# Self-care strategies for nurses: A psycho-educational intervention for stress reduction and the prevention of burnout ☆

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**Abstract**

The purpose of this project is to develop and evaluate a psycho-educational program that assists nurses to develop stress management plans. Discussion of nursing-specific risk factors, practice with relaxation techniques, and exploration via art are used as interventions. Quantitative and qualitative measures of stress and burnout are conducted pre- and postcourse using the Maslach Burnout Inventory, Draw-a-Person-in-the-Rain Art Assessment, and wellness plans. Descriptive statistics are used, and preliminary analysis indicates that the course is useful in impacting levels of emotional exhaustion. There are opportunities for evolving the program so that more enduring change in self-care is generated.
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## 1. Introduction

A critical shortage of nurses currently threatens health care in America (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002). One of the causes of this shortage is that nurses experience high levels of stress and burnout in acute care settings and leave for less-stressful jobs (Medland, Howard-Ruben, & Whitaker, 2004). One study of more than 10,000 nurses from five different countries found an incidence of burnout that ranged from 54% (United States of America) to 32% (Scotland; Aiken, Clarke, & Sloane, 2002). The purpose of this pilot study is to evaluate one approach to reduce stress and burnout in nurses.

### 1.1. Background and study rationale

Burnout is a psychological state that is characterized by a constellation of symptoms including emotional exhaus-

tion (EE), depersonalization (DP), and decreased perceptions of personal accomplishment (PA; Maslach, Jackson, & Leiter, 1996). EE is the basis for burnout leading to increased feelings of DP and decreased feelings of PA (Koeske & Koeske, 1989). EE and burnout occur as a result of chronic exposure to environmental stressors in association with ineffective coping resources (Folkman & Greer, 2000). Examples of environmental stressors to which nurses are exposed on a regular basis are pain, suffering, death, ever-changing technology, and challenging institutional and ethical issues (Fagerberg, 2004; Maytum, Heiman, & Garwick, 2004). To deal with the stressors, studies have reported effective and ineffective coping mechanisms used by nurses. Examples of ineffective coping mechanisms practiced by nurses are smoking, substance use and abuse, and overeating (American Nurses' Association, 1984; Dunn, 2005; Sarna, Bialous, Wewers, Froelicher, & Danao, 2005). When exposed to chronic and significant stressors, nurses who use ineffective coping strategies are at risk to develop the stress syndrome of burnout (Medland et al., 2004).

A correlation exists between nurses identified as experiencing burnout and their reports of fair–poor quality of care on their units, decreased job satisfaction, and

increased risk of failure to recognize patient distress (Aiken, Clarke, Sloane, Sochaliski, et al., 2002; Birkmeyer, Dimick, & Birkmeyer, 2004). Exploration of patient satisfaction and nurse burnout suggests that elevated EE scores on the Maslach Burnout Inventory (MBI) are associated with low levels of client satisfaction (Aiken, Clarke, Sloane, Sochaliski, et al., 2002). Nurses whose own emotional reservoirs are low are less equipped to meet the care needs of their patients, and this may negatively impact patient safety (Laschinger & Leiter, 2006).

## 2. Literature review

### 2.1. Coping overview

Coping is a dynamic process that functions to promote survival and adaptation in response to stimuli appraised as threatening. Coping strategies are learned patterns of behavior influenced by personality traits, historical patterns of relationship, and situational stressors (Folkman & Greer, 2000). Successful coping and adaptation can be promoted by stimulating belief in the personal power to control life circumstances, creating achievable goals, and generating a positive mood (Folkman & Greer, 2000). These conditions exist in dynamic relationship to each other as illustrated in Fig. 1 and are the principles selected to define the curriculum and methods used in the Self-Care Strategies for Nurses program.

