missing data was possible within each test if faculty did not answer all PSS-10 and MBI questions and at a time interval if faculty completed only one survey. Several efforts were taken to limit the amount of missing data. A forced response was used for all MBI and PSS-10 questions in both surveys to ensure that no questions were missed. Reminders were provided to encourage faculty to complete the pre- and post- surveys. Two emails and one verbal and written announcement during a faculty Zoom meeting were used to remind faculty to take the pre-survey, and reminders for the post-survey included two emails and short blurbs in one weekly flyer and one SON newsletter. These efforts were mostly effective. Only one pre-survey was not completed and there were no missed questions on any of the remaining pre- and post-surveys. Twenty-one faculty completed the pre-survey and 16 faculty completed the post-survey.

Traditionally, incomplete data are excluded from analysis using a paired samples t-test (Guo & Yuan, 2015). For this project, the one incomplete pre-survey was excluded from analysis. However, one challenge that arose during this project was an inability to pair most of the pre- and post- surveys because faculty could not accurately recall their self-generated passcodes. A paired samples t-test would require exclusion of all unpaired surveys; however, this exclusion comes with risks (Guo & Yuan, 2015). Guo and Yuan (2015) evaluated different methods of attempting to analyze unpaired data and found that with small sample sizes and data

missing from one time point, the paired samples t-test worked the best. There were five less post-surveys than pre-surveys, so most data was missing from one point in time.

However, this investigator received multiple emails from faculty who reported that they forgot their passcode or were unsure that they used the correct one on the post-test. This investigator requested those faculty complete the post-survey even if they could not recall their passcode. This indicated that some of the unpaired surveys were actually pairs. Assuming that all faculty who completed a post-survey completed a pre-survey, there would be 16 pairs; however, only five pairs could be matched according to passcodes. To try to include as much data in the analysis as possible, the paired samples t-test for this project was run twice- once using only the five paired pre- and post- surveys and once with 16 pairs made from pairing the first 11 submitted unpaired pre-surveys with the 11 unpaired post-surveys and adding it to the original five pairs.

Project Findings and Results

As previously described, expected outputs for the project included participation by at least 15 nursing faculty in the pre- and post-intervention surveys, participation by at least 15 to 20 faculty in the recognition and appreciation program, and 22 faculty (approximately 35 percent) receiving recognition they found meaningful. These outputs were expected to contribute to the success of the outcomes of this project. The primary outcome was a statistically significant decrease in stress and burnout scores of nursing faculty between the pre- and post- surveys. Another desired outcome was that at least 35 percent of faculty would receive at least one instance of recognition.

Two of the three outputs were met. Twenty-one nursing faculty completed the pre-survey, and 16 faculty completed the post-survey. Twenty-one faculty participated in at least one

aspect of the recognition and appreciation program. However, this count only reflects those who participated in a virtual event or had an activity or achievement shared. It is possible that even more faculty were involved in the program by way of reading about faculty achievements and activities, praising faculty privately for these activities, using recognition strategies outlined in one of the monthly newsletters, or another strategy. Eleven of 16 faculty affirmed that they had received recognition through the program that was meaningful to them; however, this did not meet the desired output of 22 faculty receiving meaningful recognition. It is important to note that receipt of meaningful recognition was measured by a question on the post-survey, so it is possible that this output may have been achieved if faculty who did not complete the post-survey also received meaningful recognition.

One of the two desired outcomes was partially met. The only way faculty receipt of recognition was measured during the project was through a question on the post-survey. As only 12 faculty indicated they received recognition on the post-survey, this did not meet the threshold of 35 percent of the nursing faculty (approximately 22 faculty). However, as with the outputs, additional faculty may have received recognition through the program but did not complete the post-survey. There were statistically significant decreases in some aspects of stress and burnout. This will be further described in the discussion of the results.

Demographics of the Sample

Demographics data was collected on 21 nursing faculty during the pre-survey. Four faculty were 40 years of age or under (19%) and 17 were 41 years of age or above (81%). There was a fairly equal split among responses by tenure status, with eight tenured faculty (38.1%), seven tenure-track faculty (33.3%), and six non-tenured, part-time faculty (28.6%). For units taught during the Fall 2020 semester, 15 (71.4%) faculty were tenured or tenure-track and did

not receive this question, four (19%) taught less than six units, and two (9.5%) taught six units or more. Six faculty had taught nursing for less than five years (28.6%). Four (19%) had taught nursing for five to 10 years, and 11 (52.4%) had taught nursing for more than 10 years.

Answering the PICO Question

This project sought to answer the PICO question: Compared to usual practice, will a meaningful recognition/ appreciation intervention decrease stress and burnout in nursing faculty at one four-year university? Inferential analysis of the data was completed through a paired samples t-test. This test was run two times. The first analysis looked at the five participants whose pre- and post- surveys could be paired. The second analysis looked at 16 pairs, which included the five pairs plus paired the first 11 unpaired completed pre-surveys with the 11 unpaired post-surveys.

In the first paired sample t-test with the five pairs, there was only a statistically significant change in the mean scores of PSS-10 question 10- In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? ($t= 6.000$, $p=0.004$). In the second paired sample t-test with 16 pairs, there were statistically significant changes in the mean scores of three instrument questions and one MBI subscale. There was a difference between the pre- and post-survey response to PSS-10 question 2- In the last month, how often have you felt that you were unable to control the important things in your life? ($t=2.298$, $p=0.036$), MBI question 8 ($t=2.333$, $p=0.034$), and MBI question 20 ($t=2.216$, $p=0.043$). Due to copyright, the wording of MBI questions 8 and 20 cannot be provided. There was also a difference between the pre- and post-survey MBI Emotional Exhaustion subscale ($t=2.262$, $p=0.039$).

Correlations

The Pearson's correlation test analyzed the pre- and post- survey PSS-10 questions, total PSS-10 score, MBI questions, and the three subscales of the MBI for significant relationships. Given the large number of variables, there were a large number of correlations that were considered statistically significant. The full list of correlations can be found in Appendix K but findings of particular value are included in Table 2 and described here.

Table 2

Correlations of Note

Variable	Variable	Correlation Coefficient	P-value
PrePSSTotal	PreMBIEE	0.793	p= 0.000
PrePSSTotal	PreMBIDP	0.648	p=0.001
PrePSSTotal	PreMBIPA	-0.574	p=0.006
PrePSSTotal	PostMBIEE	0.657	p=0.006
PrePSSTotal	PostMBIPA	-0.499	p=0.049
PostPSSTotal	PostMBIEE	0.709	p=0.002
PostPSSTotal	PostMBIPA	-0.536	p=0.032
PreMBIEE	PreMBIDP	0.539	p=0.012
PreMBIEE	PreMBIPA	-0.437	p=0.047
PreMBIEE	PostMBIEE	0.715	p=0.002
PreMBIDP	PreMBIPA	-0.670	p=0.001
PostMBIEE	PostMBIDP	0.518	p=0.040
PostMBIEE	PostMBIPA	-0.692	p=0.003
PostMBIDP	PostMBIPA	-0.529	p=0.035

For both the pre- and post- survey, the Emotional Exhaustion subscale of the MBI was positively correlated with the Depersonalization subscale (Pre: r= 0.539, p= 0.012; Post: r=0.518, p=0.040) and negatively correlated with the Personal Accomplishment subscale (Pre: r= -0.437, p=0.047; Post: r= -0.692, p=0.003). The Depersonalization subscale was also negatively correlated with the Personal Accomplishment subscale both pre- and post- survey (Pre: r= -0.670, p=0.001; Post: r= -0.529, p= 0.035). The pre-survey Emotional Exhaustion score was

positively correlated with the post-survey Emotional Exhaustion score (r= 0.715, p=0.002). This reinforces Maslach et al.'s (2001) assertion that the three burnout subscales are connected.

While it was not surprising to find correlations within each instrument, there were correlations between the two instruments that were of interest. The pre-survey PSS-10 total score was positively correlated with the pre-survey MBI Emotional Exhaustion (r=0.793, p=0.000) and Depersonalization subscales (r= 0.648, p=0.001) and negatively correlated with the pre-survey Personal Accomplishment subscale (r=-0.574,p=0.006). The post-survey PSS-10 total score was positively correlated with the post-survey Emotional Exhaustion subscale (r=0.709, p=0.002) and negatively correlated with the post-survey Personal Accomplishment subscale (r=-0.536, p=0.032); the correlation with the post-survey Depersonalization subscale did not meet statistical significance. These correlations would indicate that stress is connected with burnout in this group of nursing faculty.

Reliability of Findings

An internal reliability test was run to determine the Cronbach's alpha for the PSS-10, the MBI, and each of the three subscales of the MBI. As demonstrated in Table 3, the Cronbach's alpha for the PSS-10 and the Emotional Exhaustion and Personal Accomplishment subscales of the MBI were higher than the Cronbach's alpha located in literature by the authors of the respective instruments. The Depersonalization subscale of the MBI was less in this study than in the literature. The internal reliability of all components of the instruments used in this project was considered at least acceptable, while the reliability of the PSS-10 and MBI Emotional Exhaustion subscale would be considered very good (Ursachi et al., 2015).

Table 3

Cronbach's Alpha Results

Category	Project Cronbach's alpha	Cronbach's alpha in the literature
Perceived Stress Scale-10	0.870	0.78 (Cohen & Williamson, 1988)
Maslach Burnout Inventory-Emotional Exhaustion	0.960	0.90 (Maslach et al., 1997)
Maslach Burnout Inventory-Depersonalization	0.656	0.79 (Maslach et al., 1997)
Maslach Burnout Inventory-Personal Accomplishment	0.742	0.71 (Maslach et al., 1997)
Maslach Burnout Inventory-Overall	0.769	Not provided by the authors

Changes in Stress and Burnout

In addition to the paired sample t-test, the percentage change in the mean scores between the pre- and post- survey MBI and PSS-10 were calculated. This was calculated for each question of the PSS-10 and MBI, in addition to the total PSS-10 score and the scores on the three subscales of the MBI. This information is displayed in Tables 4-6**.** Due to copyright restrictions on the MBI, the results are presented as ranges with each subscale rather than for each question.

