Fall 12-14-2018

Caritas Intervention to Reduce Stress and Increase Resilience Among Caregivers

Randy L. Williams II
University of San Francisco, randyw2@me.com

Caritas Intervention to Reduce Stress and Increase Resilience Among Caregivers

Randy L. Williams II, MSN, MBA, RN, NEA-BC

University of San Francisco

Committee Members:

Marjorie Barter, RN, EdD, CENP

Lisa Cowan WHNP, DNP, NEA-BC, FACHE

Acknowledgements

I would like to acknowledge those that have supported this project, including Wilfrengerard Esposo (MSN, RN, NP-C), Lori Evers (MS, SPHR), Baljinder (Pepi) Lall (MSN, RN), and MaryJo Schmidt (BSN, MBA, RN). To my Committee Chair, Marjorie Barter (RN, EdD, CENP), and Committee Member, Lisa Cowan (WHNP, DNP, NEA-BC, FACHE)—my thanks for your guidance and sharing of wisdom. In addition, I would like to acknowledge my Area Manager, Patricia Rodriquez (MPH, RN), and my Chief Nurse Executive, Christine Lima (MN, MBA, PhD, RN) who have been instrumental in supporting this work and my matriculation though the doctoral program. Theresa Broderick (PhD, RN), and Jim D'Alfonso (DNP, RN, NEA-BC, FNAP), my heartfelt thanks for your modeling of visionary leadership, and for having created space and opportunities to increase the knowledge and expertise among our profession. Lastly, I wish to acknowledge those that have been most supportive—those individuals who have encouraged me and allowed me the space and time to pursue my education and continue in my career path: my parents (Randy and Virginia Williams), and most importantly my wife, Adree Williams (MSN, RN, CRNA). My wife has consistently pushed me to be the best that I can be and has been there for me to encourage me in the face of challenges and celebrations. I wish to acknowledge my children: Randy III, Miles, Fisher, and Rose; these four have a special way of centering me on what matters most, distilling the most difficult situations to the most pertinent, and always able to see the bright side of any situation. Finally, I wish to acknowledge my late grandfather, George Emory Williams, an honest, hard-working, giant of a man. He always kept his family first and sacrificed to ensure that they did not have to. He did not complete high school as he had siblings to support. However, without a formal education, he set an example and taught far more than any books could provide. His battle with

cardiac disease and resulting renal failure, and his statement to me: "Randy keep up the good work and do all that you can to ensure that these caregivers are supported to support people like me." I will never forget these words, for they served as a source of passion to participate in the aforementioned work.

Section I: Abstract

Problem

Workplace stress and burnout consistently rank among the highest concerns in surveys of caregivers. A gap analysis was conducted among a group of patient care coordinators and medical social workers. The gap analysis identified a need for tools to address stress, feelings of being overworked, and irritability.

Context

The setting is an acute care trauma facility providing care to general medical–surgical adult patients, cardiac care, pediatrics, and maternal child care. This facility exists within a larger integrated health care system, consisting of more than 20 acute care facilities in Northern California. The participants were patient care coordinators and medical social workers.

Intervention

Each participant received one 2-hour education session describing the usage of the Quick Coherence® technique (HeartMath®, 2017). In addition, four 15-minute one-on-one coaching sessions over 8 weeks were offered to each participant to support after the 2 hour educational session. The usage of the new tool was reinforced through leader-led usage in huddles and staff meetings.

Measures

This improvement project relied on a plan-do-study-act (PDSA) design, utilizing a group of 32 patient care coordinator registered nurses and medical social workers. Blinded participants were asked to complete a pre- and post-intervention Personal and Organizational Quality

Assessment – Revised 4 (POQA-R4) questionnaire which measures four primary scales: emotional vitality, emotional stress, organizational stress, and physical stress.

Results

Among the primary scales, positive shifts were identified in emotional vitality (18%), emotional stress (28%), organizational stress (38%), and physical stress (39%). Intention to quit was reduced by 26%.

Conclusions

This evidence-based project was successful in meeting its aim of reducing stress and increasing staff resilience. The personal nature of the phenomena attempting to affect, stress, which is both personal and broad, created unique challenges. The key findings for success were: significant consideration for appreciation of the readiness level for the participants, creating a clear personal value proposition, and a commitment by the organization to support the time for the practice of the intervention. In the case of this project, the key reasons for its success were the minimal time necessary to train, and efforts to increase the desire to participate, as well as ongoing support through one-to-one coaching and support for practice in a collective setting with peers. Lastly, the choice of the tool, Quick Coherence®, contributed to the success of this project because it could be engaged in the moment of the stress trigger without others being aware. The same tool could also be used to build a reservoir of resilience against both personal and professional stress triggers.

Keywords: nurse, resilience, stress, burnout, turnover

Table of Contents

Section II: Introduction

Problem Description

Retaining health care professionals is an ongoing concern as the national rate of registered nurse turnover in 2017 was 18.2%, up 2% from 2017, and recruitment of an experienced registered nurse takes on average 2.5 months.(NSI Nursing Solutions, Inc., 2018). In a study by Mealer et al. (2012) of registered nurses currently working in acute care settings, 61% scored positively for emotional exhaustion, and 50% felt a lack of personal accomplishment. The American Nurses Association (ANA) began an effort to assess the health of the United States nursing workforce between 2013 and 2016, with over 13,500 nurses and nursing students having participated. Overall, approximately 82% of respondents to this ANA census reported significant levels of risk for workplace stress (Carpenter, 2017).

Hiring, encouraging and retaining health care professionals who are committed, compassionate, and able to authentically engage with their patients is of utmost importance within the health care system. This evidence-based change project included participants from two roles within an acute care facility in Northern California. This is a highly integrated health care system with 21 acute care facilities in the region. The two roles identified were patient care coordinators and medical social workers. These roles were chosen as they have a significant impact on patients and their families; moreover, their work is integral to the maintenance of wellness across the continuum of the patient care experience.

Setting

The setting is an acute care trauma facility providing care to general medical surgical adult patients, cardiac care, pediatrics, and maternal child care. This facility exists within a larger integrated health care system consisting of 21 acute care facilities in Northern California.

Current Knowledge

The target participant population, inclusive of patient care coordinators and medical social workers, was employed at the time of the intervention within a single acute care facility. This quality improvement project utilized a small test of change method with a group of 32 participants fulfilling the aforementioned roles. This group of participants had undergone significant changes in leadership in the preceding 2 years. In addition, the patient care coordinator role was in the midst of becoming represented by a labor union. The facility had also undergone patient membership growth of nearly 25% in the preceding 4 years (Appendix B); thus creating a significant increase in the number of complex patients requiring their oversight. Therefore, staff members in the roles identified a need for an intervention aimed at creating a greater sense of team spirit, stress reduction, and greater trust between staff and leadership.

Available Knowledge

A literature search was completed to assess the available evidence relative to the following question: In caregivers (P), how does the quick coherence® technique (I) compare to standard practice (C) in terms of resilience, stress, and job satisfaction (O) within 60 days (T).

The PICOT question guided two systematic searches. The first search used the following keywords: *nurse*, *stress reduction*, *retention*, *burnout*, and *job satisfaction*. This search was completed in February of 2017 and used the following electronic databases: CINAHL Complete, Cochrane Database of Systematic Reviews, PubMed, Scopus, and DynaMed. Limitations placed within the searches were that the articles must have been published since 2009, must be in English, and must include systematic reviews, meta-analysis or meta-synthesis. The systematic search yielded 48 articles and reports. Three articles were chosen from this search.

The second search used the following keywords: *nur** (* wildcard to allow for any variation of *nurse*), *coping*, and *resilience*. This search was completed in April of 2017. CINAHL Complete yielded 48 articles. Limitations placed on the search were that the articles must have been published since 2011, must be in English, and must have been published in peer-review academic journals. Two articles were chosen from this search.

Appraisal of Evidence

Studies in this review were critically appraised using *The Johns Hopkins Research Evidence Appraisal Tool* (Dearholt & Dang, 2012). Each of the five articles was evaluated for strength of evidence, weaknesses, and rating scale. The five articles include three level III and two level II studies, each with a quality rating of B. A summary is provided in the review of evidence table (Appendix C), and characteristics, variables, and outcome measures are collated in the evidence synthesis table (Appendix D).

Burnout and Stress

Davey, Cummings, Newburn-Cook, and Lo (2009) conducted a systematic review to examine predictors of short-term absences. Statistical analysis was conducted using content analysis of 70 independent variables that were potential predictors of absenteeism and were categorized into eight types. There were clear trends among the 14 studies with burnout and job stress being predictors of increased absenteeism. Westermann, Kozak, Harling, and Nienhaus, (2014) found that reducing burnout was often about striking a balance between allowing participants to buy into and create a personal practice, as well providing opportunities within the workplace to practice these tools. Hart, Brannan, and De Chesnay (2014) identified that challenging workplaces, psychological emptiness, diminished inner -balance, and dissonance in the workplace had an adverse effect on nurses' ability to be resilient.

Coping with Stress and Resilience

Smith (2014) conducted a critical literature review to explore the state of science

regarding mindfulness-based stress reduction (MBSR) as an intervention to assist nurses to cope

with stress. Due to the variety of measures used in the studies, the author blended the results into

salient findings. While no singular benefit of MBSR was identified, the overall findings were

consistently positive. In summary, Smith (2014) found that it was possible to decrease stress,

burnout, and anxiety levels through appropriate interventions. Notwithstanding, statistical

analysis or measurement was lacking, thus indicating a weakness in the level of evidence. In

another systematic literature review, this time to analyze burnout intervention studies among

nursing staff, Westermann et al. (2014) concluded that the most effective long-term interventions

were both person-centric and work-centric. This finding should not be at all surprising as stress,

burnout, and job satisfaction are clearly multi-faceted. The systematic review identified that the

heterogeneous nature of the interventions provided for a limitation, to direct linkage toward a

specific single intervention. The review included 16 interventional studies, seven of which

reported interventions that reduced burnout. Hart et al. (2014), in a review of seven studies

(mostly surveys or qualitative studies), found a number of factors contributed to the development

of resilience. The investigators were unable to identify any specific method by which to build

personal resilience. In Pipe et al. (2012), a level II quasi-experimental study, a Quick

Coherence® intervention was found to have produced statistically significant outcomes. This

intervention produced sustained changes from baseline to 7 months post-intervention. These

findings are supported by a later systematic review by Westermann et al. (2014), who reported

that stress reduction intervention exercises taught in groups who work together tend to be more

effective. This reinforces the need to create a tipping point culture wherein the intervention is

socialized as a norm, and encouragement can be felt from peers and leadership. In this case, the

impact was a combination of both a reasonable intervention and an ability to practice within the

given team. Another study by Pipe et al. (2012) with 100 participants showed a decrease in both

personal and organizational stress indicators.

Summary of Evidence

In summary, this review has found evidence linking nurse burnout and stress with

increased absenteeism and reduced staff satisfaction (Davey et al., 2009). Hart et al. (2014)

conducted an integrative review to better understand the phenomena of resilience in nurses,

finding that efforts to identify and build resilience could help in both the recruitment and

retention of nurses. A study by Pipe et al. (2012) provided evidence of the need for intervention

with formed groups or teams for the greatest impact and sustainability.

Smith (2014) identified that while some interventions have been successful in reducing

burnout and stress, few interventions could be said to eliminate stress altogether. Interventions

observed to reduce stress tended to have a sustained effect when they included a combination of

interventions that are both personal and work directed (Westermann et al., 2014). The ideal

intervention teaches the participant skills that they may utilize when a stressful situation is

encountered, thus reducing the impact of stress. One-time interventions, however, are ineffective

at removing future stress. The evidence also suggests that the methods that might be most

helpful in promoting sustainable outcomes involve socializing norms for practicing the

intervention. Therefore, the evidence indicates that interventions should ideally be conducted

with intact groups of employees to allow for both personal and team usage within the workspace

and during personal time to reduce burnout and stress. In order to create a personal desire and

willingness to engage in the intervention, intrinsic motivation must be high; therefore, the intervention must be easily accessed and readily available at the time of a stressful event.

Rationale

The conceptual framework for this project is the theory of human caring, which has its underpinnings in nursing. The theory of human caring is based on the work of Watson (2012). The core concepts are: relational caring for self and others; a transpersonal caring relationship that goes beyond the self; caring moment; the use of a reflective meditative approach; caring as circular and expansive; the ability to change self and others, and a culture of groups/environments through caring. These concepts are intrinsic to the Caritas process. Watson's theory has been throughout nursing as a framework to guide practice, and is also used to define the requirements for what is considered a professional nurse (Watson, 2012). The primary intent of this project is to effect positive changes in the primary scales of emotional vitality, organizational stress, emotional stress, and physical stress. A secondary objective of this project is to increase the frequency of caring moments nurses within the organization are able to provide as they become more present and authentic in their interactions. Appendix E provides a visual of the participants as they open to experiencing a transpersonal caring moment.

