

ORIGINAL ARTICLE

Implementation of an Integrative Coping and Resiliency Program for Nurses

护士综合应对和康复方案的实施情况

Implementación de un programa de afrontamiento integral y de resiliencia para personal de enfermería

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ABSTRACT

Purpose: To improve resiliency and reduce burnout in nurses through implementation of the Healing Pathways program (University of Maryland School of Medicine, Baltimore). Aims of this study include assessment of feasibility and acceptability and to explore changes in stress, coping, burnout, and mindfulness.

Design: A single-group, pre-, posttest design of an 8-week program in which participants attended weekly sessions that included Reiki, yoga, and meditation. Sample included 8 nurses with 1 advanced practice nurse, all female, ages ranging from 22 to 49 years, experience levels ranging from <1 year to 26 years.

Methods: Participants completed the Perceived Stress Scale, Coping Self-Efficacy Scale, Maslach Burnout Inventory, and Mindful Attention Awareness Scale before intervention, at last session, and 1 month after last session. Data were analyzed using one-way analysis of variance and qualitative narrative inquiry.

Findings: Improvements were noted in perceived stress, coping, burnout exhaustion subscale, and mindfulness.

Conclusion: Healing Pathways was effective at reducing stress and improving coping and mindfulness in nurses.

Implications: Nurses who invest time in self-care techniques including Reiki, yoga, and meditation improve their overall wellbeing and may provide higher-quality patient care. Implementation of an 8-week program in integrative self-care is feasible and important for the health of nurses.

摘要

目的: 为了提高灵活性, 并通过实施康复之路 (Healing Pathways) 课程 (巴尔的摩马里兰州大学医学院) 以减轻护士的倦怠。这项研究的目的包括: 探讨压力、应对、倦怠与专注力变化的可行性和可接受性的评估。设计: 单组, 设计为 8 个星期的课程前测试和课程后测试, 参与者参加每周一次的课程, 包括灵气、瑜伽和冥想。样例包括 8 名护士与 1 名高级执业护士, 均为女性, 年龄从 22 至 49 岁, 经验水平从少于 1 年到 26 年。

方法: 在干预前, 最后一次课程以及最后一次课程一个月后, 参与者分别完成感知压力量表、应对自我效能感量表、工作倦怠量表和铭记的关注意识量表。数据分析采用单向方差分析和定性的叙事研究。

研究结果: 在感觉到的压力、应对、倦怠疲惫程度和专注力上有所改善。

结论: 护士在减轻压力、提高应对和专注力方面, 康复之路课程是有效的。

意义: 护士在自我护理技术 (包括灵气、瑜伽和冥想) 方面投入时间, 可以改善他们整体的福祉且可能提供更高质量的患者护理。实施一体化自我护理 8 周课程对护士的健康是可行和重要的。

SINOPSIS

Propósito: Mejorar la resiliencia y reducir el desgaste en el personal de enfermería a través de la implementación del programa Healing Pathways (Caminos de cura), (University of Maryland School of Medicine, Baltimore). Los fines de

este estudio incluyen la valoración de la viabilidad y aceptabilidad y la exploración de cambios en el estrés, el afrontamiento, el desgaste y la concienciación.

Diseño: Diseño de un programa de prueba anterior y posterior de 8 semanas para un único grupo en el cual los participantes asistían a sesiones semanales que incluían Reiki, yoga y meditación. La muestra incluía 8 enfermeras con una enfermera de practica avanzada, todas mujeres, con edades comprendidas entre los 22 y los 49 años, con niveles de experiencia entre <1 año y 26 años.

Métodos: Las participantes completaron la Escala de estrés percibido, la Escala de manejo de autoeficacia, el Inventario de desgaste de Maslach y la Escala de concienciación de atención consciente antes de la intervención, en la última sesión y un mes después de la última sesión. Se analizaron los datos usando un análisis de la varianza unidireccional y encuestas narrativas cualitativas.

Hallazgos: Se notaron mejoras en el estrés percibido, el afrontamiento, la subescala de agotamiento por desgaste y la concienciación.

Conclusión: Healing Pathways fue efectivo a la hora de reducir el estrés y mejorando el afrontamiento y la concienciación en las enfermeras.

Consecuencias: Las enfermeras que invirtieron tiempo en técnicas de autocuidado incluyendo Reiki, yoga y meditación mejoraron su bienestar general y pudieron proporcionar una mejor calidad en la atención al paciente. Es viable la implementación de un programa de 8 semanas de autocuidado integrador y es importante para la salud de las enfermeras.