Table 4

Change in Mean Scores of Perceived Stress Scale-10

Question: In the last month, how often have you…	Pre-test mean (n=21)	Post-test mean (n=16)	Percentage change between pre- and post-surveys
1. been upset because of something that happened unexpectedly?	2.14	1.75	- 18.22%
2. felt that you were unable to control the important things in your life?	2.05	1.44	- 29.76%
3. felt nervous and "stressed"?	2.38	2.31	- 2.94%
4. felt confident about your ability to handle your personal problems? (reverse scored)	0.81	1.25	+54.32%
5. felt that things were going your way?(reverse scored)	1.29	1.38	+ 6.98%

Question: In the last month, how often have you…	Pre-test mean (n=21)	Post-test mean (n=16)	Percentage change between pre- and post-surveys
6. found that you could not cope with all the things that you had to do?	1.76	1.69	- 3.98%
7. been able to control irritations in your life? (reverse scored)	1.38	1.00	- 27.54%
8. felt that you were on top of things? (reverse scored)	1.52	1.31	- 13.82%
9. been angered because of things that were outside of your control?	2.05	1.56	- 23.90%
10. felt difficulties were piling up so high that you could not overcome them?	1.43	1.13	- 20.98%
Total score on Perceived Stress Scale	16.81	14.81	- 11.90%

Table 5

Changes in Mean Scores of Maslach Burnout Inventory Subscales

Subscale	Pre-test mean (n=21)	Post-test mean (n=16)	Percentage change between pre and post
Maslach Burnout Inventory Emotional Exhaustion	20.71	16.94	- 18.20%
Maslach Burnout Inventory Depersonalization	3.67	3.25	- 11.44%
Maslach Burnout Inventory Personal Accomplishment	36.10	38.5	+ 6.65%

Table 6

Changes in Mean Scores of Maslach Burnout Inventory Questions by Subscale

Subscale questions	Improvements	Range of changes in subscale questions between pre- and post-surveys
Maslach Burnout Inventory Emotional Exhaustion questions	Improvement in all subscale questions	-3.17% to -43.36%
Maslach Burnout Inventory Depersonalization questions	Improvement in all by two subscale questions	- 23.33% to +58.33%

Subscale questions	Improvements	Range of changes in subscale questions between pre- and post-surveys
Maslach Burnout Inventory Personal Accomplishment questions	Improvement in all but one subscale question	-8.04% to +23.10%

As demonstrated by Table 4, mean scores on eight of the 10 questions of the PSS-10 decreased between the pre- and post- surveys. Two questions-questions four and five- increased between the two surveys. Both of these questions are reversed scored, so increases in these indicated less confidence in handling personal problems and lower feelings that things were going one's way, respectively (Cohen, 1994).

The mean scores for the Emotional Exhaustion and Depersonalization subscales decreased between pre- and post-survey. There were decreases in the mean scores of all Emotional Exhaustion questions and all but two questions in the Depersonalization subscale. Increases in the Personal Accomplishment questions and subscale are considered improvements. The mean Personal Accomplishment subscale scores increased from pre – to post-survey with increases in the means for all but one question related to Personal Accomplishment subscale.

Recognition Results

On the post-survey, participants were asked to identify the ways they had given recognition during the program and ways they had received recognition during the program. Participants were provided with a list of options in which they could check all that applied. Additionally, participants were asked a yes or no question regarding if they had received recognition through the program that was meaningful to them. Sixteen participants answered these questions.

In terms of giving recognition during the program, five participants (31.25%) used a recognition strategy from the School of Nursing (SON) newsletter to provide recognition or appreciation to another nursing faculty. Eight (50%) recognized or praised a faculty about an accomplishment or activity that they had read about on the SON Facebook page, the Sacramento State Professional Activities page, or the SON newsletter. Eight (50%) attended a virtual event where at least one nursing faculty or their work was being recognized. No faculty (0%) selected that they had read about the activities and accomplishments of faculty in the SON newsletter, the SON Facebook page, or the Sacramento State Professional Activities page or that they had expressed appreciation of another faculty member during a virtual event. Three participants (18.75%) selected that they did not give recognition or appreciation as part of the program. Four faculty (25%) included a comment in the "Other" selection. These included a comment about attendance ("I did not attend") and three comments about ways of recognition other than the options provided ("I was aware of my personal accomplishments and received a lot of support from a peer";"I attended faculty meetings that I was not required to attend and gave recognition to several faculty members (chat function) for their valuable contributions to the meeting"; "The emails from Jennifer really made my day! She made us feel like a team during this stressful time.").

In terms of receiving recognition, nine faculty (56.25%) had one of their accomplishments or activities shared on the SON Facebook page, the Professional Activities page, or the monthly SON newsletter. Three (18.75%) were recognized as part of a virtual event. Six faculty (37.5%) were praised or recognized by another faculty for an accomplishment or activity in the SON newsletter, Professional Activities page, or monthly SON newsletter. Two faculty (12.5%) identified that another faculty had used a suggestion from the SON newsletter to

show them recognition and appreciation. No faculty (0%) noted that another faculty had noted something they appreciated about them during a virtual event. Four faculty (25%) selected that they did not receive recognition or appreciation as part of the program. Three faculty (18.75%) provided comments in the "Other" section. These outlined ways of receiving recognition other than the options provided ("I felt internal recognition due to this project. It made me aware of good things that I was doing. A faculty member also provided support"; "I was acknowledged several times for doing a little extra work for faculty of the School of Nursing"; "Just taking time to be together was amazing. Felt like I connected more with others.").

When asked if they received recognition or appreciation through this project that was meaningful to them, 11 faculty (68.75%) identified that they had, and five faculty (31.25%) identified that they had not. However, it should be noted that only one faculty who received recognition indicated that it was not meaningful; the other four faculty reported that they did not receive any recognition through the program.

Discussion

Overall, two of three outputs were met, and one of two objectives was partially met during this project. In looking at the PICO question, the answer is nuanced. There were changes to the mean scores on 31 of 36 areas of the MBI and PSS-10, including the total PSS-10 score and all three MBI subscales. This would indicate decreases in stress and burnout in the nursing faculty at this university. This supports the findings of Garcia-Herrero et al. (2017) that recognition lowered the odds of stress, though the 11.9 percent decrease in mean total stress scores was half the 21 to 22 percent decrease in stress estimated in that study.

However, many of these differences did not achieve statistical significance through the paired samples t-tests. There were statistically significant differences in the mean scores on

Emotional Exhaustion subscale of the MBI, along with two MBI questions, and one PSS-10 question, indicating that some elements of stress and burnout decreased after the implementation of a recognition and appreciation intervention. This would align with the findings of Duke et al. (2020), who found a negative relationship between feeling valued and emotional exhaustion. Over 68 percent of participants noted receipt of meaningful recognition, and emotional exhaustion in nursing faculty decreased before and after the program.

Additionally, most faculty considered the recognition received to be meaningful. As discussed in the literature review, the literature was limited as to effective recognition practices for nurses. However, this intervention included a newsletter, which Ernst et al. (2004) and Cronin and Becherer (1999) found was a type of wanted or meaningful recognition in nurses. This project further supports the use of a newsletter as a meaningful recognition tool. Being recognized through the newsletter, Facebook page or Professional Activities page was the most frequent form of recognition received by faculty during the program, and eight of nine faculty who were recognized in this way indicated that they received meaningful recognition.

Limitations

There were several limitations to this project, including the response rate, challenges with data pairing, and inability to connect decreases in stress and burnout to the appreciation program. Sixteen of 63 eligible faculty completed the post-survey. If it is assumed that all faculty who completed the post-survey also completed the pre-survey, this would amount to an overall response rate of 25 percent. Given the small response rate, the results may not be indicative of all nursing faculty at this university.

A significant limitation with this project was difficulty with pairing pre- and post- survey results. Faculty created their own passcode to use as an identifier between the pre- and post-

survey. However, to ensure confidentiality, there was no master list of which passcode corresponded with each nursing faculty. Unfortunately, after the three-month intervention, only five pre- and post-surveys had the exact same passcode. A few faculty reached out to the DNP student/investigator during the post-survey about forgotten passcodes, and the DNP student was able to assist one faculty to recall their passcode. To analyze additional data, a second paired samples t-test was run with 16 pairs. In addition to the five pairs, the first 11 unpaired pre-surveys that were submitted in Qualtrics were paired with the remaining 11 unpaired post-surveys. This strategy came with the risk of including faculty in the analysis who only completed the post-test or excluding faculty who completed both surveys. Additionally, there is a risk that faculty who completed the final survey did not complete the initial survey. Post-survey reminders requested that faculty who had completed the pre-survey complete the post-survey. However, due to the anonymity of the responses, reminders were sent to all nursing faculty.

Finally, while there were decreases in some aspects of stress and burnout in nursing faculty, this project did not prove that these decreases resulted from the recognition and appreciation program. It is possible that extraneous variable/s accounted for at least some of the decreases in stress and burnout scores seen in this project. Two of the five survey pairs were completed by faculty who indicated that they did not give or receive recognition in the program Both faculty experienced improvement in total stress and/or some burnout subscale scores, though neither had improvement in all four areas. These improvements could indicate other factors that impacted stress and burnout. Initially, a multiple regression analysis was considered to control for the demographics as possible extraneous variables. However, the sample size in this population was lower than the threshold experts suggest (Polit, 2010). Additional research with larger sample sizes will be needed to examine the impact of extraneous variables.

Recommendations

Continuation of the recognition and appreciation program for nursing faculty at this university is recommended. Decreases in the mean scores in 31 of 36 measures of stress and burnout, including statistically significant decreases in four measures, were seen before and after implementation of the recognition and appreciation program. However, additional research should be conducted to determine if the recognition and appreciation program caused these decreases, or if they were brought on by other factors. Further research should also be conducted to determine if other interventions, when combined with recognition and appreciation, could contribute to more significant decreases in nursing faculty stress and burnout.

This recognition and appreciation program was completely coordinated by the DNP student/investigator as part of her required clinical hours. For the future sustainability of the program, consideration must be given to who will coordinate the program and how this program can become part of that faculty's work responsibilities. To prevent adding additional workload to a faculty, it is recommended that the faculty coordinator receive one unit of release time each semester to manage the program. This recommendation was also recently suggested by a faculty participant in the program.

Implications for Change

As previously described, there are possible negative repercussions from stress and burnout in nursing faculty. One possible repercussion is exacerbation of a nursing faculty shortage. Previous literature has connected emotional exhaustion with nursing faculty intention to leave their jobs or nursing education (Yedida et al., 2014; Flynn & Ironside, 2018; Aquino et al., 2018). While this project did not calculate intention to leave in this population, there was a decrease in emotional exhaustion scores of nursing faculty after implementation of a recognition

and appreciation program. While further research would be required, the impact of the recognition and appreciation program on emotional exhaustion may also lessen turnover intention. This could be important to nursing education leaders who are looking for ways to decrease nursing turnover, particularly on restricted budgets.

This project supports that no- and low-cost strategies can be effective towards decreasing stress and burnout in nursing faculty. The only cost associated with this project was the cost of the MBI. All recognition and appreciation interventions utilized either free resources or those provided free of charge to all faculty at the university. Therefore, leaders can use these strategies even if they lack a significant budget. This may be especially important in current times as the COVID-19 pandemic has led to decreased budgets at this university and other colleges throughout the United States (California State University, Sacramento, 2020; Whitford, 2021).

Conclusion

Nursing faculty experience stress and burnout and are at risk for negative repercussions resulting from these experiences. This paper outlined the stress and burnout experiences of nursing faculty at one university. Utilizing theory and evidence from the literature, a recognition and appreciation program comprised of virtual events and sharing faculty activities and achievements was developed and implemented at the university. Data analysis demonstrates decreases in mean stress and burnout scores, though only a few decreases met statistical significance. Based on the impact of this intervention, continuation of the recognition and appreciation program is recommended.