### 2.2. Emotional consequences of the work of nursing

Evidence is building to suggest that the psychological demands of nursing are pivotal factors in promoting the development of symptoms of stress, not lack of autonomous decision making and job security as has been suggested (Plaiser et al., 2006). Given this line of evidence, it becomes essential that the degree of emotional/psychological burden attached to nursing practice be considered as a risk factor for burnout. The work of nursing creates an environment that exposes nurses to intense emotional demands as well as significant work load (Trinkoff, Zhou, Storr, & Soeken, 2000). Understanding the emotional impact of the work of nursing on nurses illuminates the need for assistance and highlights the

interventions that may be useful in regulating and mitigating the stress response as well as promoting proactive, adaptive coping behaviors.

### 2.3. Resilience

Resilience is a dynamic process that minimizes the negative consequences of exposure to risk and threat (Fergus & Zimmerman, 2005). It capitalizes on the assets and resources of the individual to respond to risk and supports the individual in developing new internal working models for responding to future threat (Fergus & Zimmerman, 2005). A meaning-based model of resilience conceptualizes assets and resources as arising from the individual's and family's perceptions of experience, beliefs (i.e., self, other, and the world), coping, and relationship (Haase, Heiney, Ruccione, & Stutzer, 1999). Cultivation of meaning-based resilience supports positive adjustment to risk or threat, expansion of coping options, and promotion of prosocial interactions (Haase et al., 1999). In this study, we were interested in expanding positive coping options as a strategy to promote resilience.

### 2.4. Interventions to reduce stress and promote resilience

Interventions that promote personal well-being and adaptive coping mechanisms are associated with reduced stress and risk of burnout and are effective at reducing DP and enhancing feelings of PA (Mimura & Griffiths, 2003; Taormina & Law, 2000). Mimura and Griffiths (2003) conducted a systematic review of the literature from 1999 forward addressing nursing stress management. In this review, they examined stress management interventions and evaluation of change in individual stress levels as measured by instruments with established validity. The results of their review indicate that the self-care program components that appear to be effective include relaxation training, social support, cognitive techniques, exercise, and music (Mimura & Griffiths, 2003).

Taormina and Law (2000) conducted their study with 154 nurses from Hong Kong. The participants completed the MBI, the Organization Socialization Inventory, and a knowledge and attitude questionnaire. The results of their study showed significant correlations between reduction in
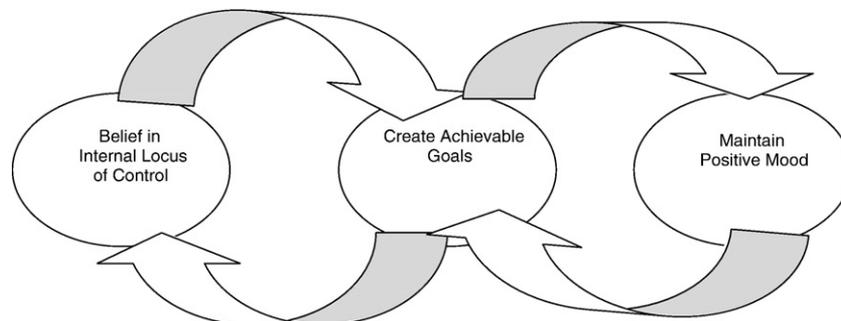


Fig. 1. Promoting adaptation by creating challenge. Adapted from Folkman and Greer (2000).

DP and improvement in PA in the presence of coworker support. In addition, those participants who expressed positive responses to training, coworker support, and future opportunities were associated with lower levels of EE.

## 2.5. Literature review summary

Burnout is a significant issue for nursing today (Aiken, Clarke, & Sloane, 2002; Aiken, Clarke, Sloane, Sochaliski, et al., 2002; Laschinger & Leiter, 2006; Medland et al., 2004). Identification of strategies to prevent and manage symptoms of burnout is important. A systematic review of 70 stress management studies observed that rigorous evaluation of specific self-care interventions was missing from the literature (Edwards & Burnard, 2003).