Specific Aim

The specific aim of the project was to provide an evidence-based intervention to patient care coordinators and medical social workers at a single acute care facility that would enable the participants to reduce their personal stress and increase their emotional vitality within a 60 day period, as measured by paired self-reported questionnaires.

Section III: Methods

Context

The key stakeholders in this project were the participants themselves (i.e., patient care coordinators and medical social workers), the managers, and the director of the individual departments, and the trainers. The stakeholders were aware of the need to address the issue of stress and emotional exhaustion. This issue was made evident after several focus group sessions during which participants identified increased pressure on them as their caseloads had grown. Moreover, increased emphasis had been placed on benchmarks, such as length of stay, readmission rates, and care experience scores related to care transitions. The managers and directors who provided leadership oversight for this clinical area were aware of the stress that is typically expressed by those working in their areas. The leadership readily identified that the increase in membership and access to health care placed additional pressure on the departments to efficiently and effectively navigate the complex health needs of patients. There was agreement that an evidence-based intervention would be beneficial to these participants. Specifically, the leadership and staff expressed a desire for an intervention that was realistic for them to utilize within their workspace.

During planning sessions, those serving involved in leadership positions identified potential barriers and mitigation tactics. A significant barrier to implementation and enculturation was the current environment. Relationships between management and staff were strained due to recent unionization activities. It was therefore determined that the best course of action was to separate the intervention from the organization's management. Consequently, responsibility for the project was shifted to the author as a professional development activity.

Intervention

The Quick Coherence® technique is an evidence-based approach developed by the HeartMath® Institute (HeartMath®, 2017). The uniqueness of this approach is its ability to rapidly utilize the power of one's heart to balance thoughts and emotions to create mental clarity, increase energy, and feel better in an instant. The intent is to create a sense of harmony and balance resulting in a coherent state. This technique assists the individual in creating resiliency by increasing their emotional vitality and reducing their emotional exhaustion, which is often experienced through the release and long lasting effects of cortisol. These steps are:

1. Focus your intention on the area of the heart. Imagine your breath is flowing in and out of your heart or chest area, breathing a little slower and deeper than usual.

2. Make a sincere attempt to experience a regenerative feeling, such as appreciation or care for someone or something in your life (HeartMath®, 2017, para.2).

These simple steps have been found to regulate both the autonomic nervous system and to regulate the hormonal system in relation to the release of cortisol and dehydroepiandrosterone also known as DHEA (HeartMath®, 2017).

The intervention consisted of one educational session lasting 2 hours, followed by smaller educational sessions within the day-to-day work of the employees, as examples in huddles, and during staff meetings. In addition, one-on-one 15 minute coaching sessions were offered every 2 weeks for a period of 8 weeks for each participant. The 2-hour class was conducted at the acute care facility at which the participants are employed. There was no comparison group, however, baseline data were collected from each participant. Appendix F provides a diagram of the proposed effects of organizational stress, and Appendix G provides a diagram of the effects expected utilizing the Quick Coherence® technique (HeartMath®, 2017).

Gap Analysis

In May and June of 2017, the organizational development department conducted listening sessions with the patient care coordinators and medical social workers. A gap analysis was completed once the sessions were concluded; a segment of the analysis pertaining to this project is exhibited in Appendix H. The listening sessions were requested by the department's leadership as there was a sense that the staff were feeling stressed and morale was low. Some of the symptoms of stress described by staff were irritability, a feeling of being overworked, and challenges managing the expectations of the increasing patient population. In addition, there were issues of respect among peers, a lack of teamwork, and perceived alliances. After the analysis of both listening sessions and anonymous surveys, it became clear that the staff needed to be equipped with tools to reduce their stress and build resilience.

Gantt Chart

In order to thoughtfully develop the project, a Gantt chart timeline was created (see Appendix I). This chart provided the leadership and project stakeholders with a snapshot of the key milestones to accomplish and a clear sense of timeframes to complete aspects of the project. Significant within the Gantt chart was the creation of enough lead time in order to allow for variables that could affect the project.

SWOT

A SWOT analysis was conducted to elucidate the strengths, weaknesses, opportunities, and threats (see Appendix J). Working in a labor management environment created special challenges for project implementation. The frontline nurses at the project hospital were members of a union with an often contentious relationship with leadership. The union contract expired in 2017 and work stoppages were anticipated. Increased tension between leadership and staff

nurses were present and expected to continue. Implementation of the intervention and the dialogue that occurred with it was expected to increase the resilience of managers and leaders during this time of stress and conflict related to potential work stoppages resulting from contract negotiations with the union.

It is estimated that approximately 20% of nurses are represented by unions.   A widely held belief by unions is that programs that impact employee working conditions are inherently union matters, and that any programs aimed at improving the retention of nurses are also union issues (Johnson & Billingsley, 2014). This was very apparent in the targeted organization. The participating nurses had recently voted to join the same union as the direct-care nurses; however, there was a disagreement within the organization as to the appropriateness of the alignment.

Budget

Appendix K provides a breakdown of the proposed budget for the project and the expected cost savings. The cost of the project was calculated to be $20,826.32, including the cost of the hourly average wage for each of the participants and trainers. The expected cost savings due to reduction in turnover and disengagement, after accounting for the cost of the project, was calculated to be $70,973.68.

Responsibility/Communication

A responsibility matrix was developed as can be seen in Appendix L. This work breakdown structure was framed by the change model. ADKAR (Prosci, 2017). This model for managing change worked well with the implementation of the project as the intervention was largely unknown to the leaders or participants; moreover, there were leadership changes taking place during the implementation phase. Consequently, it was necessary to engage each of the project leaders to enhance their awareness of the need for change, thus creating a desire to

participate, assist them with attaining the necessary knowledge to satisfy the aims of the project, to address the needs of the setting and tools to participate in the intervention, and lastly to, reinforce the change. In order to attend to this change model, which required thorough and consistent communication, a communication plan was developed (see Appendix M). The bulk of the communication plan is dedicated to raising awareness, desire, and knowledge. This project, with its intent to address known needs based on the gap analysis and known challenges, which the leaders and trainers had also faced, required very little in the way of communication to encourage or create a desire to participate. Once the intervention had been completed, the communication quickly turned to short check-ins as to how best the leaders could be supported as they continued to encourage the intervention through creating purposeful practice in the workspace.

Cost/Benefit Analysis

A cost–benefit analysis of the project can be seen in Appendix K. This appendix item provides clear evidence of cost savings due to a reduction in turnover and disengagement. In addition, a return on investment plan is presented in Appendices N.1 and N.2, detailing a cost–benefit analysis that considers extending the project beyond one facility to five facilities in each of two consecutive years. The return on investment plan evidences significant cost savings as the same challenges with turnover and disengagement exist in each location. In year 1 with only 13 registered nurse participants if 5% of those participating were retained, a cost savings ranging from $23,400 to $36,400 is expected based on 2016 cost of turnover. In year 3 if the project is expanded to 5 medical centers with 15 registered nurses participating and a 5% increase in retention is actualized, then a cost savings ranging from $135,000 to $210,000 is predicted. Reduction in expected dis-engagement year 1 is expected to add to a cost savings of $28,600 to

$165,000 in year 3. In addition, it is worth noting that even with conservative estimates of cost of turnover and dis-engagement, the low cost of project implementation and support create a beneficial outcome when only considering conservative dollars spent to address the otherwise expected turnover and dis-engagement. Likely costs that were not included, but that would be incurred with any turnover, include the cost to the morale of broken teams, the cost of orientation and onboarding for new staff, and the cost to the organization's brand to make up for any losses in service quality and experience.

Study of the Intervention

The one-on-one coaches requested feedback from the participants with respect to the intervention in order to assess the impact of the intervention on the outcome. The participants consistently indicated that the intervention itself was the variable that had the strongest effect on their responses to the questionnaire. The volume of patients and critical situations that participants worked with between the pre- and post-intervention questionnaire was also discussed with department leaders. The prevailing belief by leadership was that the patients and situations changed, however the volume and challenges in general did not, therefore these variables were not considered to have had an impact on the results. Lastly, while the makeup of the team underwent some changes over the study period, these changes had no appreciable impact at the point of the post questionnaire. A variable that may have had some effect on the overall stress levels of participants was the progression of labor management bargaining.

Measures

The design is a PDSA format. The intent was to implement the project utilizing a small group of participants who would then go on to inform a larger local group, eventually leading to a regional rollout of the intervention, assuming success (Agency for Healthcare Research and

CARITAS INTERVENTION TO REDUCE STRESS AND INCREASE RESILIENCE   22

Quality, 2017). The pre- and post-project questionnaire provided a wealth of data with which to appraise the effects of the intervention. All participants were provided with an opportunity to complete the self-report questionnaire. Using this instrument, baseline data were collected in January 2018. Following the intervention in January, and coaching in February and March, a post-questionnaire was completed in April and May, 2018. The post-questionnaire was the Personal and Organizational Quality Assessment – Revised 4 (POQA-R4) (see Appendix O). The POQA-R4 is a set of validated scales used for the assessment of coherence techniques both at baseline and after practicing the techniques (Larkey & Hector, 2014). Scores reflect both personal and organizational factors. The four scales measured include emotional vitality, emotional stress, organizational stress, and physical stress. These scales collectively reflect the participant's level of resiliency. Of the 32 participants in the intervention, all completed the pre-intervention POQA-R4, while only 21 completed the post-intervention POQA-R4.

Analysis

Following data collection, completed questionnaire data was sent to HeartMath® for data management and analysis. HeartMath®, provided the POQA-R4 online tool for survey completion and agreed to complete the data analysis for a nominal fee, which is included in cost of the survey. Longitudinal comparison was made as the questionnaire provided two points in time. The initial plan for the project was to use a T-test, using unique identifiers for each participant. This plan had to be changed, however, to compare raw score averages for the group completing the pre-intervention questionnaire to the raw score averages of the group completing the post- questionnaire. This change was necessary as the participants were provided a unique and anonymous identifier for the pre-intervention questionnaire, and were instructed to maintain these identifiers. Unfortunately, the participants were not able to maintain these unique

identifiers; therefore, in order to protect the anonymity of participants, the 32 who participated in the study were asked to complete the post-intervention questionnaire, after which the raw score averages of the pre- and post- group was compared.

Appendix P provides an example of the analysis report from HeartMath®. In Table 1, the average of the groups means at pre- and post- were compared to derive a percentage change. This percentage change may have been negative when the questions were worded negatively, and positive when worded for a positive shift. Table A1 provides an example of a measure of validity and reliability. In Table A1, the seven scales and associated subscales were analyzed using Cronbach's coefficient alpha. The overall analysis of the project included both quantitative and qualitative methods through usage of a pre- and post-intervention questionnaire, anecdotal questions through listening sessions conducted in the gap analysis phase, and discussions with participants (both individually and collectively) during the project and through to completion.

Ethical Considerations

Ethical concerns in this project are relative to the size of the small test of change and the small sample selected to participate. These concerns are mitigated by an intent to spread the benefits of this project to other groups after the completion of the small test of change. The core values of the University of San Francisco, retrieved from the student handbook, are attended to and can be evidenced throughout the intent of this project (University of San Francisco, 2017). Some examples of attention to core values are:

1. The intention to see learning as humanizing and not a competitive exercise, as exemplified by the desire to co-create the intervention sessions and the content of those sessions which increase our awareness to the human experience of stress and anxiety,

which are merely our reaction to events, and therefore opening the ability through

education for all to better manage this reaction through knowledge.

2. The intent to allow personal choice as to how we choose to be in the world in that our

   reaction to events may affect another and, by equipping one with tools, events may

   become a choice point rather than a point that then overtakes and diminishes our

   actualization of our desired self.

3. The intent to create a socially responsible group that acknowledges their ability to control

   the way in which they are being in the world; to then, therefore, create a fertile place

   from which knowledge may be shared and held in trust for future generations.

Each of the aforementioned intents are addressed within the intervention, which allows

participating individuals a personal choice point in which they may engage more fully with

others and connect in a more authentic way.

Within the nine provisions of the ANA's ethical standards are several statements that

articulate the need for the nurse to be compassionate, to provide for the safety of others, to

encourage both others and themselves to promote health and safety, to preserve wholeness of

character, and continue personal growth (ANA, 2017). This project, at its core, provides for an

increase in the awareness of staff regarding their ability to control their reactions in order to

maintain an attachment toward purpose that connects their competence and compassion for the

treatment of others and themselves. This project allows for continued growth within the

profession and personally, such that the participant is better equipped to deal with the ever-

present stressors of work and life, and react in a way that is more consistent with the internal

desire for the good of humanity.