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Zoom. (n.d.). *Zoom meeting plans for your business*. https://zoom.us/pricing

Appendix A

Sample of Systematic Review Table

STUDENT NAME: ___Jennifer Anderson____ Systematic Review Evidence Table Format [adapted with permission from Thompson, C. (2011). Evidence table format for a systematic review. In J. Houser & K. S. Oman (Eds.), Evidence-based practice: An implementation guide for healthcare organizations (p. 155). Sudbury, MA: Jones and Bartlett.]

Article/Journal	Carvalho, L.A., Thofehrn, M.B., de Souza, S.A.,,& Coimbra, V.C.C. (2016).Psychosocial risks at work of the nursing faculty and coping strategies. *Journal of Nursing UFPE, Recife, 10*(Suppl. 5):4356-63.	Kelly, L.A. &Lefton, C. (2017). Effect of meaningful recognition on critical care nurses' compassion fatigue. *American Journal of Critical Care, 26*(6), 438-444. doi: https://doi.org/10.4037/ajcc2017471
Author/Year	Carvalho, Thofehrn, de Souza & Coimbra, 2016	Kelly &Lefton, 2017
Database/Keywords	CINAHL Complete; Keywords: faculty OR educator, burnout, nurs	CINAHL Complete; Keywords: meaningful recognition, burnout, nurs*
Research Design	Descriptive, informative study, possible systematic review?	Quantitative, quasi-experimental study
Level of Evidence	Level 5: Systematic review of descriptive or qualitative studies	Level 3: Quasi-experimental study
Study Aim/Purpose	The authors identified the aim as identifying in the literature the psychosocial risks in the work of nursing teachers and what are the coping strategies they use.	The aim was to determine if meaningful recognition addressed compassion fatigue and increased compassion satisfaction
Population/Sample size criteria/Power	12 publications: 9 articles and 3 dissertations Inclusion criteria: published between 2004-2014; full text; available in Portuguese; original articles, systematic reviews, books, dissertations or	24 hospitals (14 with a DAISY award program and 10 without) and 726 nurses; Criteria: For hospitals with DAISY awards- had had award program for over 18 months, gave out 4 or more awards each year, and recognized nominees. For hospitals without the DAISY award—program not started.

	theses that met aim of study. Exclusion criteria: Not available in Portuguese, incomplete articles, not published between 2004-2014, and did not address question.	Criteria for those surveyed: nurses who work in adult ICUs at selected hospitals.
Methods/Study Appraisal Synthesis Methods	Virtual Health Library, Scientific Electronic Library and the Nursing Database used to find literature. Inclusion criteria, particularly available in Portuguese, may limit results. Review of how themes found in literature is vague. Article just notes that grouping was done of psychosocial risks and coping strategies. Without clear discussion of methods of evaluating literature for themes, evaluator bias is a concern.	Methods: emailed survey with Professional Quality of Life (ProQOL) tool (version 5), single item questions with 5 point Likert scale, and demographics questions. Asking about demographics allows the researchers to control for factors outside of meaningful recognition that may impact compassion fatigue or satisfaction. ProQOL is a developed tool, which may be validated. The single item questions may not be validated and a 5 point Likert scale may be too wide to account for nuances of compassion fatigue.
Primary Outcome Measures/Results	Over 90% of participants experienced psychosocial risks, including stress, work overload, self-esteem, anxiety. Coping strategies included alternative therapies to address stress, such as teas and florals. Activity, interactions with family and friends also noted as strategies.	Burnout was higher in those with increased stress from work, decreased satisfaction and enjoyment with their job. Those who had been nominated for a DAISY award were less likely to report burnout.
Conclusions/Implications	Implications: changes needed to address psychosocial risks experienced by nursing faculty.	Meaningful recognition could contribute to higher satisfaction and lower burnout.
Strengths/Limitations	Limitations: Limited	Strengths: Large n across a variety

	databases reviewed, and research from limited countries identified as limitations by the authors. Further, vague discussion of the evidence, which made it difficult to draw clear conclusions.	of hospitals, so results not limited to one hospital or health system. Limitations: The authors identified convenience sampling, a low response rate and responder bias as limitations. They also noted that they only looked at one method of meaningful recognition.
Funding Source	None identified.	Note at end of paper that study was financially supported in part by The DAISY Foundation.
Comments	Not a strong study. One of the few to discuss interventions used by nurse faculty addressing stress and burnout, but significant limitations	Being nominated, not just winning award had influence on burnout scores.

Article/Journal	Miyata, C., Arai, H., & Suga, Sawako. (2015). Characteristics of the nurse manager's recognition behavior and its relation to sense of coherence of staff nurses in Japan. *Collegian, 22*, 9-17.	Abualrub, R.F., & Al-Zaru, I. M. (2008). Job stress, recognition, job performance and intention to stay at work among Jordanian hospital nurses. *Journal of Nursing Management, 16*(3), 227-36.
Author/Year	Miyata, Arai, & Suga, 2015	Abualrub& Al-Zaru, 2008
Database/Keywords	California State University, Sacramento library One Search. Keywords: nurs*, recognition, burnout	California State University, Sacramento library OneSearch. Keywords: nurs*, recognition, burnout
Research Design	Descriptive study, quantitative	Quantitative, correlational study
Level of Evidence	Level 4: Correlational Design-Quantitative	Level 4: Correlational Design-Quantitative
Study Aim/Purpose	The authors identify the purpose as viewing how staff nurses view the recognition behaviors of their managers and if those behaviors are	To determine the impact of recognition on job stress and on intention of nurses to stay in their job.

	related to the sense of coherence experienced by staff nurses.	
Population/Sample size criteria/Power	1425 nurses at 10 hospitals with 100 beds or more in Kanto, Kansai, and Kyushu, Japan	Convenience sample with 206 staff nurses from four government hospitals.
Methods/Study Appraisal Synthesis Methods	Methods: Survey with three parts- demographic information, Japanese recognition behavior scale developed by Ozaki, and the Japanese version of a SOC scale Methods seem appropriate to goal of study. Methods also utilize tools developed and likely tested by others. Including a demographic survey allows for the researchers to control for some factors beyond the studied intervention that would impact sense of coherence.	Data collected via surveys: Nursing Stress Scale, McCain's Intent to Stay Scale, and the recognition scale. These tools seem relevant to the elements that are being examined by the researchers. Strengths: Considered validity of tools when translating from English to Arabic; conducted pilot to ensure instruments clear and made modifications as needed. Clear definitions of terms and what as being measured.
Primary Outcome Measures/Results	The authors found 24 out of 35 recognition behaviors were significant, and they grouped those into three factors. There was a significant difference between how staff nurse perceived manager behaviors and how managers perceived their own behaviors. Mental health, physical health, and recognition behaviors by managers were associated with SOC.	Job stress and recognition of performance negatively correlated (increased recognition = less stress). Recognition and intent to stay also negatively correlated.
Conclusions/Implications	Recognition behaviors by managers can impact a sense of coherence in staff nurses	Recognition could potentially help address the nursing shortage. Authors identify implications as implementing recognition programs using several possible methods, and the implementation of stress management programs.

Strengths/Limitations	Strengths: Authors did a regression analysis to adjust for variables. Limitation: Authors note that cultural factors may impact why some recognition behaviors were not included; therefore, study did not look at factors that may be impactful in the United States	Strengths: Adds to research about impact of recognition on job stress. Supports other literature about correlation between stress and intention to stay in one's job. Limitations: Convenience sample; sample of nurses in government hospitals, so may not be as applicable to nurses in other settings; authors did not discuss possible limitations
Funding Source	Funded by the Nursing Research Unit (Japan Self Defense Forces).	Not stated.
Comments	In the literature review, the authors noted that recognition can impact the prevention of burnout. Also, there is a wide variety of "recognition behaviors" which include posting achievements on bulletin board, preference for hours choice by nurse, and representing the unit at a hospital meeting.	Regression analysis of variables