BACKGROUND AND SIGNIFICANCE

Nurses face a variety of stressful situations in their daily work and require effective coping skills to manage stress over their careers. Stress and burnout are reported by one-quarter to one-third of nurses and have been linked to a large number of nurses leaving the bedside.^{1,2} Job dissatisfaction and burnout have been linked to poorer patient outcomes, lower patient satisfaction levels, higher turnover rates, on-the-job injuries, and decision to leave the bedside.^{2,3}

Burnout is defined as a psychological syndrome with three key dimensions: overwhelming exhaustion, feelings of cynicism or detachment from the job, and a sense of ineffectiveness.⁴ Another form of burnout is job dissatisfaction, which is described as apathy, wanting to quit, lack of satisfaction from one's own work, and frustration, despair, or anger surrounding one's work. With burnout and job dissatisfaction being linked to nurses leaving the bedside, they may also be linked to nursing turnover. This becomes a quality and cost concern for employers.⁵ The financial cost of nursing turnover has been estimated at 0.3 to 3 times nurses' salaries, and rates are estimated at 14% nationally.^{6,7}

Stress-reduction techniques including Reiki, yoga, and meditation have been shown to decrease exhaustion, improve levels of self-care and care of others, and decrease stress, fatigue, and burnout.⁸ Studies show that an 8-week program offering training in complementary techniques to the healthcare provider is effective for reducing stress.^{8,9} The purpose of this project was to improve resiliency and reduce burnout in nurses through implementation of the Healing Pathways program (University of Maryland School of Medicine, Baltimore).

Reiki

Reiki is defined as a Japanese technique for stress reduction, relaxation, and healing promotion.¹⁰ The term *Reiki* comes from two Japanese words: *rei*, meaning universal, and *ki*, which is the same as *chi* in Chinese, *prana* in Sanskrit, and *ti* or *ki* in Hawaiian, meaning life energy.¹⁰ The technique of Reiki involves "laying on of hands" and is learned through an apprenticeship with a Reiki master.¹⁰ The practice of Reiki is relatively new to the United States, having been brought by Hawayo Takata in 1937.¹⁰

The use of Reiki in treating nurses with stress-related problems has been documented in several studies.¹¹⁻¹⁴ Diaz-Rodrigues et al found that a single Reiki session can improve immune function and blood pressure regulation.¹³ In a phenomenological study of 8 nurse/Reiki masters, seven themes were developed showing the benefits received by the practitioner during a Reiki client therapy session, including feeling more peaceful, calm, and relaxed; handling stress and anxiety better; helping the client's healing process; and an increased satisfaction with being a nurse/Reiki practitioner as compared with previous or present nursing work.¹⁴ Reiki level-1 training improves nurs-

es' beliefs around their caring behaviors at the bedside.¹¹ Additionally, Reiki level 1 is associated with reductions in work-related stress levels as measured by the Perceived Stress Scale in a pilot study.¹² In several studies, reduced pain and anxiety, improved well-being, increased ability to focus on patients, and improved problem solving were found in association with Reiki practice.¹⁵⁻¹⁷

Yoga

Yoga means *union*, specifically of the individual soul with the universal spirit; it is also described as a means of uniting the physical, mental, and spiritual self.¹⁸ Hartfel et al describe yoga as a form of physical activity being introduced to improve health and well-being.¹⁹ Recent studies have shown yoga to be successful at reducing perceived stress, anxiety, and back pain and improving psychological well-being.^{19,20} In the CALM-BP (Comprehensive Approach to Lower Blood Pressure) study, use of yoga in combination with medication was more effective at improving blood pressure control and cardiovascular risk factors than the use of the DASH (Dietary Approaches to Stop Hypertension) diet in combination with medication.²¹ Additionally, onsite yoga programs at work have reduced anxiety and stress, improved fitness levels, reduced cardiovascular risk, reduced metabolic diseases, and improved heart rate variability in adults.²²⁻²⁴

MEDITATION

Meditation is a term used to describe various methods involving quieting of the mind and/or drawing one's focus into a particular moment, task, or object. Meditation can be practiced in different physical positions, from sitting very still in a cross-legged pose to walking or even while performing tasks such as washing dishes. The usefulness of meditation extends from increasing mindfulness (connection with the present) to stress reduction and physical well-being.²⁵⁻²⁹ A recent meta-analysis confirms that meditation is effective for reducing anxiety, depression, and pain, and therefore clinicians should be prepared to discuss meditation with their clients.³⁰

STUDY DESIGN

The design of the study was a single group, pre-, posttest design of an 8-week program in which participants attended weekly sessions that included Reiki, yoga, meditation, and a reflection.