Section IV: Results

Results

Appendices Q.1 and Q.2 depict the results of the pre- and post- POQA-R4 questionnaire. These appendices provide evidence of the project having achieved its aim of providing an evidence-based intervention that enabled the participants to reduce their stress and increase their emotional vitality, which they were able to sustain beyond the initial aim of 60 days to over 90 days, between the completion of intervention and the completion of the post-intervention questionnaire. The results provide a comparison of group means for both primary and secondary subscales. Primary scales reported positive shifts in: emotional vitality (18%), emotional stress (28%), organizational stress (38%), and physical stress (39%); in addition, the intention to quit reduced by 26%. Specifically, the POQA–R4 question regarding stress in the past month saw a significant reduction from a pre- questionnaire average of 50 on a scale ranging 0–100 (see Question 28, Appendix O), to 12 in the post- questionnaire. Qualitative reports from participants were all extremely positive, with statements such as:

- "HeartMath® is a gift,"

- "Thank you,"

- "This has affected not only my work life, but also my home life, I have been teaching coherence tool to my family,"

- "I really feel that this has helped us bond as a work family,"

- "It's amazing how effective something so simple can be,"

- "I don't feel nearly as tired," and

- "Everyone should be using this, I've even taught it to some of my patients."

While several extraneous factors may have influenced the results, the chief such factor is thought to be issues related to the unclear union representation of some of the participants. In addition, not all the initial 32 participants were available to complete the post- questionnaire. It might also be argued that efforts to resolve the union issue could have affected the results of the intervention in other ways. The clear understanding of representation and ability to continue to participate in projects such as this may have hindered some of the participants from completing the post- questionnaire. In either case, the strong results from greater than 65% of the participants, plus the qualitative feedback, mitigates any concerns about the results being skewed.

The leadership of the department was asked if there were any observed associations between the intervention and the results. The leaders expressed their lack of surprise about the overwhelmingly positive results, saying that it was evident to them that their staff were more present and enjoyed their participation as a group in the intervention tool at huddles and staff meetings. It was pointed out that most of the team, even those who had not participated in the training or project, joined in during the use of the tool at huddles and staff meetings.

While the project required relatively few changes, those necessary changes were significant. First, a decision was made to reduce the scope of data collection, which was initially planned to be three stages: early pre-, pre-, and post-intervention questionnaires. The director of the department expressed concerns that any early pre-questionnaire would be confused by the staff with an organizational questionnaire that was mandated annually. The timing of the organizational questionnaire was beyond the scope of control of this project; consequently, the decision was made to forego the early pre-, and instead focus on two data points: pre- and post-intervention data collection data points for comparison.

Secondly, a change was made to the didactic training of the intervention, which resulted in two significant modifications. The decision was made to increase the number of workshops and reduce their duration from 4 hours each to 2 hours. These modifications were made to better align the workshops with participants' working hours and to reduce the level of disruption to the clinical environment during what was otherwise a very busy influenza season. The first modification—increasing the number of workshops—was relatively benign and aimed at further promoting project success; nonetheless, this modification required some significant coordination with respect to room allocations and rescheduling of trainers' time. The second modification was a bit more concerning as the reduction from 4 to 2 hours of training was a significant deviation from prior implementations of the tool where two 4 hour sessions (or some combination of sessions to account for a minimum of 4 hours of training) was the norm. In this case, the decision was made to move forward to stress test the intervention and determine if the aim could be reached while simultaneously reducing the time commitment of participants. The decision included an agreement with the leadership of the departments to reaffirm their commitment to promote practice of the intervention tool within the work setting and for them to assume an ownership role over the intervention to ensure its practice. Some of the documents used for training are included in Appendix R.1 and R.2. The slides used for the training sessions are not available to share as they are the proprietary intellectual property of HeartMath® and are only made available to certified trainers. Thirdly, a decision was made to allow completion of the post-intervention questionnaire without the anonymous codes that were provided for the pre-questionnaire. This decision affected the reporting of the results and, to some extent, their veracity as it would no longer be possible to provide evidence of a direct pre- and post-relationship by individual participant. Therefore, the results are now reported by group. While

this approach increases the possibility for skewing based on significant outliers, the size of the sample makes this somewhat unlikely. While the decision to evolve the project in this way was not an easy one, it was necessary in order to maintain the course of the project and to ensure that any intervention effects could be identified.

Section V: Discussion

Summary

The project aim was achieved with little alteration to the original plan. There were several key findings in this project. This project was planned around the needs of the participants. Consequently, there was careful planning to ensure that both the chosen evidence-based tool and the method would not adversely impact participants' time and would provide maximum utility to the clinical setting. Engaging the organization's leadership also helped to create purposeful opportunities for use of tool in the workspace, and helped to remind participants of the usefulness and value of the tool. The greatest contributor to the success of this project was the desire of the participants to utilize the tool, both personally and collectively, within the professional setting. The one-on-one coaching was believed to have been a significant contributor as it provided the participants with a safe space to be vulnerable regarding their questions, their usage, experience, and encouraged accountability toward integration of the tool into their personal practice.

The apparent success of this project raises a number of opportunities to provide practice of tools in the workspace. Allowing for practice of tools provided for personal well-being and health was significant to success in the literature. This evidence and integration within the project became particularly important in building team cohesiveness. It is likely that the collective awareness and desire to practice within the work space in a state of coherence, resulted

from the team understanding of the impact one may have on the group and the individual level of responsibility for self.

The dissemination of this work is planned with the collaboration of regional leaders to engage the existing HeartMath® trainers in other facilities across the region. In addition, ongoing educational sessions will be provided by locally trained HeartMath® trainers. The implementation of this project has implications for evidence-based practices aimed at reducing stress and creating resilience in the workplace. The intent of this intervention is to maintain competent individuals within the practice setting by reducing burnout and fatigue, thus preventing highly skilled workers from leaving the profession. This study highlights the need for professional caregivers to attend to their self-care needs in order to maintain their ability to practice at the highest level.

Interpretation

Differences between the expected and observed outcomes for this project are related to organizational and external influences that affected implementation. The evidence supporting the implementation of a tool aimed at reducing stress is strong. Organizations have a number of options at their disposal. The actual financial costs for this project were accurately estimated. There were no anticipated losses or gains to be made should an alternative intervention have been chosen for the project.

The organization is undergoing constant change, as is common in health care. Most of these changes are customary, the kind of changes that often come about in response to events, such as those that affect patient care. These changes tend to be reactionary, quickly implemented, and are seldom sustained for very long. It is critically important to carefully plan change processes, ensuring clear sustainability plans to realize and sustain the change. The

implications of changes during this change process illustrate the importance of having leadership support to ensure the success and sustainability of the project.

The conceptual framework, based on the theory of human caring, was supported through the findings of this project. This project found that individuals can have an effect on others in terms of creating transpersonal caring moments. There were a number of verbal statements from participants demonstrating how they interacted or were interacting with others in a more thoughtful way following their use of the tools as a group. A number of participant statements alluded to increased teamwork and collaboration.

Limitations

Efforts were made to adjust for limitations occurring during the project, such as the ongoing labor negotiations through use of one-on-one coaching sessions, and purposefully utilizing coaches and trainers that were not part of the organization's hierarchical structure. The timing of the pre- and post- questionnaire administration was an attempt to separate it from any of the activities relative to the labor management negotiations. The major challenge or limitation in the case of this project and with this group of caregivers, and perhaps any group of caregivers, is time. Time was a limiting factor as these caring disciplines are in high demand and with growing patient populations. The professionals surveyed in this project were expected to be highly engaged throughout their working day, thus impacting their participation. This created the need for multiple educational offerings despite the small size of the participant group. It was also necessary to reduce the typical didactic session from 4-hour classes to 2-hour classes. This need to account for time allowed for a test of the actual time needed to elicit a measurable response, and in the case of this project, the reduction of didactic time from 4 to 2 hours had no appreciable impact. One important finding of this project, is that it is possible to reduce the time

from the standard teaching package. Initially, the project was intended to have three points of questionnaire completion and comparison using a t-test, such that each participant would receive a unique identifier, thus allowing for direct comparison of the impact 3 months prior to intervention as a baseline, just prior to intervention, and a 3-months post-intervention. Due to local leadership recommendations, however, it was determined that completing the questionnaire at three distinct intervals would potentially complicate a series of unrelated but ongoing labor management negotiations. Locally, there was also a limitation on the ability to compare each participant directly in terms of their pre- and post- intervention questionnaire responses. Many of the participants had misplaced their unique identifier number that would have allowed for direct comparison while maintaining anonymity. Therefore, in the absence of these identifier numbers, the decision was made to compare the pre- and post- questionnaire responses as a group, thus allowing for the maintenance of anonymity of participants throughout the project.

Conclusions

The project was successful in meeting its aim of reducing stress and increasing resilience. The evidence-based methods and interventions used in this project were found to be successful. The key findings were that, for an intervention aimed at affecting a phenomenon as personal and as wide as stress, it is necessary to consider acknowledging the readiness level of the participants to participate. It is also necessary to create a clear value proposition to create an intrinsic desire among participants to utilize the tool, and a commitment, in the case of an organization and employee relationship, by the organization to support the practice of the tool in the work setting where participants interact with one another. Key to the success of this project was the minimal time necessary to train and create an intrinsic desire to participate. Also essential was the ongoing one-on-one coaching and support offered to participants to practice their new stress

management skills in a collective setting with their peers. Lastly, and significantly, was the utilization of a tool that could be engaged in the moment of the stress trigger without others being aware, and the ability to utilize that same tool in order to build a reservoir of resilience against both personal and professional triggers.

The success of this project has implications for wider health care audiences. It can be argued that the challenges facing health care workers are somewhat universal and that the experience of stress is fundamental to the care-giver role. If meaningful, effective, and reasonable tools can be provided that suit the needs of the care-giver wherever they are, the findings of this project provide evidence that they (i.e., health care workers) will indeed embrace these tools, thus positively affecting their workplace performance, their relationships with colleagues and patients, and their capacity to remain within the profession.

If, as a result of this project, employee retention can be increased, and the health care workers' heart and mind engaged in caregiving, together these can promote improved patient care and health care outcomes. The challenge remains, however, to remove the barriers to educating health care workers about these tools, and allowing them the time necessary to practice. The need, therefore, continues to exist for projects such as this to be published and presented in order to raise awareness of the evidence that exist for these tools to affect those who provide care to care for themselves in a way that maintains the sustainability for the most vulnerable populations.

Section VI: Other Information

Funding

This project was funded by The Kaiser Permanent Nurse Scholars Academy and is part of the continuing commitment to spread best practices across the organization and build upon previous doctoral projects. There was collaboration of funding for participants' and trainers' time from the local facility.

Section VII: References

Agency for Healthcare Research and Quality. (2017). Plan-Do-Study-Act (PDSA) Cycle.

Retrieved July 25, 2018, from https://innovations.ahrq.gov/qualitytools/plan-do-study-

act-pdsa-cycle

American Nurses' Association. (2017). View the Code of Ethics for Nurses. Retrieved July 25,

2018, from https://www.nursingworld.org/practice-policy/nursing-

excellence/ethics/code-of-ethics-for-nurses/

Carpenter, H. (2017). ANA's health risk appraisal: three years later. *American Nurse Today*,

12(1), 15.

Davey, M. M., Cummings, G., Newburn-Cook, C. V., & Lo, E. A. (2009). Predictors of nurse

absenteeism in hospitals: a systematic review. *Journal of Nursing Management*, *17*(3),

312–330. https://doi.org/10.1111/j.1365-2834.2008.00958.x

Dearholt, S. L., & Dang, D. (Eds.). (2012). Research evidence appraisal tool. In *Johns Hopkins

Nursing Evidence-Based Practice: Model and Guidelines* (2nd ed., pp. 237–240).

Indianapolis, IN: Sigma Theta Tau International.

Hart, P. L., Brannan, J. D., & De Chesnay, M. (2014). Resilience in nurses: an integrative

review. *Journal of Nursing Management*, *22*(6), 720–734. https://doi.org/10.1111/j.1365-

2834.2012.01485.x

HeartMath®. (2017). Quick Coherence® Technique. Retrieved July 25, 2018, from

https://www.heartmath.com/quick-coherence-technique/

Johnson, J. E., & Billingsley, M. (2014). Convergence: how nursing unions and magnet are

advancing nursing. *Nursing Forum*, *49*(4), 225–232. https://doi.org/10.1111/nuf.12074

Larkey, L., & Hector, R. (2014). Hospital personal and organizational quality assessment entry

      data 2003–2012: the case for coherence contagion. *Global Advances in Health and*

      Medicine, *3*(Suppl 1), BPA13. https://doi.org/10.7453/gahmj.2014.BPA13

Mealer, M., Jones, J., Newman, J., McFann, K. K., Rothbaum, B., & Moss, M. (2012). The

      presence of resilience is associated with a healthier psychological profile in intensive care

      unit (ICU) nurses: results of a national survey. *International Journal of Nursing Studies*,

      49(3), 292–299. https://doi.org/10.1016/j.ijnurstu.2011.09.015

NSI Nursing Solutions, Inc. (2018). *2018 National Health Care Retention & RN Staffing Report*.