Appendix B

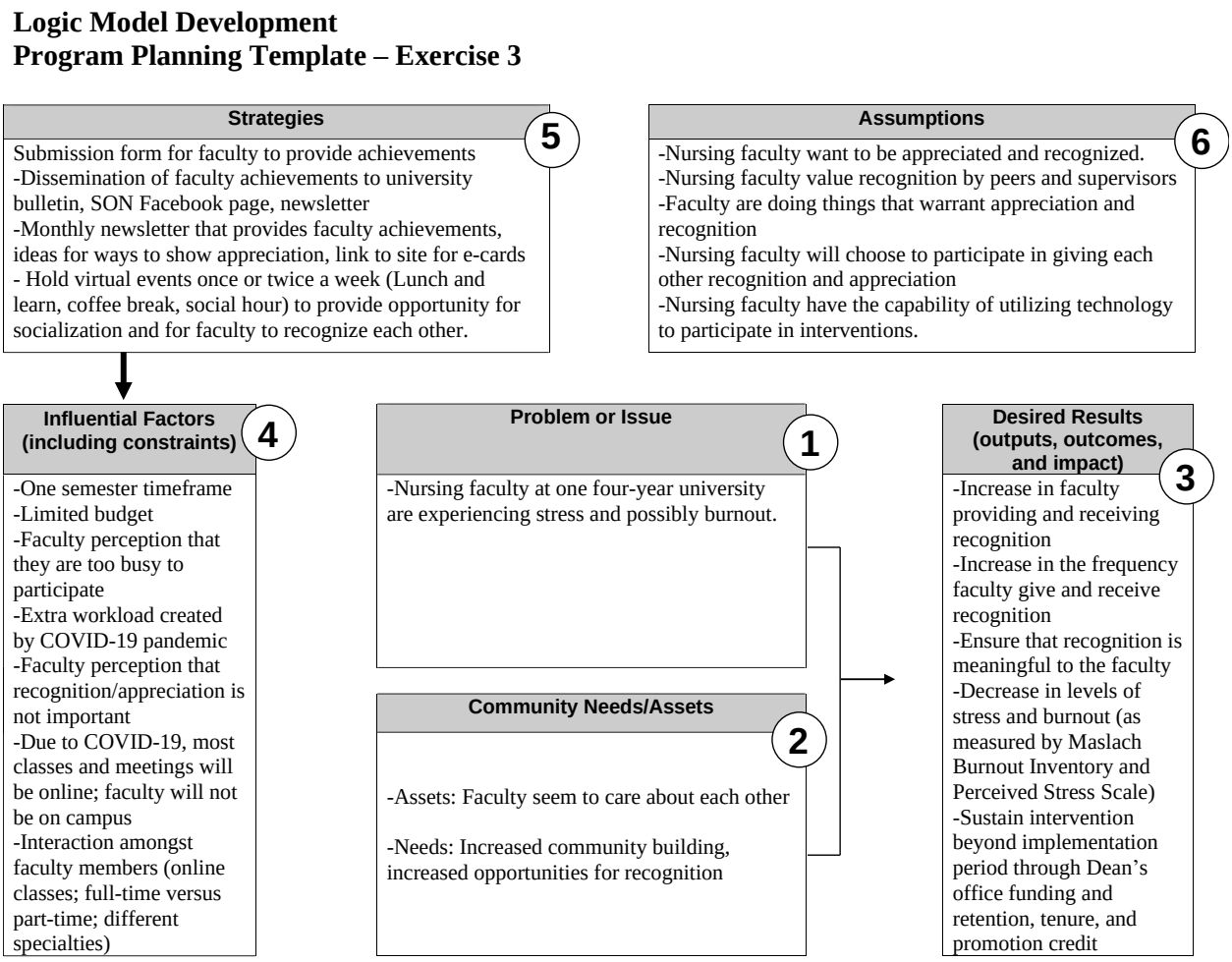
Budget and Resources

Resource	**Estimated Cost**	**Provided by**	**Actual cost**
Faculty coordinator to handle logistics and activities	$2080/unit of release time- est. based on otherSacramento State program (McReynolds et al., 2019).	DNP student/investigator	No cost as work done as part of student's DNP clinical hours
Perceived Stress Scale 10 (PSS-10) and Maslach Burnout Inventory (MBI)	PSS-10: Free for educational usage MBI: $2.50 per test with a minimum of 50 tests (Mind Garden, n.d.)	Purchased by DNP student/investigator	$100 for 50 tests including doctoral student discount
OpenMe- online e-cards	Free, signup required (OpenMe, n.d.)	Available online	Free
Zoom	Available for free with a limit of 100 users and 40 minutes per session. Subscriptions available starting at $14.99 a month per host (Zoom, n.d.)	Sacramento State to all faculty	No cost for faculty
Qualtrics	$1500 (Rubin, 2019)	Sacramento State to all faculty	No cost for faculty
SPSS	Limited free trial or subscription starting at $99 a month (IBM, n.d.)	Sacramento State to all faculty	No cost for faculty
Microsoft products (Forms for faculty achievement submissions, Outlook for sending information, weekly flyer, newsletters to faculty)	These products can be purchased as part of a Microsoft 365 subscription that starts $6.99 a month for a single person or $69.99 for a year (Krol, 2020).	Sacramento State to all faculty	No cost for faculty
Websites for sharing faculty activities and achievements: Canva	Free accounts available for Canva and Facebook	Canva: Available online	Free

for creation of weekly flyers and newsletters, SON Facebook page, and University Professional Activities page	Professional Activities page free, but only faculty/staff at university can have items posted	SON Facebook page: run by SON faculty University Professional Activities: run by University staff	

Appendix C

Logic Model



RESOURCES	ACTIVITIES	OUTPUTS	SHORT & LONG-TERM OUTCOMES	IMPACT
In order to accomplish our set of activities we will need the following:	*In order to address our problem or asset we will accomplish the following activities:*	*We expect that once accomplished these activities will produce the following evidence of service delivery:*	*We expect that if accomplished these activities will lead to the following changes in 1-3 then 4-6 years:*	*We expect that if accomplished these activities will lead to the following changes in 7-10 years:*
-Nursing faculty (part-time and full-time) to participate in surveys and appreciation program -Nursing faculty to present during lunch and learns -Maslach Burnout Inventory- Educator Survey (MBI) and Perceived Stress Scale-10 (PSS-10) to measure burnout and stress -Funding for MBI -List of possible appreciation methods faculty could use. -Online tools for virtual events, pre/post survey, newsletter, e-cards (Zoom, Qualtrics, access to Facebook page, OpenMe e-cards, Sacramento State email) -Approval for activities	-Recruit faculty to provide appreciation strategies to each other -Recruit faculty to take MBI and PSS-10 pre and post appreciation intervention -Organize and host virtual events 1-2x a week (lunch and learn, coffee break, social hour) -Have faculty submit recent achievements and events that will be disseminated via the SON Facebook page, submission to the university bulletin, or the newsletter -Develop monthly newsletter highlighting faculty and their achievements, includes suggestions for appreciation that faculty	-15 faculty will complete pre and post intervention MBI and PSS-10 -15-20 faculty will provide appreciation to other faculty -22 (35%) faculty will receive a form of appreciation that is meaningful to them	<u>Short-term (by the end of the 3 month intervention):</u> - At least 35% of nursing faculty will receive a form of appreciation (Comparison: 65% of workers have not been recognized in the last year (meaning only 35% have) [OC Tanner as cited in Novak, 2019]) -Statistically significant decrease in stress and burnout scores of faculty from pre-intervention to post-intervention as measured by MBI (Comparison: Deloitte LLP (n.d.) found that 77% of workers experienced burnout, and 64% often felt stress or frustration at work; 31% felt that lack of help or recognition by	- Sustained culture among faculty of showing appreciation to each other -Sustained decrease in levels of stress and burnout in nursing faculty (there is no national benchmark, so the benchmark will be decided by the organization based on initial burnout scores and what is considered an acceptable benchmark) -Implementation of a peer appreciation program in other departments at the university.

from chair of the department -Person in charge of logistics, including developing and sending out the newsletters electronically, organizing and hosting virtual events, adding submitted achievements to Facebook page, newsletter, and university bulletin (for implementation, this will be the investigator/DNP student; post-implementation, this will be determined in consultation with leadership and faculty).	can do on their own, and provides link to free program to develop and send e-cards.		leadership was a cause.) -Maintenance of the appreciation program as part of the faculty activities and culture (with faculty maintaining program receiving credit for Service to the University as part of Retention, Tenure and Promotion activities required for tenure-track) <u>Long-term:</u> -If intervention outcomes successful, funding from Dean's office to continue and/or expand the appreciation program -Increase in retention rate of nursing faculty (Comparison: 79% of workers leave their jobs because they were not appreciated enough [OC Tanner as cited in Novak, 2019])	

Appendix D

Timeframe for DNP Project

	July 2020	**August 2020**	**Sept 2020**	**Oct 2020**	**Nov 2020**	**Dec 2020**	**Jan 2021**	**Feb 2021**	**March 2021**	**April 2021**
IRB approval										
Recruit faculty										
Initial MBI and PSS-10 survey										
Recognition program										
Final MBI and PSS-10 survey										
Review and analyze data										
Compose final report										
Present to Regis faculty										

Appendix E

Perceived Stress Scale-10 Questions and Author Permission for Use

PERCEIVED STRESS SCALE

The questions in this scale ask you about your feelings and thoughts during the last month**. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way.**

Name _____ Date _____

Age _____ Gender (*Circle*): **M F** Other _____

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

1. In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2. In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3. In the last month, how often have you felt nervous and "stressed"?	0	1	2	3	4
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5. In the last month, how often have you felt that things were going your way?	0	1	2	3	4
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
7. In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8. In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
9. In the last month, how often have you been angered because of things that were outside of your control?	0	1	2	3	4
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

info@mindgarden.com
www.mindgarden.com

References

The PSS Scale is reprinted with permission of the American Sociological Association, from Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24,* 386-396.

Cohen, S. and Williamson, G. Perceived Stress in a Probability Sample of the United States. Spacapan, S. and Oskamp, S. (Eds.) *The Social Psychology of Health.* Newbury Park, CA: Sage, 1988.

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.

Sheldon Cohen
Robert E. Doherty University Professor of Psychology
Department of Psychology
Baker Hall 335-D
Carnegie Mellon University
Pittsburgh, PA 15213

Appendix F

Maslach Burnout Inventory License and MBI-Educators Survey Sample Questions

Maslach Burnout Inventory™

Instruments and Scoring Keys

Includes MBI Forms:

Human Services - MBI-HSS
Medical Personnel - MBI-HSS (MP)
Educators - MBI-ES
General - MBI-GS
Students - MBI-GS (S)

Christina Maslach
Susan E. Jackson
Michael P. Leiter
Wilmar B. Schaufeli
Richard L. Schwab

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To Whom It May Concern,

The above-named person has made a license purchase from Mind Garden, Inc. and has permission to administer the following copyrighted instrument up to that quantity purchased:

Maslach Burnout Inventory forms: Human Services Survey, Human Services Survey for Medical Personnel, Educators Survey, General Survey, or General Survey for Students.

The three sample items only from this instrument as specified below may be included in your thesis or dissertation. Any other use must receive prior written permission from Mind Garden. The entire instrument form may not be included or reproduced at any time in any other published material. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

Citation of the instrument must include the applicable copyright statement listed below.
Sample Items:

MBI - Human Services Survey - MBI-HSS:
I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job.
I don't really care what happens to some recipients.

MBI - Human Services Survey for Medical Personnel - MBI-HSS (MP):
I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job.
I don't really care what happens to some patients.

MBI - Educators Survey - MBI-ES:
I feel emotionally drained from my work.
I have accomplished many worthwhile things in this job.
I don't really care what happens to some students.

Appendix G

CITI Training Transcripts

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 1 OF 2
COURSEWORK REQUIREMENTS*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Jennifer Anderson (ID: 8911596)
- **Institution Affiliation:** Regis University (ID: 745)
- **Institution Email:** janderson029@regis.edu
- **Institution Unit:** School of Nursing

- **Curriculum Group:** Human Research
- **Course Learner Group:** Social Behavioral Research Investigators
- **Stage:** Stage 1 - Basic Course

- **Record ID:** 35328040
- **Completion Date:** 15-Feb-2020
- **Expiration Date:** 14-Feb-2023
- **Minimum Passing:** 80
- **Reported Score*:** 94

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Unanticipated Problems and Reporting Requirements in Social and Behavioral Research (ID: 14928)	09-Feb-2020	5/5 (100%)
Populations in Research Requiring Additional Considerations and/or Protections (ID: 16680)	09-Feb-2020	5/5 (100%)
Conflicts of Interest in Human Subjects Research (ID: 17464)	10-Feb-2020	5/5 (100%)
History and Ethical Principles - SBE (ID: 490)	10-Feb-2020	4/5 (80%)
The Federal Regulations - SBE (ID: 502)	12-Feb-2020	5/5 (100%)
Assessing Risk - SBE (ID: 503)	12-Feb-2020	5/5 (100%)
Informed Consent - SBE (ID: 504)	12-Feb-2020	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	15-Feb-2020	5/5 (100%)
Defining Research with Human Subjects - SBE (ID: 491)	14-Feb-2020	4/5 (80%)
Informed Consent and Confidentiality in Public Health Research (ID: 17639)	15-Feb-2020	4/5 (80%)
Vulnerable Subjects - Research Involving Workers/Employees (ID: 483)	15-Feb-2020	4/4 (100%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 2 OF 2
COURSEWORK TRANSCRIPT**

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- **Name:** Jennifer Anderson (ID: 8911596)
- **Institution Affiliation:** Regis University (ID: 745)
- **Institution Email:** janderson029@regis.edu
- **Institution Unit:** School of Nursing

- **Curriculum Group:** Human Research
- **Course Learner Group:** Social Behavioral Research Investigators
- **Stage:** Stage 1 - Basic Course

- **Record ID:** 35328040
- **Report Date:** 06-Jun-2020
- **Current Score**:** 94