METHODS

Participants

Eight registered nurses, including 1 nurse practitioner, were recruited for the study. Participants were recruited by emailed flyers sent to the unit directors of 3 units. The unit directors sent the flyer to all the nurses on their units and posted the flyer in their unit's lounge. Approximately 175 nurses received an email for recruitment. Ten additional nurses responded but were unable

to attend the program on the dates specified and were therefore excluded from the enrollment. All participants were female adults aged 22 to 49 years. The participants' nursing experience levels ranged from <1 year to 26 years. All of the study participants agreed to complete surveys before starting the program, at the end of the program, and 1 month after completion of the program. Additionally, all of the nurses recruited were working at the bedside, so it was assumed that they were fit enough to participate in yoga.

Setting

Participants were recruited at a 520-bed urban teaching hospital from three units. The units selected for this program were the emergency department, a medical intensive care unit, and an oncology unit. Sessions were held at the University of Pittsburgh Medical Center (UPMC) Center for Integrative Medicine.

Measures

The project's specific aims were measured using valid and reliable tools. Measures used in this project included the Perceived Stress Scale, the Coping Self-efficacy Scale, the Maslach Burnout Inventory, the Mindful Attention Awareness Scale (MAAS), program attendance, and a post-program qualitative survey.

The Perceived Stress Scale (PSS) is a 10-item Likert scale on which participants rated the degree to which they felt that life was manageable and their ability to cope with stressors. The scale's effectiveness and external validity has been verified.³¹

The Coping Self-Efficacy Scale is a 26-item scale that measures the level of confidence that respondents have in managing and responding to adverse events. This scale has been validated and shown to be reliable.³²

The Maslach Burnout Inventory is a 22-question instrument that measures three dimensions: emotional exhaustion, depersonalization, and personal accomplishment. This inventory was originally validated by its authors, has been said to be the most commonly used instrument to measure burnout, and has been validated recently.³³

Mindfulness is considered to be the level to which someone is attentive, aware, and conscious within the current moment. Mindfulness has been linked to positive psychological wellbeing outcomes and can be measured using the MAAS, which measures the frequency of mindful states over time.³⁴ The MAAS is a 5-item scale that has been validated in a study by MacKillop and Anderson.³⁵

In addition to the formal surveys, participant attendance was also measured to quantify program acceptability. It was presumed that if participants attended the program or makeup sessions, they found the program to be an acceptable form of learning and valued the techniques being taught. Participants were also given the opportunity to provide qualitative feedback in the form of an open-ended survey given at the end of the last session. The open-ended survey invited

the participants to write about how the program affected them, whether it changed their outlook on nursing, and if they would recommend the program to other nurses/healthcare providers.

PROCEDURE

Prior to the start of the program, the instructor trained with the director of Healing Pathways to ensure consistency in teaching. The program was taught primarily by a registered nurse who is a registered yoga teacher (RYT 200), Reiki master, and graduate of the Healing Pathways program. Prior to initiation of the program, approval was gained from the Internal Review Board of the University of Pittsburgh, University of Pittsburgh School of Nursing, and the UPMC Quality Review Committee.

The program consisted of six 3-hour sessions and two 5-hour sessions held weekly over the course of 8 weeks. The program was conducted at the hospital campus. Each of the weekly sessions involved a 60- to 90-minute yoga practice and a 1-hour didactic component. For reinforcement, an exercise, reflection, or meditation was included. The yoga practice used various yogic asanas, or physical positions, from styles including Embodi yoga, Hatha yoga, and Raja yoga. The didactic component consisted of lectures on the 7 energetic centers of the body known as chakras. Information on the names, sounds, emotions/feelings, and reflections associated with each chakra was provided. The exercises, reflections, and meditations also reflected mental and emotional tasks to reinforce the didactic components. The two 5-hour sessions covered the content on the history and teachings of Usui Reiki Practice as is traditionally taught by a Reiki master during attunements. The first Reiki session, which was held during the third week of the program, covered Reiki level I. The second Reiki session, which was held during the sixth week of the program, covered Reiki level II.