      East Petersburg, PA: Author. Retrieved from

      http://www.nsinursingsolutions.com/Files/assets/library/retention-

      institute/NationalHealthcareRNRetentionReport2018.pdf

Pipe, T. B., Buchda, V. L., Launder, S., Hudak, B., Hulvey, L., Karns, K. E., & Pendergast, D.

      (2012). Building personal and professional resources of resilience and agility in the

      healthcare workplace. *Stress and Health*, *28*(1), 11–22. https://doi.org/10.1002/smi.1396

Prosci. (2017). ADKAR Change Management Model Overview & Exercises. Retrieved July 25,

      2018, from https://www.prosci.com/adkar/adkar-model

Smith, S. A. (2014). Mindfulness-based stress reduction: an intervention to enhance the

      effectiveness of nurses' coping with work-related stress. *International Journal of Nursing*

      Knowledge, *25*(2), 119–130. https://doi.org/10.1111/2047-3095.12025

University of San Francisco. (2017). Student Handbook. Retrieved July 25, 2018, from

      https://myusf.usfca.edu/fogcutter

Watson, J. (2012). *Human caring science: a theory of nursing* (2nd ed.). Sudbury, MA: Jones &

      Bartlett Learning.

Westermann, C., Kozak, A., Harling, M., & Nienhaus, A. (2014). Burnout intervention studies

for inpatient elderly care nursing staff: systematic literature review. *International Journal

of Nursing Studies*, *51*(1), 63–71. https://doi.org/10.1016/j.ijnurstu.2012.12.001

Section VIII: Appendices

Appendix A.1: Summary of Project Table

Project Purpose	The goal of this project is to provide an evidence-based intervention, Quick Coherence® technique (HeartMath®, 2017), to patient care coordinators and medical social workers at a facility within a large integrated health system in the Northern California Region. This aim of this intervention is to enable participants to reduce their stress and increase their emotional vitality within a 60 day period, as measured by paired surveys (HeartMath®, 2017).
Population	Medium-sized tertiary medical center with a bed capacity of 170 licensed beds.
Subgroup receiving intervention	Patient Care Coordinators & Social Workers. Staffed with: 45 PCC's – Registered Nurses 25 – Social Workers
Sources of data	Personal and Organizational Quality Assessment Revised 4 - 4 Scales within: Emotional Vitality, Emotional Stress, Organizational Stress and Physical Stress
Criteria for inclusion	Any staff working in the role of PCC or SW as of January 2018 who volunteer to participate.
Exclusion criteria	There is no exclusion criteria
Time frame	Project to begin January 2018 and complete April 2018

Appendix A.2: Statement of Non-Research Determination Form

UNIVERSITY OF   School of Nursing and
SAN FRANCISCO   Health Professions

DNP Statement of Non-Research Determination Form

__Student Name:__

Randy L. Williams II, MSN,MBA, RN, NEA-BC

__Title of Project:__ Caritas intervention to reduce stress and increase resilience among care givers.

__Brief Description of Project:__

A) Aim Statement: Provide evidence based intervention to patient care coordinators and social workers at South Sacramento Kaiser Permanente Medical Center which enables the participants to reduce stress, increase emotional vitality within a 60 day period as measured by paired surveys

B) Description of Intervention: The intervention will consist of one 2 hour educational session, followed by smaller educational sessions within the day to day work of the employees as examples in huddles, and during staff meetings. In addition the plan is to provide opportunities for one on one coaching sessions lasting 15 minutes each once every two weeks for a period of eight weeks. The 2 hour class will be conducted at the acute care facility which the participants are employed. There will be no comparison group, however the intent is to acquire baseline data from the participants.

C) How will this intervention change practice? This intervention is intended to reduce stress and increase resilience among the participants. The outcome will be increased presence with patients, greater efficiency in task and higher satisfaction within the work environment.

D) Outcome measurements: Measures will specifically focus on the impact of the intervention as it relates to personal perceptions of stress, of resilience and of organizational stress. The tool utilized will be the validated Personal and Organizational Quality Assessment Revised 4 (POQA-R4). The POQA-R4 survey will be delivered to volunteer participants in a time series of three, wherein the third will be approximately 60 days after intervention. The outcome measures and desired effect are outlined below.

- **Emotional Vitality increase of 5%**

- **Emotional Stress reduction of 5%**

UNIVERSITY OF School of Nursing and
SAN FRANCISCO Health Professions

- Organizational Stress reduction of 5%

- Physical Stress reduction of 5%

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used: (http://answers.hhs.gov/ohrp/categories/1569)

X   This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☐This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title:	YES	NO
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	x	
The specific aim is to improve performance on a specific service or program and **is a part of usual care**. ALL participants will receive standard of care.	x	
The project is **NOT** designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does **NOT** follow a protocol that overrides clinical decision-making.	x	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does **NOT** develop paradigms or untested methods or new untested standards.	x	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does **NOT** seek to test an intervention that is beyond current science and experience.	x	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	x	
The project has **NO** funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	x	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., **not** a personal	x	

UNIVERSITY OF   School of Nursing and
SAN FRANCISCO   Health Professions

research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.		
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: *"This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."*	x	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME (Please print):
Randy L. Williams II

Signature of Student:

DATE_July 6, 2017_

SUPERVISING FACULTY MEMBER (CHAIR) NAME (Please print):

Dr. Marjorie Barter
Signature of Supervising Faculty Member (Chair):

8/2/2017

DATE

Appendix A.3: Letter of Organizational Support 1 of 2

KAISER PERMANENTE.

July 7, 2017

To Whom It May Concern,

I have worked with Mr. Randy Williams over the past five years at Kaiser Permanente's South Sacramento Medical Center. In my current position as Director of the Continuity of Care Services Department, I am in full support of Randy Williams' doctoral project. His project provides evidence-based intervention that addresses employee resiliency, job-related stress reduction and increased emotional vitality. I have personally seen the benefit, both personally and professionally, in the use of quick coherence technique.

We look forward to the positive effects of Randy's training on my staff which includes both Registered Nurse/Care Coordinators and Medical Social Workers.

Respectfully,

Mary Jo Schmidt, RN, BSN, MBA
Continuity of Care, Service Director
Kaiser Foundation Hospitals
South Sacramento Service Area

MJS:rm

Appendix A.3: Letter of Organizational Support 2 of 2

KAISER PERMANENTE.

To whom it may concern,

I, Jennifer Park, support Randy Williams's project to provide an evidence based intervention to patient care coordinators and social workers at South Sacramento Kaiser Permanente Medical Center with the intent to reduce stress, and increase emotional vitality as measured by self-reported participant surveys.

I wholeheartedly support this work and have personally seen the benefit, both personally and professionally of the use of quick coherence technique.

Respectfully,

Jennifer Park, LCSW, ACHP-SW
Manager of Social Services
Department of Continuity of Care
Kaiser Permanente, South Sacramento Service Area

Appendix B: Membership Growth

MEMBERSHIP SEPTEMBER
23.6% growth in 4 Years

199823   211760   226835   237602   246925

6%   7%   5%   4%

2013   2014   2015   2016   2017
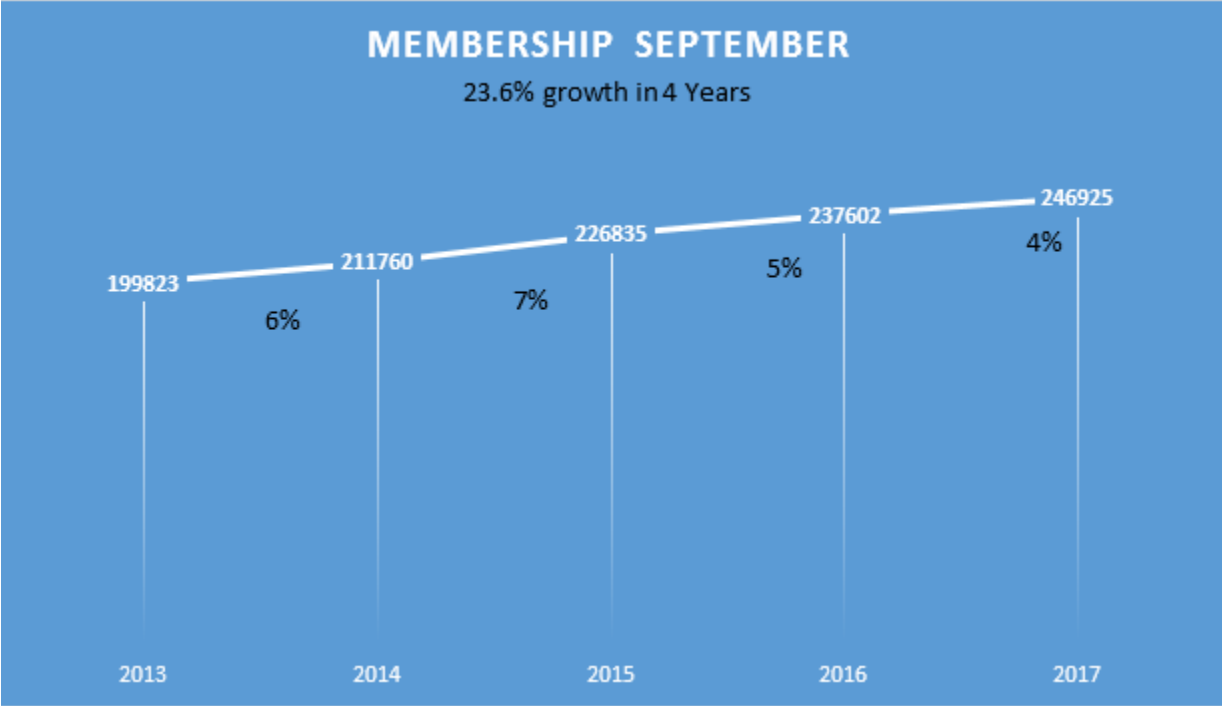
Appendix C: Review of Evidence Table 1 of 5

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
❖ All articles critically appraised using *Johns Hopkins Research Evidence Appraisal Tool.* ❖ Dearholt, S. L., & Dang, D. (Eds.). (2012). Research evidence appraisal tool. In *Johns Hopkins Nursing Evidence-Based Practice: Model and Guidelines* (2nd ed., pp. 237–240). Indianapolis, IN: Sigma Theta Tau International.								
Davey, M. M., Cummings, G., Newburn-Cook, C. V., & Lo, E. A. (2009). Predictors of nurse absenteeism in hospitals: a systematic review. *Journal of Nursing Management*, 17(3), 312–330. https://doi.org/10.1111/j.1365-2834.2008.00958.x	Majority of studies did not explicitly follow a theoretical framework.	Systematic review. 10 Online databases searched, English only and 1986-2006..	14 peer reviewed research articles	Absenteeism- not coming to work when scheduled	70 potential predictors of absenteeism examined and analyzed using content analysis	Content analysis with 70 independent variables. Eight determinants: prior attendance, work attitudes, retention, burnout and stress, manager characteristics, HR management practices, nurse characteristics, and work and job characteristics.	Attendance was best predictor of absenteeism. Burnout and job stress increased absenteeism.	**Strengths:** Identified need for continued research and to be conducted in standardized way. Identified need for identification of interventions to effect absenteeism. **Limitations:** Lack of robust theory about nurse absenteeism. Heterogeneity of research designs not allowing for one summary statistic. **Critical Appraisal Tool & Rating:** *See tool. Level III, Quality B.