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
Defining Research with Human Subjects - SBE (ID: 491)	14-Feb-2020	4/5 (80%)
The Federal Regulations - SBE (ID: 502)	12-Feb-2020	5/5 (100%)
Assessing Risk - SBE (ID: 503)	12-Feb-2020	5/5 (100%)
Informed Consent - SBE (ID: 504)	12-Feb-2020	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	15-Feb-2020	5/5 (100%)
Unanticipated Problems and Reporting Requirements in Social and Behavioral Research (ID: 14928)	09-Feb-2020	5/5 (100%)
History and Ethical Principles - SBE (ID: 490)	10-Feb-2020	4/5 (80%)
Populations in Research Requiring Additional Considerations and/or Protections (ID: 16680)	09-Feb-2020	5/5 (100%)
Vulnerable Subjects - Research Involving Workers/Employees (ID: 483)	15-Feb-2020	4/4 (100%)
Informed Consent and Confidentiality in Public Health Research (ID: 17639)	15-Feb-2020	4/5 (80%)
Conflicts of Interest in Human Subjects Research (ID: 17464)	10-Feb-2020	5/5 (100%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: www.citiprogram.org/verify/?k3e9cbd[illegible]0c-5463-4bc0-bf36-20b829a2c222-35328040

Appendix H

Letter of Support from Sacramento State

SACRAMENTO STATE

California State University, Sacramento
School of Nursing ·
6000 J Street · Folsom Hall · Sacramento, CA 95819-6096
(916) 278-6525 · (916) 278-6311 Fax · www.hhs.csus.edu/nrs

Letter of Agreement

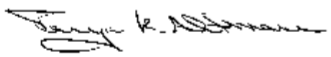
June 22, 2020

To Regis University Institutional Review Board (IRB)

I am familiar with Jennifer Anderson's quality improvement project entitled "A Recognition/Appreciation Intervention to Decrease Stress and Burnout in Nursing Faculty." I understand California State University, Sacramento School of Nursing's involvement to be allowing implementation of a recognition and appreciation program in the School of Nursing which includes virtual events, collecting of accomplishments and activities from faculty, and dissemination of achievements to the university bulletin, the SON Facebook page, and/or a newsletter generated by Ms. Anderson. Additionally, we will allow Ms. Anderson to recruit nursing faculty to complete surveys, including the Maslach Burnout Inventory, Perceived Stress Scale, and a demographics questionnaire that will be used to measure the impact of the recognition and appreciation program.

I understand that this quality improvement project will be carried out following sound ethical principles and provides confidentiality of project data, as described in the proposal. IRB approval will be obtained prior to implementation of the project

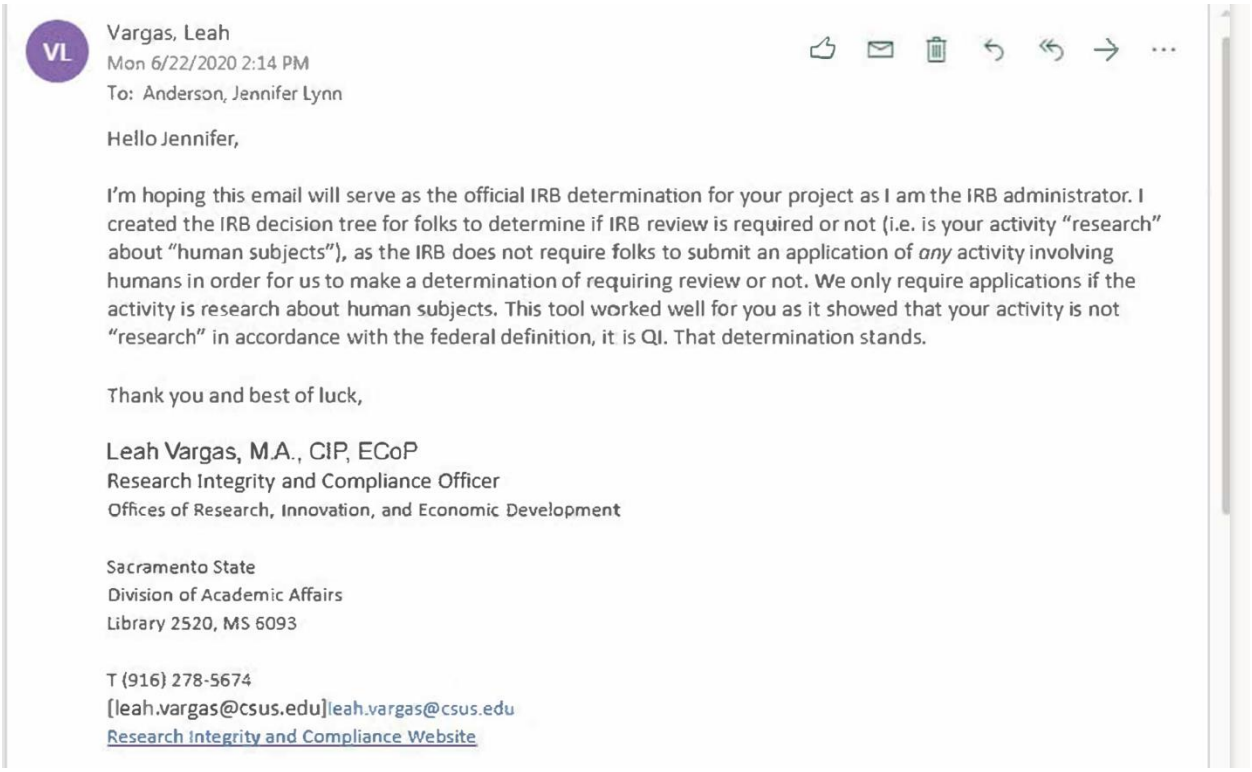
Therefore, as a representative of California State University, Sacramento, School of Nursing, I agree that Jennifer Anderson's quality improvement project may be conducted at our agency/institution.



Tanya K. Altmann PhD, RN
Chair & Professor, CSUS School of Nursing,
California State University, Sacramento,
6000 J Street, Sacramento, CA 95819-6096,
Phone: (916) 278-1504 Email: altmannt@csus.edu (aka: kristi@csus.edu)

Appendix I

Email from Sacramento State IRB Administrator



VL

Vargas, Leah
Mon 6/22/2020 2:14 PM
To: Anderson, Jennifer Lynn

Hello Jennifer,

I'm hoping this email will serve as the official IRB determination for your project as I am the IRB administrator. I created the IRB decision tree for folks to determine if IRB review is required or not (i.e. is your activity "research" about "human subjects"), as the IRB does not require folks to submit an application of *any* activity involving humans in order for us to make a determination of requiring review or not. We only require applications if the activity is research about human subjects. This tool worked well for you as it showed that your activity is not "research" in accordance with the federal definition, it is QI. That determination stands.

Thank you and best of luck,

Leah Vargas, M.A., CIP, ECoP
Research Integrity and Compliance Officer
Offices of Research, Innovation, and Economic Development

Sacramento State
Division of Academic Affairs
Library 2520, MS 6093

T (916) 278-5674
[leah.vargas@csus.edu]leah.vargas@csus.edu
Research Integrity and Compliance Website

Appendix J

Regis IRB Determination

REGIS UNIVERSITY

REGIS.EDU

Institutional Review Board

DATE:	August 12, 2020
TO:	Jennifer Anderson, MSN
FROM:	Regis University Human Subjects IRB
PROJECT TITLE:	[1633333-1] A Recognition/Appreciation Intervention to Decrease Stress and Burnout in Nursing Faculty
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF NOT RESEARCH
DECISION DATE:	August 12, 2020

Thank you for your submission of New Project materials for this project. The Regis University Human Subjects IRB has determined this project does not meet the definition of human subject research under the purview of the IRB according to federal regulations.

The project may proceed as written.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact the Institutional Review Board at irb@regis.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Regis University Human Subjects IRB's records.

Appendix K

Correlation Table

Variable 1	Variable 2	Correlation Coefficient	P-value	Low, Moderate, High	Positive or Negative
PrePSSQ1	PrePSSQ5	0.443	0.044	Moderate	Positive
PrePSSQ1	PrePSSQ10	0.493	0.023	Moderate	Positive
PrePSSQ1	PrePSSTotal	0.467	0.033	Moderate	Positive
PrePSSQ1	4 PreMBI questions*	0.564 0.617 0.461 -0.593	0.008; 0.003; 0.035; 0.005	Moderate Moderate Moderate Moderate	Positive Positive Positive Negative
PrePSSQ1	PreMBIDP	0.682	0.001	Moderate	Positive
PrePSSQ2	PrePSSQ3	0.517	0.016	Moderate	Positive
PrePSSQ2	PrePSSQ4	0.471	0.031	Moderate	Positive
PrePSSQ2	PrePSSQ5	0.600	0.004	Moderate	Positive
PrePSSQ2	PrePSSQ6	0.491	0.024	Moderate	Positive
PrePSSQ2	PrePSSQ9	0.552	0.009	Moderate	Positive
PrePSSQ2	PrePSSTotal	0.704	0.000	Moderate	Positive
PrePSSQ2	5 PreMBI questions*	0.448 0.445 -0.643 0.505 0.450	0.042 0.043 0.002 0.020 0.041	Moderate Moderate Moderate Moderate Moderate	Positive Positive Negative Positive Positive
PrePSSQ2	5 PostMBI questions*	0.516 0.636 0.578 0.530 0.510	0.041 0.008 0.019 0.035 0.043	Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive
PrePSSQ3	PrePSSQ4	0.435	0.049	Moderate	Positive
PrePSSQ3	PrePSSQ5	0.603	0.004	Moderate	Positive
PrePSSQ3	PrePSSQ6	0.634	0.002	Moderate	Positive
PrePSSQ3	PrePSSQ8	0.451	0.040	Moderate	Positive
PrePSSQ3	PrePSSQ9	0.631	0.002	Moderate	Positive
PrePSSQ3	PrePSSQ10	0.676	0.001	Moderate	Positive
PrePSSQ3	PrePSSTotal	0.810	0.000	High	Positive
PrePSSQ3	11 PreMBI questions*	0.653 0.662 0.701 0.465 0.625 0.697 -0.733 0.670	0.001 0.001 0.000 0.034 0.002 0.000 0.000 0.001	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Negative Positive