## 3. Research purpose and aims

The purpose of this project is to develop and evaluate a psycho-educational program that assists nurses who work in high-stress areas to develop personalized stress management plans that rely on the use of adaptive coping strategies. The aims of this program are to:

Aim 1. Test the effects of a psycho-educational program of self-care strategies directed at nurses working in high-stress areas.
Hypothesis 1.1. The structure and content of this program will reduce EE and, as a result, reduce feelings of DP and enhance feelings of PA.
Hypothesis 1.2. The use of art therapy, relaxation training, and wellness plans is acceptable to the participants.
Aim 2. Compare the levels of EE measured in nurses new to oncology and in experienced oncology nurses.
Hypothesis 2.1. Increased levels of burnout are associated with nurses new to oncology (3 years or less of practice in oncology) as compared to experienced oncology nurses (3 or more years of practice in oncology).

## 4. Theoretical framework

The theoretical framework of this study uses Lazarus and Folkman's (1984) Cognitive Model of Stress and Coping to identify the curriculum and the Transtheoretical Model of Change (Prochaska & Norcross, 2001) to guide the instructional methods. The Cognitive Model of Stress and Coping and the Transtheoretical Model are supported by the framework of structure, process, and outcome first described by Donabedian in 1966 (Fig. 2).

Lazarus and Folkman's Cognitive Model of Stress and Coping focuses on the processes of stress appraisal and coping behaviors. The model addresses the relationship between perceptions of threat, coping behaviors, and the impact of personal characteristics and environment on the stress response (Folkman & Greer, 2000). The Transtheoretical Model of Change emphasizes the therapeutic opportu-
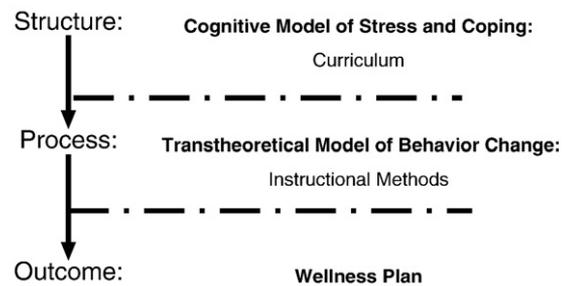


Fig. 2. Conceptual framework. Adapted from Folkman and Greer (2000) and Prochaska & Norcross (2001).

nity for change created by the relationship between the facilitators and the participants. It suggests that each of the six stages of behavior change (precontemplation, contemplation, preparation, action, maintenance, and termination) requires a specific style of interaction by the facilitator (Prochaska & Norcross, 2001). The styles of facilitation recommended for the precontemplation, contemplation, and preparation stages, stages found in this study, are on a continuum from nurturing to instructive to mentoring (Prochaska & Norcross, 2001). In Donabedian's model, structure refers to aspects of the setting or the system. Process describes performance and behavior and outcomes represent the results (Donabedian, 1966).

## 5. Material and methods

### 5.1. Design

This study uses a single psycho-educational intervention to teach positive self-care behaviors to nurses. The intervention consists of a single 6-hour class and uses adult learning principles of discussion and interactions as well as participant tailored outcomes. Primary interventions include relaxation and guided imagery training, art exploration of proactive coping strategies, and creation of a personalized wellness plan (Table 1).

### 5.2. Intervention

The intervention is conducted in a classroom setting. The first element of content, significance of self-care, is explored through discussion and art. A poem with self-care as its subject is read by one of the participants, and an art reflection that represents the most significant element of the poem for each participant is created using oil pastels. The art is then processed within the group with the participants voluntarily describing their work. Stress and the stress response is the next element of instruction presented and is followed by guided deep breathing and positive intention practice. Coping strategies are reviewed, and collage art is created to reflect current and future coping patterns. The artwork is processed by bringing the entire group together in a circle and each participant making a statement about the art. Wellness plans are the next activity. This is a guided exercise