Appendix C: Review of Evidence Table 2 of 5

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
• All articles critically appraised using *Johns Hopkins Research Evidence Appraisal Tool.* • Dearholt, S. L., & Dang, D. (Eds.). (2012). Research evidence appraisal tool. In *Johns Hopkins Nursing Evidence-Based Practice: Model and Guidelines* (2nd ed., pp. 237–240). Indianapolis, IN: Sigma Theta Tau International. ****** Whittemore R. & Knafl K. (2005) The integrative review: updated methodology. Journal of Advanced Nursing 52, 546-553.								
Hart, P. L., Brannan, J. D., & De Chesnay, M. (2014). Resilience in nurses: an integrative review. *Journal of Nursing Management*, 22(6), 720–734. https://doi.org/10.1111/j.1365-2834.2012.01485.x	Integrated approach based on Whittemore and Knafl (2005)** consists of five stages: problem identification, literature search, data evaluation, data analysis and presentation.	Integrative Review 2011-2012 data search. Using four databases. Language must be English, published 1990-Dec. 2011. Must address resilience, qualitative or quantitative, participants must have been nurses. Key terms were: nurse, resilience, resiliency and resilient. 462 articles identified narrowed to 7.	7 articles. 90% of participants were female. Ages of participants varied and were provided as ranges. Settings were varied	Resilience: is the ability of individuals to bounce back or cope successfully despite adverse circumstances.	Evaluation of the quality of the primary sources occurred through interrater reliability rankings of studies on a 7 point Likert scale. Of the 7 studies included three were quantitative and four were qualitative.	Matrix developed that outlined population being studied, contributing factors for the need for resilience, characteristics of nurses that promote resilience and strategies that help build resilience in nurses. Analysis was then integrated using a constant comparative method.	Contributing factors to Resilience were Psychological emptiness, challenging workplaces, diminishing inner balance, and a sense of dissonance Intrapersonal characteristics related to resilience included hope, self-efficacy, coping, control, competence, flexibility, adaptability, hardiness, sense of coherence Strategies- Cognitive reframing provided ability to re-vision or re-create the work environment into a more effective workplace.	**Strengths:** Provides information on the concept of resilience within the work-environment. Assist to understand why some nurses are resilient. Provides for some suggestive actions to promote resilience through culture and need to develop programs specific to development of resilience. **Limitations:** Lack of detailed information in some studies, non-diverse populations, majority of participants female, variety of practice settings. Research designs of the studies were primarily surveys or qualitative interviews. High variability in research questions **Critical Appraisal Tool & Rating:** *See tool. Level III, Quality B.

Appendix C: Review of Evidence Table 3 of 5

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
<td colspan="9">   - All articles critically appraised using *Johns Hopkins Research Evidence Appraisal Tool.*   - Dearholt, S. L., & Dang, D. (Eds.). (2012). Research evidence appraisal tool. In *Johns Hopkins Nursing Evidence-Based Practice: Model and Guidelines* (2nd ed., pp. 237–240). Indianapolis, IN: Sigma Theta Tau International.   </td>
Pipe, T. B., Buchda, V. L., Launder, S., Hudak, B., Hulvey, L., Karns, K. E., & Pendergast, D. (2012). Building personal and professional resources of resilience and agility in the healthcare workplace. *Stress and Health*, 28(1), 11–22. https://doi.org/10.1002/smi.1396	Watson's Theory of Human Caring	Quasiexperimental. participation was voluntary and open to staff from specified units and clinical leaders	N=100 Selected group of managers, supervisors and educators and staff nurses within a hematology/oncology unit.	Personal: fatigue, anger management, distress and vitality Physical stress symptoms: inadequate sleep, body aches, rapid heartbeats Job related: satisfaction, productivity, clarity, communication, and social support	Usage of the Personal and Organizational Quality Assessment Revised- (POQA-R) 80 question survey. Pre and post intervention, post was at seven months post.	Analysis of POQA-R as a single instrument with subscales. Grouped 80 items into constructs: positive outlook, gratitude, motivation.	44% of the 100 participants in the intervention completed the pre and post surveys. Statistically significant differences were found in each of the personal indicators trending positively. In organizational indicators all trended in the expected direction, statistically significant difference were found in indicators of goal clarity, productivity, communication and effectiveness and time pressure. In addition organization measures trended in a positive direction of impact to include turnover, employee satisfaction, as well as patient satisfaction with nursing care improved during the time frame.	**Strengths:** Demonstrates that stress is challenging within a hospital setting. Provides evidence that a workplace intervention is feasible and effective in promoting positive changes in coping, enhancing well-being both personally and organizationally. The intervention was shown to produce positive results with some degree of sustainability considering the post was 7 months after intervention. The study also provided a clear intervention which can affect change for both leadership and staff. The study did show correlation with personal positive effects and organizational measures of patient satisfaction which provides a suggestive of conceptual framework relevance to practice. **Limitations:** Intervention was not conducted in isolation of other activities within the facility. This was one study within one organization and there was no control group, however there was a pre and post.

								Critical Appraisal Tool & Rating:
								*See tool. Level II, Quality B.

Appendix C: Review of Evidence Table 4 of 5

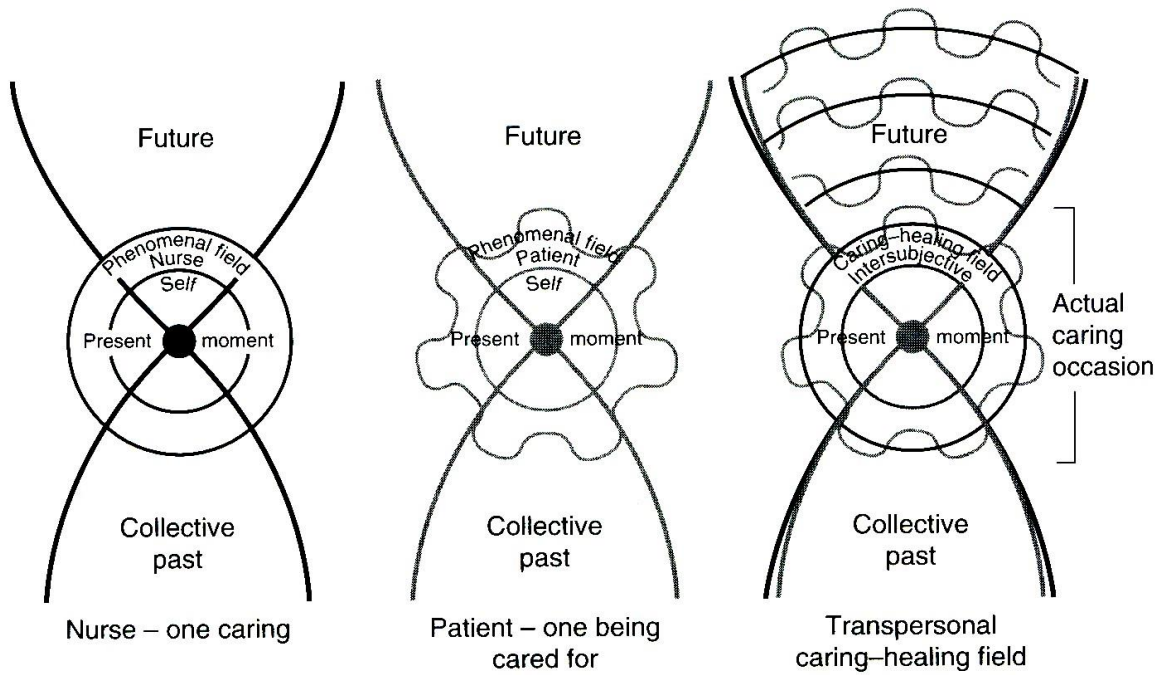| Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
• All articles critically appraised using *Johns Hopkins Research Evidence Appraisal Tool.* • Dearholt, S. L., & Dang, D. (Eds.). (2012). Research evidence appraisal tool. In *Johns Hopkins Nursing Evidence-Based Practice: Model and Guidelines* (2nd ed., pp. 237–240). Indianapolis, IN: Sigma Theta Tau International.								
Smith, S. A. (2014). Mindfulness-based stress reduction: an intervention to enhance the effectiveness of nurses' coping with work-related stress. *International Journal of Nursing Knowledge*, 25(2), 119–130. https://doi.org/10.1111/2047-3095.12025	None identified.	Critical Literature Review Literature sources included searches from EBSCOhost, Gale Powersearch, Proquest, PubMed, Medline, Google scholar. Only empirical articles that included nurses or student nurses	11 quantative and 2 qualitative studies	Mindfulness Based stress reduction – 8 week intensive training in mindfulness meditation.	Variety of measures usied in the studies because the variety of focus. Therefore reduced to salient findings	Results blended into salient findings	The salient points that were found were: decreased stress, burnout and anxiety could be achieved through intervention.	**Strengths:** Identified that intervention was possible to address stress. Nurse use of MBSR may be a key intervention to help improve nurses' ability to cope with stress. **Limitations:** Meditation methods must have been based on Kabat-Zinn techniques therefore limiting the scope. Lack of a clear statistic due to multiple study designs. **Critical Appraisal Tool & Rating:** *See tool. Level III, Quality B.

Appendix C: Review of Evidence Table 5 of 5

Citation	Conceptual Framework	Design/ Method	Sample/ Setting	Variables Studied	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
• All articles critically appraised using *Johns Hopkins Research Evidence Appraisal Tool.* • Dearholt, S. L., & Dang, D. (Eds.). (2012). Research evidence appraisal tool. In *Johns Hopkins Nursing Evidence-Based Practice: Model and Guidelines* (2nd ed., pp. 237–240). Indianapolis, IN: Sigma Theta Tau International.								
Westermann, C., Kozak, A., Harling, M., & Nienhaus, A. (2014). Burnout intervention studies for inpatient elderly care nursing staff: systematic literature review. *International Journal of Nursing Studies*, *51*(1), 63–71. https://doi.org/10.1016/j.ijnurstu.2012.12.001	None Identified	Systematic Literature review Systematic search of burnout intervention studies conducted in the databases Embase, Medline, and PsycNet published from 2000 to January 2012.	16 interventional studies	Burnout intervention studies	Most common instrument used to measure was the MBI, *n*=14. However the various versions of the scale only allowed for a limited comparison of the effects.	Seven of 16 studies had interventions found to positively affect burnout.	Most effective long-term were interventions including a combination of person centric and work centric focuses. All studies n=2 with a work-directed approach led to a reduction in staff burnout lasting up to 1 year after intervention. Only two out of nine interventions with a person-directed approach had an effect on staff burnout for up to 1 month after the intervention. Three of five combined intervention studies led to positive effects on staff burnout lasting up to four months to more than 1 year.	**Strengths:** All three intervention approaches are useful in order to achieve effects on staff burnout – person centric, work-directed or combined. However work-directed and combined had the longest term effect. **Limitations:** The studies available only allowed for limited comparisons. Studies differed in terms of conceptual nature of the approach as well as the survey instruments. **Critical Appraisal Tool & Rating:** *See tool. Level II, Quality B.

Appendix D: Evidence Synthesis Table

Articles	Davey, M. M., Cummings, G., Newburn-Cook, C.V., & Lo, E.A. (2009)	Hart, Brannan, & Chesnay (2014)	Pipe et al (2012)	Smith (2014)	Westerman, Kozak, Harling, & Nienhaus (2014)
Variables					
Stress	X	X	X	X	X
Job satisfaction	X		X	X	X
Staff Engagement		X	X		X
Absenteeism	X				X
Resilience		X	X	X	X

Appendix E: Transpersonal Caring Moment (Watson, 2012)

Future

Phenomenal field
Nurse
Self

Present   moment

Collective
past

Nurse – one caring

Future

Phenomenal field
Patient
Self

Present   moment

Collective
past

Patient – one being
cared for

Future

Caring–healing field
Intersubjective

Present   moment

Collective
past

Transpersonal
caring–healing field

Actual
caring
occasion

Appendix F: Effects of Organizational Stress

Effects of Organizational Stress
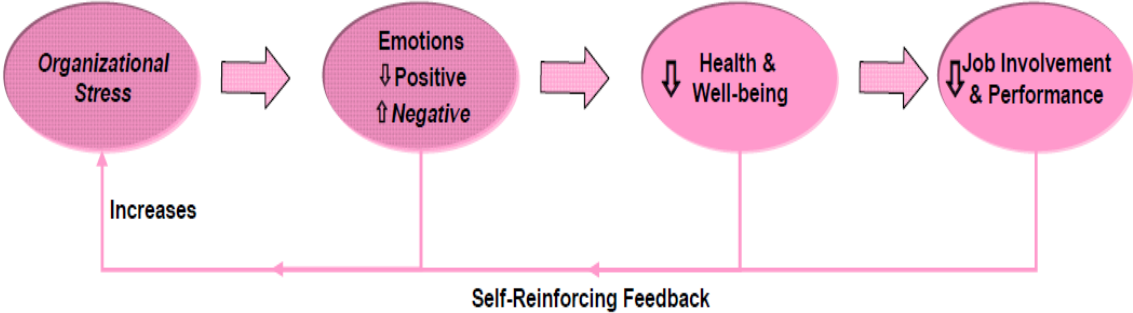
Appendix G: HeartMath intervention effects