		0.669	0.001	Moderate	Positive
		0.601	0.004	Moderate	Positive
		0.723	0.000	Moderate	Positive
PrePSSQ3	PreMBIEE	0.762	0.000	Moderate	Positive
PrePSSQ3	4 PostMBI	0.543	0.030	Moderate	Positive
	questions*	0.509	0.044	Moderate	Positive
		-0.617	0.011	Moderate	Negative
		0.605	0.013	Moderate	Positive
PrePSSQ4	PrePSSQ5	0.664	0.001	Moderate	Positive
PrePSSQ4	PrePSSQ6	0.589	0.005	Moderate	Positive
PrePSSQ4	PrePSSQ7	0.508	0.019	Moderate	Positive
PrePSSQ4	PrePSSQ8	0.676	0.001	Moderate	Positive
PrePSSQ4	PrePSSQ10	0.442	0.045	Moderate	Positive
PrePSSQ4	PrePSSTotal	0.779	0.000	Moderate	Positive
PrePSSQ4	12 PreMBI	0.480	0.028	Moderate	Positive
	questions*	0.466	0.033	Moderate	Positive
		-0.580	0.006	Moderate	Negative
		0.525	0.015	Moderate	Positive
		0.579	0.006	Moderate	Positive
		0.702	0.000	Moderate	Positive
		0.667	0.001	Moderate	Positive
		-0.702	0.000	Moderate	Negative
		0.492	0.024	Moderate	Positive
		0.544	0.011	Moderate	Positive
		0.603	0.004	Moderate	Positive
		0.493	0.023	Moderate	Positive
PrePSSQ4	PreMBIEE	0.580	0.006	Moderate	Positive
PrePSSQ4	PreMBIDP	0.594	0.005	Moderate	Positive
PrePSSQ4	PreMBIPA	-0.613	0.003	Moderate	Negative
PrePSSQ4	1 PostMBI	0.572	0.021	Moderate	Positive
	questions				
PrePSSQ5	PrePSSQ7	0.495	0.023	Moderate	Positive
PrePSSQ5	PrePSSQ8	0.610	0.003	Moderate	Positive
PrePSSQ5	PrePSSTotal	0.768	0.000	Moderate	Positive
PrePSSQ5	14 PreMBI	0.436	0.048	Moderate	Positive
	questions*	0.462	0.035	Moderate	Positive
		0.523	0.015	Moderate	Positive
		0.571	0.007	Moderate	Positive
		0.484	0.026	Moderate	Positive
		0.507	0.019	Moderate	Positive
		-0.726	0.000	Moderate	Negative
		0.498	0.022	Moderate	Positive
		0.600	0.004	Moderate	Positive
		0.444	0.044	Moderate	Positive
		0.521	0.016	Moderate	Positive
		-0.593	0.005	Moderate	Negative

		-0.443 0.535	0.044 0.012	Moderate Moderate	Negative Positive
PrePSSQ5	PreMBIEE	0.582	0.006	Moderate	Positive
PrePSSQ5	PreMBIDP	0.583	0.006	Moderate	Positive
PrePSSQ5	PreMBIPA	-0.714	0.000	Moderate	Negative
PrePSSQ5	4 PostMBI questions*	0.528 0.572 0.528 0.622	0.036 0.021 0.035 0.010	Moderate Moderate Moderate Moderate	Positive Positive Positive Positive
PrePSSQ6	PrePSSQ8	0.669	0.001	Moderate	Positive
PrePSSQ6	PrePSSQ10	0.661	0.001	Moderate	Positive
PrePSSQ6	PrePSSTotal	0.779	0.000	Moderate	Positive
PrePSSQ6	10 PreMBI questions *	0.704 0.592 0.620 0.514 0.757 -0.483 0.576 0.471 0.529 0.644	0.000 0.005 0.003 0.017 0.000 0.027 0.006 0.031 0.014 0.002	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Negative Positive Positive Positive Positive
PrePSSQ6	PreMBIEE	0.682	0.001	Moderate	Positive
PrePSSQ6	PostPSSQ1	0.583	0.018	Moderate	Positive
PrePSSQ6	PostPSSQ3	0.535	0.033	Moderate	Positive
PrePSSQ6	3 PostMBI questions*	0.611 0.498 0.529	0.012 0.050 0.035	Moderate Moderate Moderate	Positive Positive Positive
PrePSSQ6	PostMBIEE	0.528	0.036	Moderate	Positive
PrePSSQ7	PrePSSTotal	0.434	0.049	Moderate	Positive
PrePSSQ7	1 PreMBI question*	-0.481	0.027	Moderate	Negative
PrePSSQ7	PreMBIPA	-0.469	0.032	Moderate	Negative
PrePSSQ8	PrePSSTotal	0.667	0.001	Moderate	Positive
PrePSSQ8	10 PreMBI questions*	0.582 0.619 0.618 0.636 0.820 -0.597 0.605 0.557 0.536 0.707	0.006 0.003 0.003 0.002 0.000 0.004 0.004 0.009 0.012 0.000	Moderate Moderate Moderate Moderate High Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Negative Positive Positive Positive Positive
PrePSSQ8	PreMBIEE	0.720	0.000	Moderate	Positive
PrePSSQ8	PreMBIPA	-0.435	0.049	Moderate	Negative

PrePSSQ8	PostPSSQ3	0.507	0.045	Moderate	Positive
PrePSSQ8	PostPSSQ5	0.517	0.040	Moderate	Positive
PrePSSQ8	10 PostMBI questions*	0.582 0.650 0.517 0.544 0.662 0.576 0.606 -0.647 -0.535 0.567	0.018 0.006 0.040 0.029 0.005 0.019 0.013 0.007 0.033 0.022	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Positive Negative Negative Positive
PrePSSQ8	PostMBIEE	0.696	0.003	Moderate	Positive
PrePSSQ8	PostMBIPA	-0.503	0.047	Moderate	Negative
PrePSSQ9	PrePSSQ10	0.505	0.020	Moderate	Positive
PrePSSQ9	PrePSSTotal	0.653	0.001	Moderate	Positive
PrePSSQ9	2 PreMBI questions*	0.459 -0.489	0.036 0.024	Moderate Moderate	Positive Negative
PrePSSQ9	7 PostMBI questions*	0.627 -0.514 0.553 -0.634 0.607 -0.583 0.537	0.009 0.042 0.026 0.008 0.013 0.018 0.032	Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Negative Positive Negative Positive Negative Positive
PrePSSQ9	PostMBIDP	0.564	0.023	Moderate	Positive
PrePSSQ10	PrePSSTotal	0.783	0.000	Moderate	Positive
PrePSSQ10	14 PreMBI questions*	0.773 0.660 0.689 0.569 0.709 0.468 0.455 -0.564 0.644 0.494 0.603 -0.469 0.648 0.515	0.000 0.001 0.001 0.007 0.000 0.032 0.038 0.008 0.002 0.023 0.004 0.032 0.002 0.017	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Positive Negative Positive Positive Positive Negative Positive Positive
PrePSSQ10	PreMBIEE	0.727	0.000	Moderate	Positive
PrePSSQ10	PreMBIDP	0.623	0.003	Moderate	Positive
PrePSSQ10	11 PostMBI questions*	0.766 0.597 0.730	0.001 0.015 0.001	Moderate Moderate Moderate	Positive Positive Positive

		0.515	0.041	Moderate	Positive
		0.751	0.001	Moderate	Positive
		0.762	0.001	Moderate	Positive
		0.559	0.024	Moderate	Positive
		0.698	0.003	Moderate	Positive
		-0.746	0.001	Moderate	Negative
		-0.500	0.048	Moderate	Negative
		0.735	0.001	Moderate	Positive
PrePSSQ10	PostMBIEE	0.769	0.000	Moderate	Positive
PrePSSQ10	PostMBIDP	0.512	0.043	Moderate	Positive
PrePSSTotal	13 PreMBI	0.730	0.000	Moderate	Positive
	questions*	0.675	0.001	Moderate	Positive
		0.687	0.001	Moderate	Positive
		0.592	0.005	Moderate	Positive
		0.807	0.000	High	Positive
		0.580	0.006	Moderate	Positive
		0.580	0.006	Moderate	Positive
		-0.811	0.000	High	Negative
		0.722	0.000	Moderate	Positive
		0.688	0.001	Moderate	Positive
		0.664	0.001	Moderate	Positive
		-0.534	0.013	Moderate	Negative
		0.701	0.000	Moderate	Positive
PrePSSTotal	PreMBIEE	0.793	0.000	Moderate	Positive
PrePSSTotal	PreMBIDP	0.648	0.001	Moderate	Positive
PrePSSTotal	PreMBIPA	-0.574	0.006	Moderate	Negative
PrePSSTotal	8 PostMBI	0.669	0.005	Moderate	Positive
	questions*	0.708	0.002	Moderate	Positive
		0.702	0.002	Moderate	Positive
		0.706	0.002	Moderate	Positive
		0.504	0.046	Moderate	Positive
		-0.580	0.018	Moderate	Negative
		-0.686	0.003	Moderate	Negative
		0.677	0.004	Moderate	Positive
PrePSSTotal	PostMBIEE	0.657	0.006	Moderate	Positive
PrePSSTotal	PostMBIPA	-0.499	0.049	Moderate	Negative
PreMBIQ1	11 PreMBI	0.861	0.000	High	Positive
	questions*	0.792	0.000	Moderate	Positive
		0.707	0.000	Moderate	Positive
		0.854	0.000	High	Positive
		0.443	0.045	Moderate	Positive
		-0.529	0.014	Moderate	Negative
		0.795	0.000	Moderate	Positive
		0.720	0.000	Moderate	Positive
		0.595	0.004	Moderate	Positive
		-0.451	0.040	Moderate	Negative

		0.718	0.000	Moderate	Positive
PreMBIQ1	2 PreMBI categories*	0.889 0.551	0.000 0.010	High Moderate	Positive Positive
PreMBIQ1	7 PostMBI questions*	0.592 0.590 0.543 0.734 0.516 -0.701 0.696	0.016 0.016 0.030 0.001 0.041 0.002 0.003	Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Negative Positive
PreMBIQ1	1 PostMBI category*	0.672	0.004	Moderate	Positive
PreMBIQ2	8 PreMBI questions*	0.846 0.746 0.873 -0.578 0.785 0.751 0.621 0.685	0.000 0.000 0.000 0.006 0.000 0.000 0.003 0.001	High Moderate High Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Negative Positive Positive Positive Positive
PreMBIQ2	1 PreMBI category*	0.910	0.000	High	Positive
PreMBIQ2	PostPSSQ1	0.513	0.042	Moderate	Positive
PreMBIQ2	8 PostMBI questions*	0.580 0.616 0.555 0.563 0.600 0.706 -0.606 0.714	0.018 0.011 0.026 0.023 0.014 0.002 0.013 0.002	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Negative Positive
PreMBIQ2	1 PostMBI category*	0.710	0.002	Moderate	Positive
PreMBIQ3	8 PreMBI questions*	0.694 0.841 -0.448 -0.636 0.755 0.654 0.715 0.644	0.000 0.000 0.042 0.002 0.000 0.001 0.000 0.002	Moderate High Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Negative Negative Positive Positive Positive Positive
PreMBIQ3	2 PreMBI categories	0.881 -0.472	0.000 0.031	High Moderate	Positive Negative
PreMBIQ3	PostPSSQ3	0.537	0.032	Moderate	Positive
PreMBIQ3	6 PostMBI questions*	0.545 0.520	0.029 0.039	Moderate Moderate	Positive Positive