Table 1
Content and structure of psycho-educational intervention

| Topic | Intervention(s) | Concept |
|---|---|---|
| Significance of self-care | 1. Psycho-education<br>2. Introduction to stress diary and wellness plan<br>3. Poem and art reflection | Successful coping and adaptation can be promoted by stimulating belief in the personal power to control life circumstances, creating achievable goals and generating a positive mood (Folkman & Greer, 2000) |
| Stress and the stress response | 1. Psycho-education<br>2. Guided deep breathing and positive intention practice | |
| Creation of a wellness plan | 1. Art directive exploring coping strategies<br>2. Initiate writing wellness plan<br>3. Grounding exercise practice | |
| Coping options | 1. Art directive exploring challenges and options for managing challenges<br>2. Progressive muscle relaxation practice | Cultivation of meaning-based resilience supports positive adjustment to risk or threat, expansion of coping options and promotion of prosocial interactions (Haase et al., 1999) |
| Completion of the wellness plan | 1. Refine and complete the wellness plans<br>2. Guided imagery practice | |

with the facilitators acting as consultants to the participants as they create their wellness plans. The course concludes with a guided imagery practice that promotes further reflection about self-care.

### 5.3. Sample

The sample consisted of new graduates hired to work in a comprehensive cancer center in Southern California, as well as staff nurses from that center plus nurses from the surrounding community organizations. The new-graduate sample was recruited from all new graduates that were hired at the cancer center, and the intervention was offered during their orientation. The staff nurses were recruited through mailed flyers sent to their homes. The number of course participants was 248. New-graduate nurses and new-hire nurses experienced in nursing with or without experience in oncology accounted for 51% of the participants, and experienced nurses who had been employed by their current employer for more than 1 year accounted for 49% of the participants.

### 5.4. Inclusion criteria

New-hire RNs including new graduates, incumbent RN staff members, and community RNs were invited to participate. The course was opened to non-RN health care providers in the second year of the study.

### 5.5. Informed consent

The study was reviewed and approved by the Institutional Review Board. Consent was obtained prior to initiating the intervention. The primary investigator and/or the coinvestigator explained the study including risks and benefits to all attendees including community health care providers. The potential participants were assured that participation was strictly voluntary and confidential. Consent was obtained by the project director, an RN, and the research assistant after the primary and coinvestigators left the room to protect the anonymity of the participants. All instruments and materials were blind coded with an alphanumeric code to further protect

participant anonymity. When explaining the study, permission to answer only the questions they were comfortable with was emphasized. All participants, regardless of consent status, then received the psycho-educational intervention.

### 5.6. Data collection

Evaluation includes satisfaction with course and faculty as well as pre–post evaluation of burnout using the MBI: Human Services Survey (HSS) and the art technique, Draw-a-Person-in-the-Rain, and wellness plans.

### 5.7. Instruments

#### 5.7.1. Maslach Burnout Inventory—Human Services Survey

The MBI-HSS is used to assess three components of the burnout syndrome: EE, DP, and PA (Maslach et al., 1996). The MBI-HSS is a quantitative measure with established reliability and validity (Maslach et al., 1996). There are 22 items, which are divided into the three subscales, EE, DP, and PA. Items are scaled from 0 to 6 with 0 = *never* and 6 = *every day*.

Internal consistency of the MBI-HSS was established and reported using Cronbach's alpha coefficient ($N = 1,316$). Reported reliability for the EE subscale is 0.90, DP subscale is 0.71, and PA subscale is 0.79 (Maslach et al., 1996). In this study, the Cronbach's alpha coefficient was .91 for the EE subscale, .86 for the DP subscale, and .79 for the PA subscale.

Burnout exists as a continuum of human experience extending from low degrees of burnout to high degrees of burnout. Burnout is assessed as low, average, or high by comparing EE, DP, and PA scores to norms established for specific groups (Maslach et al., 1996). EE reflects the degree of compassion fatigue experienced by the participant, and high scores are associated with increased risk of burnout. DP reflects the extent to which the participants have emotionally removed themselves from the work and high scores are consistent with burnout. PA reflects the sense of satisfaction the participant experiences with work. Low PA scores are associated with increased risk of burnout. The scores for all

Table 2

MBI-HSS norms for medical workers, physicians, and nurses: PA scores have an inverse relationship with EE and DP

| Subscales | No. of items | Range of scores | Degree of burnout as measured in scores | | |
|---|---|---|---|---|---|
| | | | Low | Average | High |
| EE | 9 | 0–54 | ≤18 | 19–26 | ≥27 |
| DP | 5 | 0–30 | ≤5 | 6–9 | ≥10 |
| PA | 8 | 0–48 | ≥40 | 39–34 | ≤32 |

three components of burnout are used to determine the degree of burnout. This study used the norms established for medical workers, physicians and nurses, practicing in the United States (Table 2).