Data Collection

Participants were given surveys to complete prior to the first session, at the end of the last session, and 1 month after the last session. All surveys were completed anonymously and tracked via a nonassociated study participant number for pre-, posttest analysis.

DATA ANALYSIS AND FINDINGS

Data were analyzed using one-way analysis of variance (ANOVA) and for qualitative narrative. Significance level was set at $\alpha=0.05$. In addition, narrative feedback was gathered at the end of the intervention.

Findings

In the post-program narrative, survey participants reported themes including improved focus, increased positive feelings about nursing, feeling more peaceful/relaxed, improved wellbeing, and feeling less reactive, less anxious, and "generally happier." In addition to

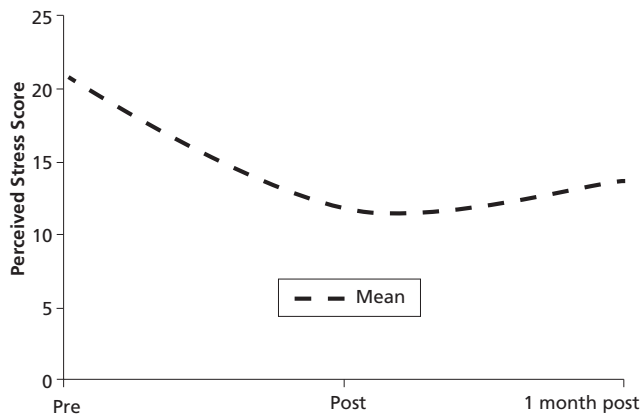


Figure 1 Perceived Stress Scale.

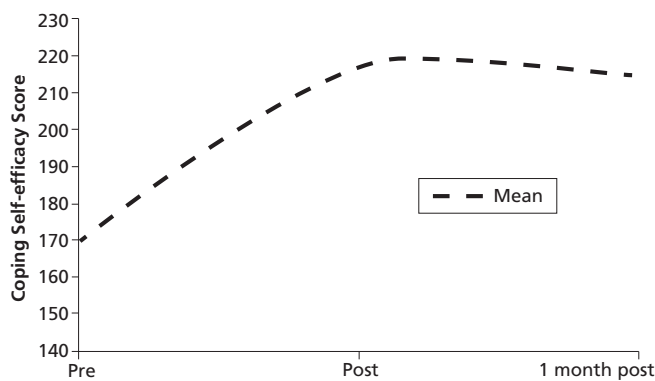


Figure 2 Coping Self-efficacy Scores.

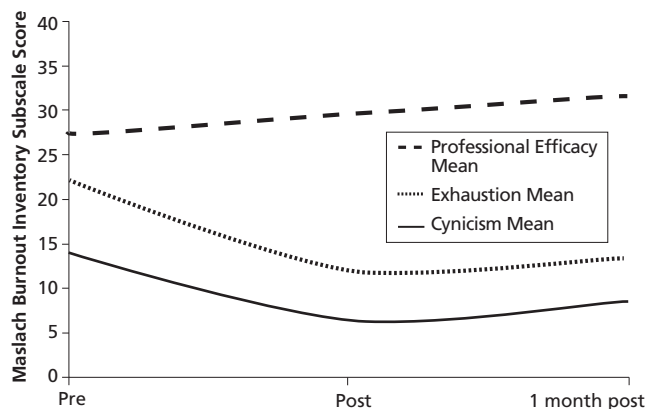


Figure 3 Maslach Burnout Inventory.

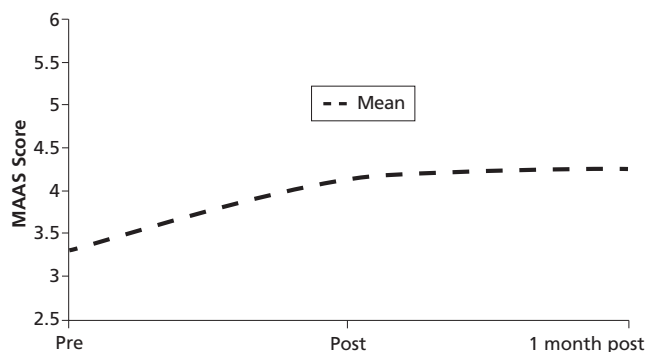


Figure 4 Mindful Attention Awareness Scale (MAAS).

this qualitative information, a quantitative analysis was performed using one-way ANOVA.