		0.504 0.564 0.674 0.664	0.046 0.023 0.004 0.005	Moderate Moderate Moderate Moderate	Positive Positive Positive Positive
PreMBIQ3	1 PostMBI category*	0.622	0.010	Moderate	Positive
PreMBIQ4	1 PreMBI questions*	-0.460	0.036	Moderate	Negative
PreMBIQ4	1 PreMBI category*	0.500	0.021	Moderate	Positive
PreMBIQ5	2 PreMBI questions*	-0.502 0.715	0.020 0.000	Moderate Moderate	Negative Positive
PreMBIQ5	1 PreMBI category*	0.591	0.005	Moderate	Positive
PreMBIQ5	2 PostMBI questions*	0.545 0.829	0.029 0.000	Moderate High	Positive Positive
PreMBIQ5	1 PostMBI category*	0.500	0.048	Moderate	Positive
PreMBIQ6	6 PreMBI questions*	0.757 -0.539 0.623 0.665 0.698 0.785	0.000 0.012 0.003 0.001 0.000 0.000	Moderate Moderate Moderate Moderate Moderate Moderate	Positive Negative Positive Positive Positive Positive
PreMBIQ6	1 PreMBI category*	0.839	0.000	High	Positive
PreMBIQ6	1 PostMBI questions*	-0.507	0.045	Moderate	Negative
PreMBIQ7	2 PreMBI questions*	0.689 0.642	0.001 0.002	Moderate Moderate	Positive Positive
PreMBIQ7	1 PreMBI category*	0.541	0.011	Moderate	Positive
PreMBIQ8	8 PreMBI questions*	0.466 0.450 -0.639 0.833 0.781 0.697 -0.523 0.830	0.033 0.040 0.002 0.000 0.000 0.000 0.015 0.000	Moderate Moderate Moderate High Moderate Moderate Moderate High	Positive Positive Negative Positive Positive Positive Negative Positive
PreMBIQ8	2 PreMBI categories*	0.947 0.464	0.000 0.034	High Moderate	Positive Positive
PreMBIQ8	PostPSSQ1	0.509	0.044	Moderate	Positive
PreMBIQ8	10 PostMBI questions*	0.655 0.548 0.608	0.006 0.028 0.012	Moderate Moderate Moderate	Positive Positive Positive

		0.570	0.021	Moderate	Positive
		0.649	0.006	Moderate	Positive
		0.691	0.003	Moderate	Positive
		0.658	0.006	Moderate	Positive
		0.589	0.016	Moderate	Positive
		-0.729	0.001	Moderate	Negative
		0.768	0.001	Moderate	Positive
PreMBIQ8	1 PostMBI category*	0.766	0.001	Moderate	Positive
PreMBIQ9	1 PreMBI category*	0.597	0.004	Moderate	Positive
PreMBIQ10	7 PreMBI questions*	0.977	0.000	High	Positive
		-0.611	0.003	Moderate	Negative
		0.593	0.005	Moderate	Positive
		0.585	0.005	Moderate	Positive
		0.745	0.000	Moderate	Positive
		-0.580	0.006	Moderate	Negative
		0.481	0.027	Moderate	Positive
PreMBIQ10	3 PreMBI categories*	0.544	0.011	Moderate	Positive
		0.831	0.000	High	Positive
		-0.606	0.004	Moderate	Negative
PreMBIQ10	PostPSSQ8	0.648	0.007	Moderate	Positive
PreMBIQ10	3 PostMBI questions*	0.624	0.010	Moderate	Positive
		0.632	0.009	Moderate	Positive
		0.580	0.018	Moderate	Positive
PreMBIQ11	6 PreMBI questions*	-0.661	0.001	Moderate	Negative
		0.606	0.004	Moderate	Positive
		0.606	0.004	Moderate	Positive
		0.704	0.000	Moderate	Positive
		-0.601	0.004	Moderate	Negative
		0.489	0.025	Moderate	Positive
PreMBIQ11	3 PreMBI categories*	0.533	0.013	Moderate	Positive
		0.838	0.000	High	Positive
		-0.605	0.004	Moderate	Negative
PreMBIQ11	PostPSSQ7	0.553	0.026	Moderate	Positive
PreMBIQ11	PostPSSQ8	0.663	0.005	Moderate	Positive
PreMBIQ11	4 PostMBI questions*	0.626	0.009	Moderate	Positive
		0.609	0.012	Moderate	Positive
		0.571	0.021	Moderate	Positive
		-0.548	0.028	Moderate	Negative
PreMBIQ12	4 PreMBI questions*	-0.769	0.000	Moderate	Negative
		-0.699	0.000	Moderate	Negative
		-0.747	0.000	Moderate	Negative
		-0.563	0.008	Moderate	Negative
PreMBIQ12	3 PreMBI categories*	-0.720	0.000	Moderate	Negative
		-0.607	0.004	Moderate	Negative

		0.605	0.004	Moderate	Positive
PreMBIQ12	PostPSSQ8	-0.649	0.007	Moderate	Negative
PreMBIQ12	7 PostMBI questions*	-0.658 -0.607 -0.625 -0.675 0.591 0.630 -0.509	0.006 0.013 0.010 0.004 0.016 0.009 0.044	Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Negative Negative Negative Negative Positive Positive Negative
PreMBIQ12	1 PostMBI category*	-0.572	0.021	Moderate	Negative
PreMBIQ13	4 PreMBI questions*	0.826 0.757 -0.522 0.654	0.000 0.000 0.015 0.001	High Moderate Moderate Moderate	Positive Positive Negative Positive
PreMBIQ13	3 PreMBI categories*	0.888 0.581 -0.445	0.000 0.006 0.043	High Moderate Moderate	Positive Positive Negative
PreMBIQ13	PostPSSQ1	0.584	0.017	Moderate	Positive
PreMBIQ13	9 PostMBI questions*	0.751 0.576 0.558 0.731 0.708 0.659 0.512 -0.763 0.748	0.001 0.019 0.025 0.001 0.002 0.005 0.043 0.001 0.001	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Positive Negative Positive
PreMBIQ13	1 PostMBI category*	0.764	0.001	Moderate	Positive
PreMBIQ14	3 PreMBI questions*	0.721 -0.571 0.754	0.000 0.007 0.000	Moderate Moderate Moderate	Positive Negative Positive
PreMBIQ14	2 PreMBI categories*	0.875 0.608	0.000 0.003	High Moderate	Positive Positive
PreMBIQ14	4 PostMBI questions*	0.529 0.499 -0.629 0.513	0.035 0.049 0.009 0.042	Moderate Moderate Moderate Moderate	Positive Positive Negative Positive
PreMBIQ14	1 PostMBI category*	0.542	0.030	Moderate	Positive
PreMBIQ16	1 PreMBI question*	0.685	0.001	Moderate	Positive
PreMBIQ16	2 PreMBI categories*	0.814 0.573	0.000 0.007	High Moderate	Positive Positive
PreMBIQ16	PostPSSQ3	0.508	0.045	Moderate	Positive

PreMBIQ16	PostPSSQ8	0.562	0.024	Moderate	Positive
PreMBIQ16	6 PostMBI questions*	0.661 0.589 0.732 0.642 0.645 -0.519	0.005 0.016 0.001 0.007 0.007 0.039	Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Negative
PreMBIQ16	1 PostMBI category*	0.635	0.008	Moderate	Positive
PreMBIQ17	2 PreMBI questions*	-0.488 0.525	0.025 0.015	Moderate Moderate	Negative Positive
PreMBIQ17	3 PreMBI categories*	-0.517 -0.707 0.709	0.016 0.000 0.000	Moderate Moderate Moderate	Negative Negative Positive
PreMBIQ17	4 PostMBI questions*	-0.541 -0.630 -0.523 0.710	0.030 0.009 0.038 0.002	Moderate Moderate Moderate Moderate	Negative Negative Negative Positive
PreMBIQ17	1 PostMBI category*	-0.525	0.037	Moderate	Negative
PreMBIQ18	1 PreMBI question*	-0.458	0.037	Moderate	Negative
PreMBIQ18	2 PreMBI categories*	-0.503 0.572	0.020 0.007	Moderate Moderate	Negative Positive
PreMBIQ18	PostPSSQ5	-0.502	0.048	Moderate	Negative
PreMBIQ18	1 PostMBI question*	-0.498	0.050	Moderate	Negative
PreMBIQ19	1 PreMBI category*	0.633	0.002	Moderate	Positive
PreMBIQ20	2 PreMBI categories*	0.856 0.512	0.000 0.018	High Moderate	Positive Positive
PreMBIQ20	8 PostMBI questions*	0.540 0.568 0.583 0.612 0.519 -0.740 -0.554 0.498	0.031 0.022 0.018 0.012 0.040 0.001 0.026 0.050	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Negative Negative Positive
PreMBIQ20	1 PostMBI category*	0.631	0.009	Moderate	Positive
PreMBIQ21	2 PreMBI categories*	-0.462 0.695	0.035 0.000	Moderate Moderate	Negative Positive
PreMBIQ21	2 PostMBI questions*	0.541 0.735	0.030 0.001	Moderate Moderate	Positive Positive
PreMBIQ22	1 PreMBI	0.547	0.010	Moderate	Positive

	category*				
PreMBIQ22	4 PostMBI questions*	0.661 0.523 0.859 0.592	0.005 0.038 0.000 0.016	Moderate Moderate High Moderate	Positive Positive Positive Positive
PreMBIQ22	1 PostMBI category*	0.616	0.011	Moderate	Positive
PreMBIEE	PreMBIDP	0.539	0.012	Moderate	Positive
PreMBIEE	PreMBIPA	-0.437	0.047	Moderate	Negative
PreMBIEE	8 PostMBI questions*	0.638 0.553 0.599 0.598 0.649 0.636 -0.702 0.685	0.008 0.026 0.014 0.014 0.006 0.008 0.002 0.003	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Negative Positive
PreMBIEE	PostMBIEE	0.715	0.002	Moderate	Positive
PreMBIDP	PreMBIPA	-0.670	0.001	Moderate	Negative
PreMBIDP	PostPSSQ7	0.637	0.008	Moderate	Positive
PreMBIDP	PostPSSQ8	0.528	0.035	Moderate	Positive
PreMBIDP	8 PostMBI questions*	0.651 0.503 0.518 0.586 0.521 0.612 -0.536 -0.504	0.006 0.047 0.040 0.017 0.038 0.012 0.032 0.047	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Negative Negative
PreMBIPA	PostPSSQ8	-0.569	0.021	Moderate	Negative
PreMBIPA	2 PostMBI questions*	0.506 0.528	0.046 0.035	Moderate Moderate	Positive Positive
PostPSSQ1	PostPSSQ2	0.689	0.003	Moderate	Positive
PostPSSQ1	PostPSSQ3	0.698	0.003	Moderate	Positive
PostPSSQ1	PostPSSQ5	0.552	0.027	Moderate	Positive
PostPSSQ1	PostPSSQ6	0.754	0.001	Moderate	Positive
PostPSSQ1	PostPSSTotal	0.795	0.000	Moderate	Positive
PostPSSQ1	6 PostMBI questions*	0.697 0.707 0.583 0.610 0.695 0.633	0.003 0.002 0.018 0.012 0.003 0.009	Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive
PostPSSQ1	PostMBIEE	0.668	0.005	Moderate	Positive
PostPSSQ2	PostPSSQ3	0.639	0.008	Moderate	Positive