Effects of HeartMath Intervention
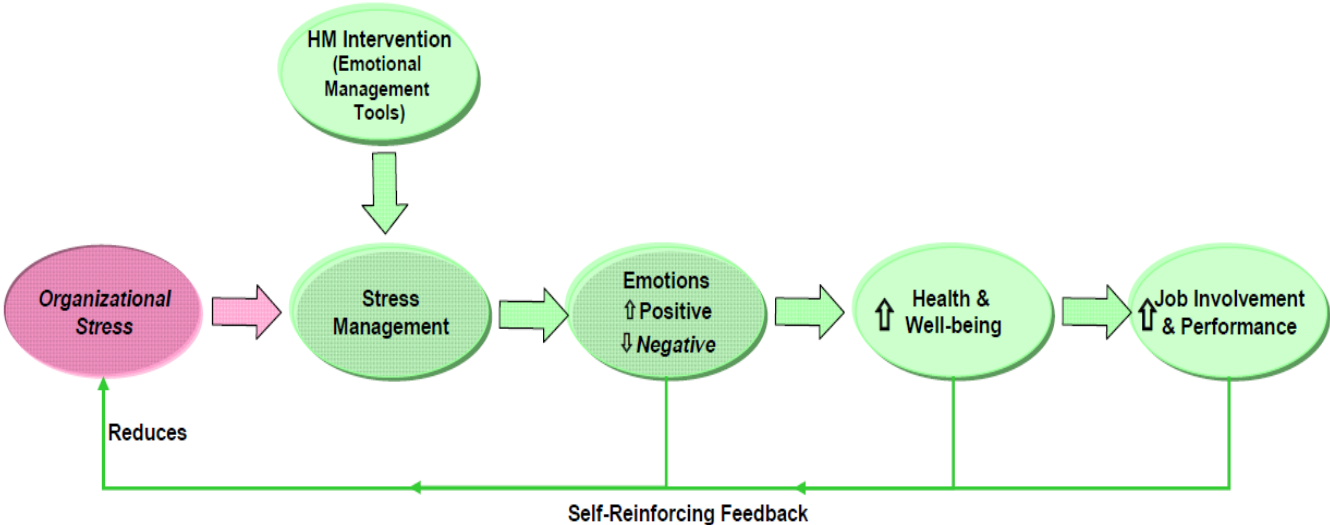
Appendix H: Gap Analysis

GAP Analysis Patient Care Coordinators and Medical Social Workers

Tool to Reduce Stress and Increase Resilience

Team Stress

Perceived Alliances
Disrespect
Unwilling to help

Communication

Mixed messages
Sense of Chaos
Confusion between Social Work and
Patient Care Coordinator role

Personal Resilience

Overworked/Tired/Irritability
Challenging Patient/Colleague
Conversations
Multiple Changes within department
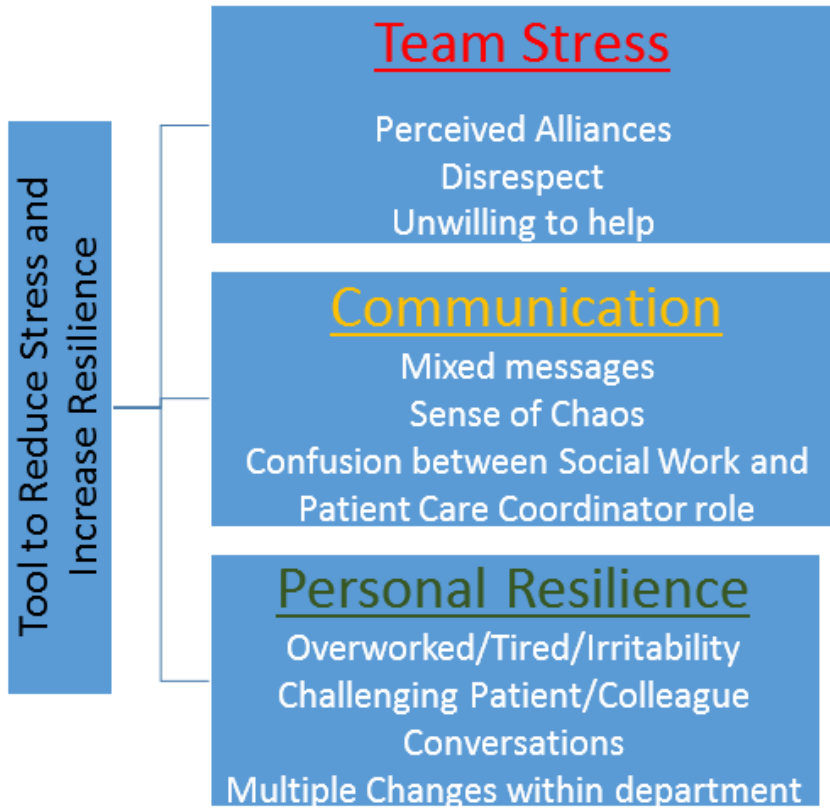
Appendix I: GANTT Project Timeline

Williams. Caritas Intervention to reduce stress and increase resilience among care givers.

	EL-DNP Calendar & Important Dates:	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
								2017											**2018**						
S1	**Semester 1: Spring 2017 1/20–5/11**																								
x	Identify Project					1st																			
x	Research and Critique Evidence					10th																			
x	Determine Framework/SWOT				5th																				
x	Meet with PCC Director					15th																			
x	Meet with PCC & SW Managers					25th																			
S2	**Semester 2: Summer 2017 5/22 – 8/11**																								
x	Meet with Managers 2hrs						5th																		
x	Manager HeartMath Training (10hrs prep/ 5hrs class)						19th																		
x	Provide Technology for practice to Mngrs						26th																		
x	Check in with Mngrs on Practice Sessions							6th & 12th																	
x	Work toward POQA – negotiations 3/5 hours						Ongoing																		
>	BASELINE POQA (Electronic)																								
x	Coach Team Agreement (Pamela, Lori, Wilfren, Stacy, Lanie)						21st	6th																	
x	Letter of Project Approval																								
x	Discussion for finance Support						Done																		
x	**MUST Have Project Identified**								10																
S3	**Semester 3: Fall 2017 8/20 – 12/7**																								
x	Meet with Trainer Team								18th																
x	Develop Coaching Script										8th														
x	Meet with managers for WorkPlace Integration										15th														
x	Provide Baselinet POQA Survey											15th													
x	Confirm Intervention Dates/Location											20th													
x	Confirm Intervention Trainers											20th													
x	Confirm Coaching Plans											20th													
x	**Submit Statement of Determination**								28th																
x	**Prospectus Submit**							15																	
x	**Manuscript Submit**							21																	
S4	**Semester 4: Spring 2018 1/19 – 5/10**													15-17		26-28									
x	Provide Intervention to Groups													5,10,15											
x	Meet with Coaches													30th											
x	Checkin Managers													15th											
x	Check in Coaches													15th	15th	15th									
x	Checkin Managers/Coaches													10th	15th	15/30									
x	Checkin Managers/Coaches																15th								
x	Post POQA Survey															15th	15th								
x	**N793: Practicum IV (135 hours)**													1/15 –4/15											
S5	**Semester 5: Summer 2018 5/21 – 8/10**																	7th-9	12th-14						
x	POQA Analysis																	30th	15th						
	N794: Practicum V (135 hours)																	5/21 – 8/10							
S6	**Semester 6: Fall 2018 8/20 – 12/15**																								12th-14
	N789: DNP Project																				8/20 –12/15				
	N795: Practicum VI (135 hours)																				8/20 – 12/15				
	Graduation: Dec 14th																								14th

Legend

| Semester |
| Intensive Dates or Key Events |
| Project or Curriculum Milestone |
| Practicum Course |

Randy Williams, RN, MSN, MBA, NEA-BC
EL-DNP Cohort 8 - GANTT Chart
University of San Francisco

Notes within chart:
- Agreement on Plan and need
- Moved to December
- Recvd both Director and SW Manager

Appendix J: SWOT Analysis

Caritas intervention to reduce stress and increase resilience among care givers.

	Helpful to achieving objective	Harmful to achieving objective
Internal	- **Experienced Master Trainer** - **Organizational support for wellness** - **Identified micro-system leader willing to partner**	- **Trust of leadership related to organizing efforts** - **Direct correlation to a ROI** - **Internal drive for personal investment (buy-in)**
External	- Opportunity to spread meso and macro to like groups - Effect to wellness of patient populations - Increased patient volume - Spreading beyond direct care nursing roles	- Organizing in process/may create resistance - Increased demand reduces time to practice - Value of a low commitment process

SWOT

Appendix K: Project Budget and Cost Savings

BUDGET	Project Year - 1 Facility
Project Cost	
Scope:	**Project : 1 Facility**
Per Survey	$ 7.40
HeartMath Report setup	$ 40.00
Number Surveys	2
Number Participants	27
Total Number Surveys	54
Total Cost	$ 479.60
Cost of Time Participants	
Average Annual Increase Hourly	3%
Average *PCC RN Hourly Rate	$ 74.45
Benefits & Taxes	0.48
Total Hourly Cost *PCC RN	$ 110.19
Average **MSW Hourly Rate	$ 51.44
Benefits & Taxes	0.48
Total Hourly Cost **MSW	$ 76.13
Training Hours	5
Number of *PCC RNs	18
Number of **MSW	14
Summary of Particpant Cost	$ 15,128.24
Cost of Trainers	
Average Trainer Hourly	$ 82.00
Benefits & Taxes	0.48
Total Hourly Cost Trainer	$ 121.36
Project Coordinator hourly	
Benefits & Taxes	0.48
Total Hourly Cost Coordinator	
Coordinator Hours	
Training hours classes	16
Training hours Coaching	27
Total Trainer Cost	$ 5,218.48
Total Coordinator Cost	$ -
Total Annual Cost	$ **20,826.32**
* PCC RN	Patient Care Coordinator Registered Nurse
** MSW	Medical Social Worker

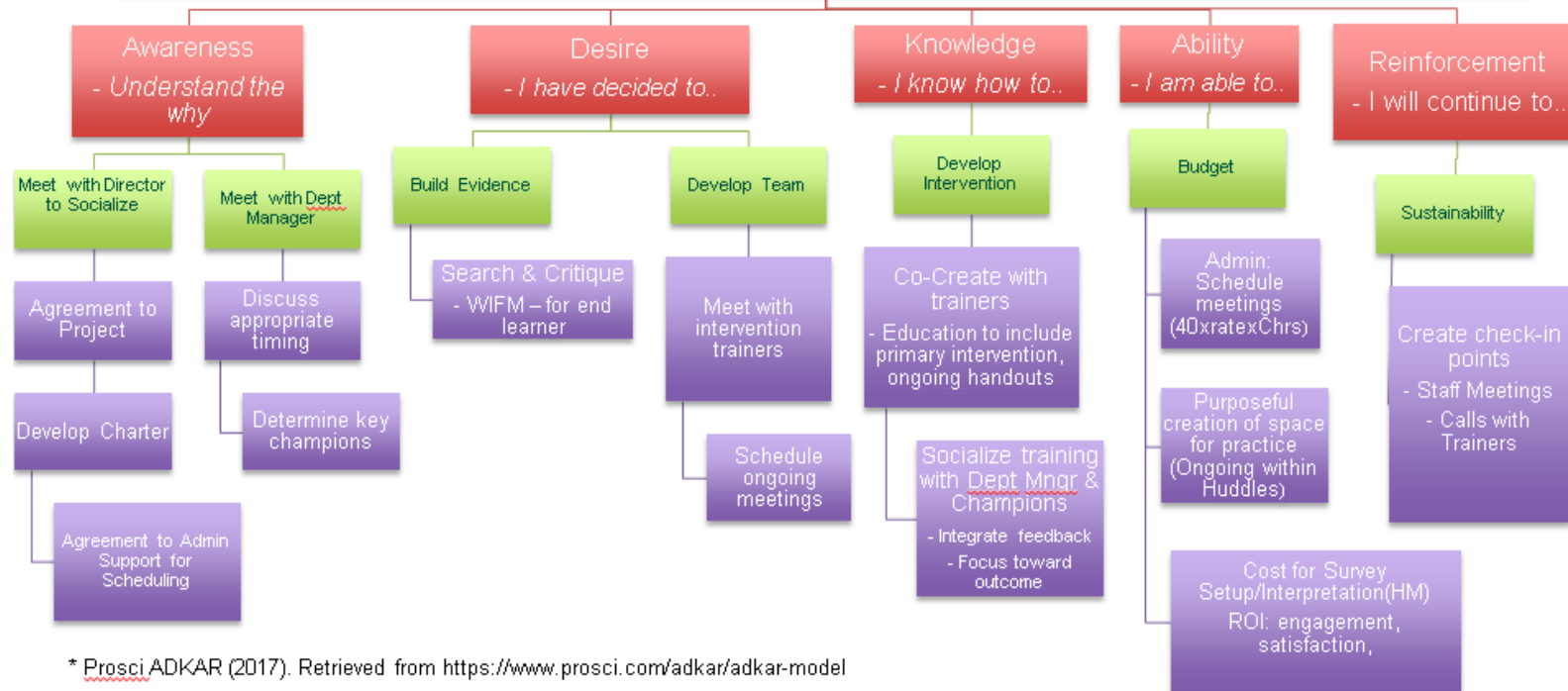| Project Benefit Analysis		PCC RNs Only	
		Assumptions	
Cost of Project			$20,826.32
Cost Savings			
*Turnover	$ 36,000.00	5%	$32,400.00
**Dis-engagement	$ 22,000.00	15%	$59,400.00
		Cost Savings Total:	$70,973.68
* Dempsey & Reilly, 2016			
** Schaufenbuel, 2013			

Appendix L: Work Breakdown Structure

Caritas Intervention
to reduce stress and increase resilience among care givers

Provide an evidence based intervention to patient care coordinators and medical social workers at South Sacramento Kaiser Permanente Medical Center which enables participants to reduce stress, increase emotional vitality within a 60 day period measured by paired questionnaires.