Stress scores decreased considerably from the start of the program to the 1-month post-intervention mark ($P=.002$; Figure 1). Coping scores improved at the end of the intervention and were maintained at the 1-month post-intervention mark ($P=.000$; Figure 2).

The Maslach Burnout Inventory subscale of professional efficacy did not show a statistically significant change ($P=.371$; Figure 3). The subscale for exhaustion, however, showed drastic improvement at both the post-intervention and 1-month follow-up points ($P=.017$). The final subscale on the Maslach Burnout Inventory calculated was the cynicism scale, which showed improvement that was not statistically significant ($P=.065$). Mindfulness improved significantly at both the post-intervention and follow-up points ($P=.026$; Figure 4).

Attendance of the program was used to address acceptability of the program. Three of the participants missed 1 session, and all but 1 of the missed sessions were made up on alternate dates. All but 1 of the participants completed the equivalent of 28 session hours, meaning the participants found this program format acceptable. In addition to an overall effect of acceptability, some general statements can be made about the data that were collected.

It was noted that 2 participants were unable to complete the 1-month post-intervention survey. A second ANOVA was run on each scale using the participants' post-intervention scores for their 1-month post-intervention score as well. This showed a change in the Maslach Burnout Inventory subscale for cynicism from insignificant to significant ($P=.041$). No other significant changes were noted in the data set using this method.

DISCUSSION

Participants were able to use the techniques learned to decrease their perceived stress levels and improve their coping efficacy. Improved coping scores illustrate that the nurses were able to apply the techniques learned to improve their ability to cope with daily personal and work-related stressors in a healthier manner. By reducing their perceived stress levels while improving coping, nurses may experience a higher level of wellbeing and ability to handle the difficult aspects of their nursing positions.

Improved MAAS scores indicate that the participants became more mindful during the program. Becoming more mindful indicates that participants were more aware or conscious of their state in the present moment. Increased mindfulness may be helpful in improved mental clarity, attaining calm acceptance of feelings, and increased ability to deal with unexpected situations that arise.

While most of the scores were statistically significantly improved, the professional efficacy and cynicism subscales of the Maslach Burnout Inventory were

not significantly changed. It is possible that the participants were satisfied in their positions upon start of the program and therefore had limited room to improve as the mean score was relatively high. Feeling cynical indicates a general distrust of human integrity and/or sincerity. This lack of change indicates that participants' feelings about the reliability they seek in others was unchanged by participation in the program. The cynicism subscale scores were greatly reduced at the post-intervention mark but had returned toward the baseline at the 1-month post-intervention mark. This indicates that the program had some effect but the results weren't significantly changed over time. It is possible that professional events such as job changes may have skewed final results as the sample size was small. The findings of this study are of limited generalizability because of the small sample size. However, both the qualitative and the quantitative findings point toward positive implications for future use of this and similar programs.

IMPLICATIONS

In the face of a growing nursing shortage, creating resiliency in the current nursing workforce is essential. The US Centers for Disease Control and Prevention recently reported occupational stress as a job hazard, stating, "healthcare workers have higher rates of substance abuse and suicide than other professions and elevated rates of depression and anxiety linked to job stress."³⁶ Nurses must take action to care for themselves by reducing stress and increasing coping abilities. Reiki is a practice that can be learned and accomplished over time in varying lengths by nurses from any background. Yoga practice can also be attained through the use of regular session attendance to learn initially and then implemented as home practice. Meditation practice is a skill that, once learned, is perfected through self-practice over time. Nurses should seek out resources to help them cope with the pressures faced in day-to-day work to prevent burnout and unhealthy coping. These modalities are effective at improving resiliency through a short program that can be taught in or out of the hospital.

The cost-effectiveness of this program lies in the possibility of preventing nursing turnover and early departure from nursing careers. An original study by Aiken et al found that "burnout and dissatisfaction predict nurses' intentions to leave their current jobs within a year."³⁷ Additionally, reducing stress may reduce nursing turnover expenses because stress and harsh work environments are a leading cause of nurses leaving the bedside.¹ Stress-related issues are a leading cause of nurses' motivation to leave and are therefore a key place to start when looking to improve staff resiliency as a cost-saving measure.

The findings from this program are limited by the small sample size. More research is needed with larger sample sizes to confirm these findings and improve generalizability. These modalities are safe and afford-

able to implement, may greatly improve the lives of nurses, and should therefore be considered for use by nurses seeking to improve their self-care regimen along with nursing units looking to improve nurses' coping and resiliency.

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