PostPSSQ2	PostPSSQ4	0.629	0.009	Moderate	Positive
PostPSSQ2	PostPSSQ5	0.711	0.002	Moderate	Positive
PostPSSQ2	PostPSSQ6	0.862	0.000	High	Positive
PostPSSQ2	PostPSSQ8	0.560	0.024	Moderate	Positive
PostPSSQ2	PostPSSQ10	0.659	0.005	Moderate	Positive
PostPSSQ2	PostPSSTotal	0.910	0.000	High	Positive
PostPSSQ2	7 PostMBI questions*	0.650 0.639 0.598 0.596 0.536 -0.515 0.612	0.006 0.008 0.014 0.015 0.032 0.041 0.012	Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Negative Positive
PostPSSQ2	PostMBIEE	0.649	0.007	Moderate	Positive
PostPSSQ3	PostPSSQ6	0.749	0.001	Moderate	Positive
PostPSSQ3	PostPSSTotal	0.674	0.004	Moderate	Positive
PostPSSQ3	5 PostMBI questions*	0.549 0.535 0.558 0.504 0.549	0.028 0.033 0.025 0.046 0.027	Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive
PostPSSQ3	PostMBIEE	0.548	0.028	Moderate	Positive
PostPSSQ4	PostPSSQ5	0.552	0.027	Moderate	Positive
PostPSSQ4	PostPSSQ7	0.617	0.011	Moderate	Positive
PostPSSQ4	PostPSSQ8	0.520	0.039	Moderate	Positive
PostPSSQ4	PostPSSQ9	0.503	0.047	Moderate	Positive
PostPSSQ4	PostPSSTotal	0.732	0.001	Moderate	Positive
PostPSSQ4	2 PostMBI questions*	-0.505 -0.633	0.046 0.009	Moderate Moderate	Negative Negative
PostPSSQ4	PostMBIPA	-0.505	0.046	Moderate	Negative
PostPSSQ5	PostPSSQ9	0.537	0.032	Moderate	Positive
PostPSSQ5	PostPSSQ10	0.639	0.008	Moderate	Positive
PostPSSQ5	PostPSSTotal	0.736	0.001	Moderate	Positive
PostPSSQ5	1 PostMBI question*	0.517	0.040	Moderate	Positive
PostPSSQ5	PostMBIPA	-0.503	0.047	Moderate	Negative
PostPSSQ6	PostPSSQ10	0.571	0.021	Moderate	Positive
PostPSSQ6	PostPSSTotal	0.788	0.000	Moderate	Positive
PostPSSQ6	6 PostMBI questions*	0.619 0.668 0.558 0.569 0.559 0.639	0.011 0.005 0.025 0.021 0.024 0.008	Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive
PostPSSQ6	PostMBIEE	0.642	0.007	Moderate	Positive

PostPSSQ7	8 PostMBI questions*	0.561 -0.544 0.527 0.534 0.514 -0.604 -0.506 -0.617	0.024 0.029 0.036 0.033 0.042 0.013 0.046 0.011	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Negative Positive Positive Positive Negative Negative Negative
PostPSSQ7	PostMBIPA	-0.598	0.014	Moderate	Negative
PostPSSQ8	PostPSSQ10	0.789	0.000	Moderate	Positive
PostPSSQ8	PostPSSTotal	0.749	0.001	Moderate	Positive
PostPSSQ8	10 PostMBI questions*	0.806 0.604 0.692 0.714 0.545 -0.510 0.745 -0.588 -0.639 -0.510	0.000 0.013 0.003 0.002 0.029 0.044 0.001 0.017 0.008 0.044	High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Negative Positive Negative Negative Negative
PostPSSQ8	PostMBIEE	0.661	0.005	Moderate	Positive
PostPSSQ8	PostMBIPA	-0.624	0.010	Moderate	Negative
PostPSSQ9	PostPSSTotal	0.501	0.048	Moderate	Positive
PostPSSQ9	1 PostMBI question*	0.514	0.041	Moderate	Positive
PostPSSQ10	PostPSSTotal	0.810	0.000	High	Positive
PostPSSQ10	7 PostMBI questions*	0.707 0.534 0.500 0.679 0.534 0.638 0.498	0.002 0.033 0.048 0.004 0.033 0.008 0.050	Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Positive
PostPSSQ10	PostMBIEE	0.630	0.009	Moderate	Positive
PostPSSQ10	PostMBIPA	-0.503	0.047	Moderate	Negative
PostPSSTotal	10 PostMBI questions*	0.786 0.659 0.611 0.684 0.589 -0.531 0.745 0.547 -0.514 -0.500	0.000 0.006 0.012 0.003 0.016 0.034 0.001 0.028 0.042 0.048	Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Negative Positive Positive Negative Negative

PostPSSTotal	PostMBIEE	0.709	0.002	Moderate	Positive
PostPSSTotal	PostMBIPA	-0.536	0.032	Moderate	Negative
PostMBIQ1	12 PostMBI questions*	0.849 0.854 0.923 0.949 0.658 0.579 0.535 -0.505 -0.741 -0.738 0.691 -0.512	0.000 0.000 0.000 0.000 0.006 0.019 0.033 0.046 0.001 0.001 0.003 0.043	High High High High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Positive Positive Positive Negative Negative Negative Positive Negative
PostMBIQ1	3 PostMBI categories*	0.939 0.563 -0.707	0.000 0.023 0.002	High Moderate Moderate	Positive Positive Negative
PostMBIQ2	7 PostMBI questions*	0.837 0.746 0.828 0.616 -0.522 -0.576 0.527	0.000 0.001 0.000 0.011 0.038 0.020 0.036	High Moderate High Moderate Moderate Moderate Moderate	Positive Positive Positive Positive Negative Negative Positive
PostMBIQ2	1 PostMBI category*	0.859	0.000	High	Positive
PostMBIQ3	6 PostMBI questions*	0.822 -0.505 0.869 -0.564 -0.602 0.508	0.000 0.046 0.000 0.023 0.014 0.045	High Moderate High Moderate Moderate Moderate	Positive Negative Positive Negative Negative Positive
PostMBIQ3	2 PostMBI categories*	0.846 -0.562	0.000 0.023	High Moderate	Positive Negative
PostMBIQ5	7 PostMBI questions*	0.597 0.829 0.830 -0.535 0.665 -0.613 0.855	0.015 0.000 0.000 0.033 0.005 0.012 0.000	Moderate High High Moderate Moderate Moderate High	Positive Positive Positive Negative Positive Negative Positive
PostMBIQ5	2 PostMBI categories*	0.949 -0.530	0.000 0.035	High Moderate	Positive Negative
PostMBIQ6	6 PostMBI questions*	0.517 0.501 0.937	0.041 0.048 0.000	Moderate Moderate High	Positive Positive Positive

		-0.708	0.002	Moderate	Negative
		-0.594	0.015	Moderate	Negative
		0.545	0.029	Moderate	Positive
PostMBIQ6	2 PostMBI categories*	0.664	0.005	Moderate	Positive
		-0.502	0.048	Moderate	Negative
PostMBIQ7	2 PostMBI questions*	0.658	0.006	Moderate	Positive
		0.594	0.015	Moderate	Positive
PostMBIQ7	1 PostMBI category*	0.618	0.011	Moderate	Positive
PostMBIQ8	10 PostMBI questions*	0.566	0.022	Moderate	Positive
		0.503	0.047	Moderate	Positive
		0.891	0.000	High	Positive
		0.546	0.029	Moderate	Positive
		0.598	0.014	Moderate	Positive
		0.596	0.015	Moderate	Positive
		-0.735	0.001	Moderate	Negative
		-0.592	0.016	Moderate	Negative
		0.776	0.000	Moderate	Positive
		-0.500	0.049	Moderate	Negative
PostMBIQ8	3 PostMBI categories*	0.912	0.000	High	Positive
		0.670	0.005	Moderate	Positive
		-0.656	0.006	Moderate	Negative
PostMBIQ9	1 PostMBI question*	0.656	0.006	Moderate	Positive
PostMBIQ9	1 PostMBI category*	0.622	0.010	Moderate	Positive
PostMBIQ11	4 PostMBI questions*	0.697	0.003	Moderate	Positive
		0.657	0.006	Moderate	Positive
		-0.517	0.040	Moderate	Negative
		0.767	0.001	Moderate	Positive
PostMBIQ11	1 PostMBI category*	0.927	0.000	High	Positive
PostMBIQ12	1 PostMBI question*	0.573	0.020	Moderate	Positive
PostMBIQ12	1 PostMBI category*	0.606	0.013	Moderate	Positive
PostMBIQ13	8 PostMBI questions*	0.610	0.012	Moderate	Positive
		0.582	0.018	Moderate	Positive
		0.596	0.015	Moderate	Positive
		-0.524	0.037	Moderate	Negative
		-0.772	0.000	Moderate	Negative
		-0.724	0.002	Moderate	Negative
		0.723	0.002	Moderate	Positive
		-0.510	0.044	Moderate	Negative
PostMBIQ13	3 PostMBI categories*	0.941	0.000	High	Positive
		0.565	0.023	Moderate	Positive

		-0.708	0.002	Moderate	Negative
PostMBIQ14	2 PostMBI questions*	-0.583 0.690	0.018 0.003	Moderate Moderate	Negative Positive
PostMBIQ14	1 PostMBI category*	0.743	0.001	Moderate	Positive
PostMBIQ15	3 PostMBI questions*	-0.684 0.691 0.680	0.004 0.003 0.004	Moderate Moderate Moderate	Negative Positive Positive
PostMBIQ15	3 PostMBI categories*	0.545 0.813 -0.565	0.029 0.000 0.023	Moderate High Moderate	Positive Positive Negative
PostMBIQ16	3 PostMBI questions*	-0.761 -0.656 0.607	0.001 0.006 0.013	Moderate Moderate Moderate	Negative Negative Positive
PostMBIQ16	2 PostMBI categories*	0.723 -0.614	0.002 0.011	Moderate Moderate	Positive Negative
PostMBIQ17	3 PostMBI questions*	0.527 0.607 0.866	0.036 0.013 0.000	Moderate Moderate High	Positive Positive Positive
PostMBIQ17	1 PostMBI category*	0.772	0.000	Moderate	Positive
PostMBIQ18	2 PostMBI questions*	0.705 -0.760	0.002 0.001	Moderate Moderate	Positive Negative
PostMBIQ18	3 PostMBI categories*	-0.812 -0.536 0.808	0.000 0.032 0.000	High Moderate High	Negative Negative Positive
PostMBIQ19	1 PostMBI question*	0.599	0.014	Moderate	Positive
PostMBIQ19	2 PostMBI categories*	-0.724 0.859	0.002 0.000	Moderate High	Negative Positive
PostMBIQ20	1 PostMBI question*	0.531	0.034	Moderate	Positive
PostMBIQ20	3 PostMBI categories*	0.802 0.712 -0.558	0.000 0.002 0.025	High Moderate Moderate	Positive Positive Negative
PostMBIQ21	2 PostMBI categories*	-0.639 0.787	0.008 0.000	Moderate Moderate	Negative Positive
PostMBIQ22	PostMBI category*	0.879	0.000	High	Positive
PostMBIEE	PostMBIDP	0.518	0.040	Moderate	Positive
PostMBIEE	PostMBIPA	-0.692	0.003	Moderate	Negative
PostMBIDP	PostMBIPA	-0.529	0.035	Moderate	Negative

**Note:* MBI is a copyrighted instrument. Those purchasing the instrument cannot provide information about what category (EE, DP, PA) each question fits into. Providing correlations of

specific questions could provide the reader insight into the category of each question; therefore, the specific MBI questions will not be provided in the correlation table.