Awareness
- *Understand the why*

Meet with Director to Socialize

Meet with Dept Manager

Agreement to Project

Discuss appropriate timing

Develop Charter

Determine key champions

Agreement to Admin Support for Scheduling

Desire
- *I have decided to..*

Build Evidence

Develop Team

Search & Critique
- WIFM – for end learner

Meet with intervention trainers

Schedule ongoing meetings

Knowledge
- *I know how to..*

Develop Intervention

Co-Create with trainers
- Education to include primary intervention, ongoing handouts

Socialize training with Dept Mngr & Champions
- Integrate feedback
- Focus toward outcome

Ability
- *I am able to..*

Budget

Admin: Schedule meetings (40xratexChrs)

Purposeful creation of space for practice (Ongoing within Huddles)

Cost for Survey Setup/Interpretation(HM)
ROI: engagement, satisfaction,

Reinforcement
- I will continue to..

Sustainability

Create check-in points
- Staff Meetings
- Calls with Trainers

* Prosci ADKAR (2017). Retrieved from https://www.prosci.com/adkar/adkar-model

Appendix M: Communication Plan

Williams.Caritas intervention to reduce stress and increase resilience among care givers.

Communication Plan	2017												2018											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
Director																								
Discuss Project Possibility					15th																			
Communicate plan progress						6th					15th		10th	20th		15th								
Request letter of Support						6th																		
Communicate plan for Survey								12th	30th		15th				20th									
Updates												15th	15th		15th	15th		15th						
Managers																								
Discuss Project Plan					25th																			
Educate on HeartMath						19th							5th	3rd										
Provide Technology for Practice						26th																		
Check in						6th						15th	15th	15th	15th	15th	30th							
Communicate plan for Survey								12th																
Admin Support																								
Discuss plan need for rooms etc							6th																	
Identify Volunteers							30th	12th																
Discuss Scheduled Rooms								28th			15th		5th											
Participants																								
Plan to socialize project and request volunteers							11th	5th																
Communicate Update									28th		15th													
Communicate intervention registration											15th	5th												
Release POQA Pre -1											15th													
ReleasePost POQA - 2																25th								
Close POQA 2																	15th							
Trainers																								
Request to participate						21st																		
Develop schedule for Coaching Calls						6th																		
Schedule Meeting								15th								10th								
Develop Coaching Session Talking Points								15th																
Meet Trainers										15th				1st			5th							
Heartmath Support																								
Plan for Survey		23rd									15th			15th										
Procure Financial Support for Survey				11th																				
Checkin on Questionairre								25th			10th	5th				20th	1st							
Data Analysis Back																		30th						

Appendix N.1: Return on Investment Plan Three Years

BUDGET	Project Year - 1 Facility		Year 1		Year 2		Year 3	
Project Cost								
Scope:	**Project : 1 Facility**		1 Facility		5 Facilities		5 Facilities	
Per Survey	$	7.40	$	7.40	$	7.40	$	7.40
HeartMath Report setup	$	40.00	$	40.00	$	200.00	$	200.00
Number Surveys	2		2		10		10	
Number Participants	27		27		150		150	
Total Number Surveys	54		54		1500		1500	
Total Cost	$	479.60	$	479.60	$	13,100.00	$	13,100.00
Cost of Time Participants								
Average Annual Increase Hourly		3%		3%		3%		3%
Average *PCC RN Hourly Rate	$	74.45	$	74.45	$	76.68	$	78.98
Benefits & Taxes		0.48		0.48		0.48		0.48
Total Hourly Cost *PCC RN	$	110.19	$	110.19	$	113.49	$	116.90
Average **MSW Hourly Rate	$	51.44	$	51.44	$	52.98	$	54.57
Benefits & Taxes		0.48		0.48		0.48		0.48
Total Hourly Cost **MSW	$	76.13	$	76.13	$	78.42	$	80.77
Training Hours	5		5		5		5	
Number of *PCC RNs	18		13		75		75	
Number of **MSW	14		14		75		75	
Summary of Particpant Cost	$	15,128.24	$	12,373.59	$	71,315.66	$	73,455.12
Cost of Trainers								
Average Trainer Hourly	$	82.00	$	82.00	$	84.46	$	86.99
Benefits & Taxes		0.48		0.48		0.48		0.48
Total Hourly Cost Trainer	$	121.36	$	121.36	$	125.00	$	128.75
Project Coordinator hourly			$	82.00	$	84.46	$	86.99
Benefits & Taxes		0.48		0.48		0.48		0.48
Total Hourly Cost Coordinator				121.36		125.00		128.75
Coordinator Hours				40		120		120
Training hours classes		16		16		80		80
Training hours Coaching		27		27		135		135
Total Trainer Cost	$	5,218.48	$	5,218.48	$	26,875.17	$	27,681.43
Total Coordinator Cost	$	-	$	4,854.40	$	15,000.10	$	15,450.10
Total Annual Cost	$	**20,826.32**	$	**22,926.07**	$	**126,290.92**	$	**129,686.65**
* PCC RN			Patient Care Coordinator Registered Nurse					
** MSW			Medical Social Worker					

Cost Savings	Project Year - 1 Facility		Year 1		Year 2		Year 3	
Turnover	1 Facility		1 Facility		5 Facilities		5 Facilities	
Turnover RN - $36,000- $56,000 (Dempsey & Reilly, 2016).	$	36,000.00	$	36,000.00	$	36,000.00	$	36,000.00
	$	56,000.00	$	56,000.00	$	56,000.00	$	56,000.00
Assumption Percentage of *PCC RNs retained of those Participating	5%		5%		5%		5%	
Turnover Low end Estimated Savings	$	32,400.00	$	23,400.00	$	135,000.00	$	135,000.00
Turnover High end Estimated Savings	$	50,400.00	$	36,400.00	$	210,000.00	$	210,000.00
Dis-Engagement								
Cost of Dis-Engagement (Schaufenbuel, 2013)	$	22,000.00	$	22,000.00	$	22,000.00	$	22,000.00
Assumption Percent of *PCC RNs that would dis-engage of those participating (Dempsey & Reilly, 2016).	15%		15%		15%		15%	
Rough Estimate of dis-engagement that would be negated by Resilience Tools	5%		5%		5%		5%	
Total Annual Cost Savings related to Dis-engagement	$	39,600.00	$	28,600.00	$	165,000.00	$	165,000.00
* PCC RN			Patient Care Coordinator Registered Nurse					
** MSW			Medical Social Worker					

Appendix N.2: Benefit Analysis Three Year Plan

	Benefit Analysis:		Turnover (5%) + Dis-Engagement (15%) * PCC RN Only Cost		
Option 1 (1,5,5)	Annual Savings Minimum		$ 52,000.00	$ 300,000.00	$ 300,000.00
	Annual Savings Maximim		$ 65,000.00	$ 375,000.00	$ 375,000.00
	Three Year predicted Cost Savings		$ 652,000.00	to	$ 815,000.00
	Expenditure for 3 Years		$ 278,903.64		
	Benefit Analysis:		**$ 373,096.36**	**to**	**$ 536,096.36**
Option 2 (1,1,1)	Annual Savings Minimum		$ 52,000.00	$ 52,000.00	$ 52,000.00
	Annual Savings Maximim		$ 65,000.00	$ 65,000.00	$ 65,000.00
	Three Year Predicted Cost Savings		$ 156,000.00	to	$ 195,000.00
	Expenditure for 3 Years		$ 68,778.21		
	Benefit Analysis:		**$ 87,221.79**	**to**	**$ 126,221.79**
Option 3 No Action	Annual Minimum Per Facility		$ 52,000.00	$ 52,000.00	$ 52,000.00
	Annual Maximum Per Facility		$ 65,000.00	$ 65,000.00	$ 65,000.00
	Three Year Cost Per Facility		$ 156,000.00	to	$ 195,000.00
	11 Facilities Cost Over 3 Years		$ 652,000.00	to	$ 815,000.00
	Benefit Analysis: Cost of Turnover & Dis-Engagement		$ 652,000.00	to	$ 815,000.00
	* PCC RN		Patient Care Coordinator Registered Nurse		

Appendix O: 1 of 3 Data Collection Tool: Personal and Organizational Quality

Assessment Revised – 4 (Sample with permission from HeartMath.org)

POQA-R4   Personal and Organizational Quality Assessment-Revised

This survey is voluntary and confidential.
Only summary, anonymous data will be provided to your organization.

INSTRUCTIONS: Please fill in the boxes below with the requested dates and ID number.
For the remaining items, FILL IN THE NUMBER of the response that describes you.

TODAY'S DATE
Month Day   Year

UNIQUE ID NUMBER

Please enter the last four digits of your social security number. This number is used for matching your responses over time.

1. What is your GENDER?
- Male
- Female

2. What is your MARITAL STATUS? (fill in one only)
- Single
- Partnered
- Divorced
- Married
- Separated
- Widowed

3. Roughly how old are you?
- Under 21
- 31-40
- 51-60
- Over 70
- 21-30
- 41-50
- 61-70

4. What is your approximate salary range?
- Under $20,000
- $70,000 - 79,999
- $20,000 - 29,999
- $80,000 - 89,999
- $30,000 - 39,999
- $90,000 - 99,999
- $40,000 - 49,999
- $100,000 - 149,999
- $50,000 - 59,999
- $150,000 or more
- $60,000 - 69,999

5. What is your highest level of EDUCATION? (fill in one only)
- Elementary
- Bachelor's Degree
- Junior/Middle School
- Some Graduate
- High School
- Master's Degree
- Technical School
- Doctorate Degree
- Some College/Associate's Degree

6. Which of the following best describes your EMPLOYMENT STATUS? (fill in one only)
- Student
- Executive
- Laborer
- Engineer/Technical
- Skilled or Clerical
- Retired
- Management
- Unemployed
- Professional
- Other

7. How many HOURS PER WEEK do you usually work?
- Less than 25 hours
- 41-50 hours
- 26-35 hours
- 51-59 hours
- 36-40 hours
- 60 or more hours

8. How long have you been with this COMPANY or ORGANIZATION?
- 0 - 6 MONTHS
- 5 YEARS - 10 YEARS
- 6 MONTHS - 1 YEAR
- 10 YEARS - 20 YEARS
- 1 YEAR - 2 YEARS
- 20 YEARS OR MORE
- 2 YEARS - 5 YEARS

9. How long have you been in your CURRENT JOB or POSITION?
- 0 - 6 MONTHS
- 2 YEARS - 5 YEARS
- 6 MONTHS - 1 YEAR
- 5 YEARS - 10 YEARS
- 1 YEAR - 2 YEARS
- 10 YEARS OR MORE

Please turn to the next page

Appendix O: 2 of 3 Data Collection Tool: Personal and Organizational Quality Assessment

Revised – 4 (Sample with permission from HeartMath.org)

POQA-R4 — Personal and Organizational Quality Assessment-Revised

INSTRUCTIONS:
Following is a list of words that describe feelings people sometimes have. Please FILL IN THE NUMBER which reflects how frequently you have felt the following during the LAST MONTH.

Scale: NOT AT ALL / ONCE IN A WHILE / SOMETIMES / FAIRLY OFTEN / OFTEN / VERY OFTEN / ALWAYS

1. Resentful
2. Fatigued
3. Annoyed
4. Sad
5. Body aches (Joint Pain, Backaches, etc.)
6. Headaches
7. Rapid Heartbeats
8. Depressed
9. Exhausted
10. Blue
11. Appreciative
12. Relaxed
13. Anxious
14. Tired
15. My sleep is inadequate
16. Thankful
17. Indigestion, heartburn or stomach upset
18. Calm
19. Cynical
20. Muscle Tension
21. Grateful
22. Worried
23. Unhappy
24. Uneasy
25. Angry
26. Peaceful

27. Over the last month my health has been:
Excellent (1)   Good (2)   Average (3)   Fair (4)   Poor (5)

28. Fill in the bubble on the line below that indicates how stressed you have been in the past month:
Most Calm I've Ever Been ———————————— Most Stressed I've Ever Been

SAMPLE

Appendix O: 3 of 3 Data Collection Tool: Personal and Organizational Quality Assessment

Revised – 4 (Sample with permission from HeartMath.org)

Following is a list of statements that describe the way people sometimes feel or think about themselves. Please FILL IN THE NUMBER which reflects how frequently you have felt or thought the following during the LAST MONTH.

Scale: NOT AT ALL (1), ONCE IN A WHILE (2), SOMETIMES (3), FAIRLY OFTEN (4), OFTEN (5), VERY OFTEN (6), ALWAYS (7)

#	Statement	1	2	3	4	5	6	7
29.	My life is deeply fulfilling	①	②	③	④	⑤	⑥	⑦
30.	Dynamic	①	②	③	④	⑤	⑥	⑦
31.	I get upset easily	①	②	③	④	⑤	⑥	⑦
32.	I find it difficult to calm down after I've been upset	①	②	③	④	⑤	⑥	⑦
33.	I feel loved by my spouse/partner	①	②	③	④	⑤	⑥	⑦
34.	I feel optimistic about the future	①	②	③	④	⑤	⑥	⑦
35.	I wake up and look forward to each day	①	②	③	④	⑤	⑥	⑦
36.	Motivated	①	②	③	④	⑤	⑥	⑦
37.	I am pleased with my life	①	②	③	④	⑤	⑥	⑦
38.	I sometimes have urges to break, throw or smash things	①	②	③	④	⑤	⑥	⑦
39.	I sometimes have a short fuse	①	②	③	④	⑤	⑥	⑦
40.	Enthusiastic	①	②	③	④	⑤	⑥	⑦

We are asking about your feelings and experiences over the LAST MONTH. Please FILL IN THE NUMBER which reflects how much you AGREE or DISAGREE with the following statements as they apply to you, your job and place of employment during the LAST MONTH.

SAMPLE

Scale: STRONGLY DISAGREE (1), DISAGREE (2), SLIGHTLY DISAGREE (3), NEUTRAL (4), SLIGHTLY AGREE (5), AGREE (6), STRONGLY AGREE (7)

#	Statement	1	2	3	4	5	6	7
41.	I am satisfied with my life	①	②	③	④	⑤	⑥	⑦
42.	I am satisfied with my job	①	②	③	④	⑤	⑥	⑦
43.	There is tension between management and staff	①	②	③	④	⑤	⑥	⑦
44.	I feel there is never enough time	①	②	③	④	⑤	⑥	⑦
45.	I feel pressed for time	①	②	③	④	⑤	⑥	⑦
46.	The pace of life is too fast and I can't keep up	①	②	③	④	⑤	⑥	⑦
47.	I feel like leaving this organization	①	②	③	④	⑤	⑥	⑦
48.	I feel conflict between work and personal priorities	①	②	③	④	⑤	⑥	⑦
49.	It takes a lot of effort to sustain my performance level	①	②	③	④	⑤	⑥	⑦
50.	I feel like quitting my job	①	②	③	④	⑤	⑥	⑦
51.	I work with people who don't get along with each other	①	②	③	④	⑤	⑥	⑦
52.	I'm aware of power struggles between co-workers that damage morale	①	②	③	④	⑤	⑥	⑦

Thank You Very Much For Your Participation!

Appendix P: Pre and Post POQA-R4 Raw Score Means

Table 1: Raw Score Means

	Pre	Post	% Change
Organizational Stress	3.93	2.44	-38%
Pressures of Life	4.36	2.70	-38%
Relational Tension	3.19	2.13	-33%
Stress	9.03	5.20	-42%
Emotional Vitality	4.81	5.66	18%
Emotional Buoyancy	4.93	5.58	13%
Emotional Contentment	4.65	5.77	24%
Emotional Stress	2.38	1.71	-28%
Anxiety & Depression	2.38	1.63	-32%
Anger & Resentment	2.39	1.78	-26%
Physical Stress	3.08	1.89	-39%
Fatigue	3.48	2.19	-37%
Health Symptoms	2.81	1.68	-40%
Intention to Quit	1.70	1.26	-26%

Table A1: Results from Analysis of Internal Consistency of Measurement

	Number of Items	Internal Consistency α
Emotional Vitality	14	**0.92**
Emotional Buoyancy	8	0.90
Emotional Contentment	6	0.86
Organizational Stress	9	**0.76**
Pressures of Life	5	0.78
Relational Tension	3	0.69
Stress	1	–
Emotional Stress	15	**0.92**
Anxiety/Depression	7	0.90
Anger/Resentment	8	0.85
Physical Stress	10	**0.87**
Fatigue	4	0.87
Health Symptoms subscale	6	0.76
Intention to Quit	2	0.90

Appendix Q.1: Pre and Post POQA-R4 Primary Scales
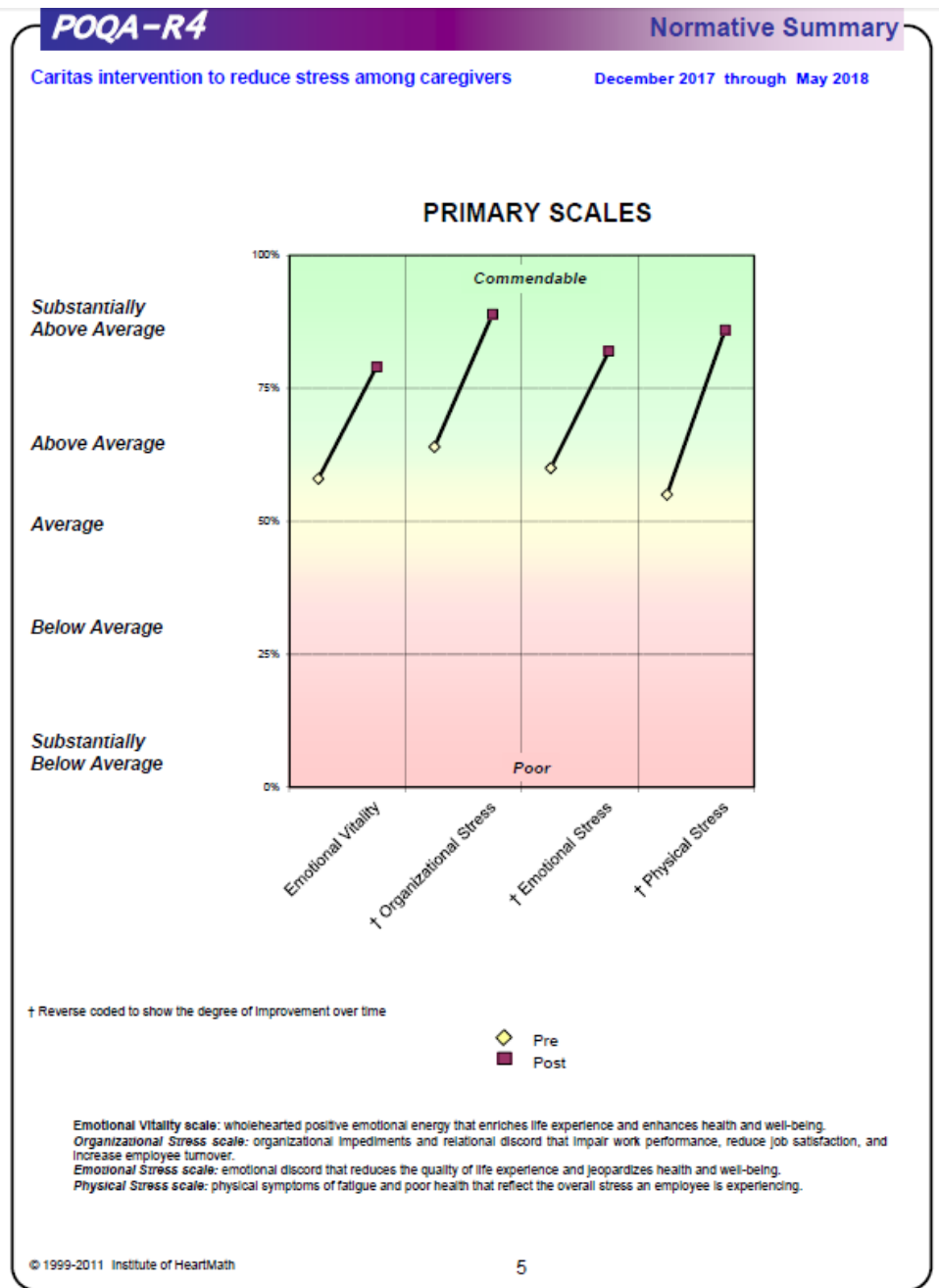
Appendix Q.2: Pre and Post POQA-R4 Subscales
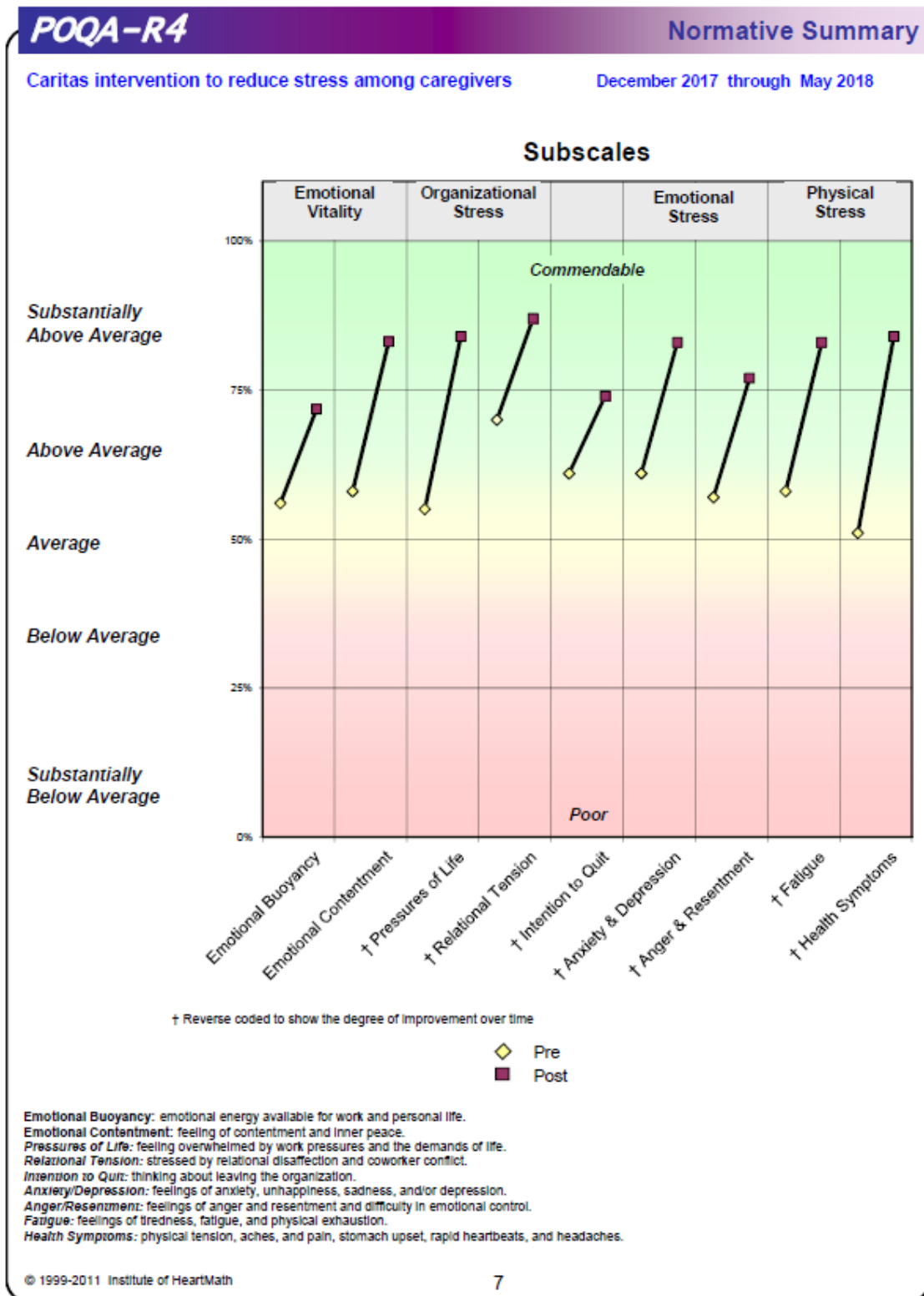
Appendix R.1: Materials for Implementation

Energy-Draining Situations/Events Exercise

Identify situations that cause stress, the corresponding feelings that typically drain your inner battery and what you currently do now to handle them. Write them on the lines below.

Examples:

Situations	Feelings	Current Solution
Late for work	Anxious	Call co-worker
Argument with spouse	Angry, helpless	Wait for it to blow over
Can't get enough sleep	Frustrated, tired	Leave work early

Situations	Feelings	Current Solution

Appendix R.2: Materials for Implementation

Energy-Renewing Situations/Events Exercise

Identify situations or interactions and the corresponding feelings that renew you and recharge your inner battery. Write them on the lines below.

Examples:

Situations	Feelings
Hanging out with friends	Appreciation, happiness
Acknowledged for a good job	Confident, sense of accomplishment
Serving others	Proud, fulfilled, sense of honor

Situations	Feelings