### 5.7.2. Draw-a-Person-in-the-Rain Art Assessment technique

Draw-a-Person-in-the-Rain Art Assessment (PIR) is an evolving art evaluation technique in the initial stages of development (Carney, 1992). The PIR was used to augment the information obtained from the MBI. The PIR is intended to reveal the interaction between stressors and coping resources as depicted in the images created by the study participants. The materials provided are 8.5 × 11 in. white paper, colored pencils, felt markers, and pastels. The participants are instructed to "draw a person in the rain." No further instructions are provided. The completed pictures are collected for evaluation by the research team.

The primary investigator, the coinvestigator, and an external consultant who is board-certified in art therapy independently evaluated each drawing for the presence of specific elements using criteria articulated by Carney in 1992. In order for a criterion to be identified as present and included in the data set, two of three of the raters had to agree that it was present in the image. Agreement by a minimum of two of three raters was reached 100% of the time.

Two variables were evaluated in the images, rain and shielding. Rain signifies the intensity of the stressors as perceived by the artist, and shielding represents the available

coping resources and their potential to be effective. The relationship between the intensity of the stressors and the available coping resources is used to suggest risk of burnout (Table 3). For example, if an image shows large amounts of rain and the person in the image is standing in the rain without any shielding, significant stressors and lack of coping resources are hypothesized.

### 5.7.3. Wellness plan

The Personalized wellness plan documents the (a) intentions and (b) strategies that each participant will use to help guide a new practice of positive self-care. The completed tools were analyzed using content analysis. The wellness plans were identified as data sources during Year 2 of the study. As a result, 145 wellness plans were used in this analysis.

Qualitative content analysis was built upon a coding scheme and analysis method for qualitative data. This coding scheme included specific topics coded under five conceptual domains for the intention statements and self-care strategies. The five conceptual domains used were emotional, physical, mental/cognitive, spiritual, and social. Handwritten responses were transcribed. All responses were deidentified and assigned an identification number. Some responses were divided into two or more topics. The lead author participated in the assignment of comments to thematic categories with two other members of the research team. Results were reviewed and consensus reached on all item assignments.

Intention statements numbered 333 and were identified from this sample with some participants providing more than one intention statement per wellness plan. The number of responses in each conceptual domain of the self-care strategies varied because some domains had no strategies identified by individual participants.

### 5.7.4. Course evaluations

Course evaluations were obtained from each participant at the end of the intervention. The evaluations asked for reactions to course content and instructional methods,

Table 3

Classification of coping and risk of burnout from PIR

| Scoring criteria identified as present | Significance | Risk of burnout |
|---|---|---|
| Adequate shielding: protective gear that would shield the entire body from rain | Coping resources are depicted as balanced with and equal to demand of stressors | Low |
| Small amount of rain: inclement weather present in sufficient amounts to indicate rain, but not in amounts that overwhelm the figure | | |
| Inadequate and/or absent shielding: insufficient and/or absent shielding for the figure | Coping resources are depicted as inadequate or unable to meet the demands of the stressors in the environment | Medium |
| Moderate amount of rain: inclement weather present in sufficient amounts to indicate rain, but not in amounts that overwhelm the figure | | |
| Inadequate and/or absent shielding: insufficient and/or absent shielding for the figure | Coping resources are depicted as inadequate or unable to meet the demands of stressors depicted as intense, threatening, and potentially overwhelming | High |
| Large amount of rain: large amounts of rain indicated and/or rain angled to hit the figure regardless of covering | | |

PIR was developed from Carney (1992) and from "The draw-a-person in the rain technique: Its relationship to diagnostic category and other personality indicators," by J. S. Verinis, E. F. Lichtenberg, and L. Henrich, 2006, *Journal of Clinical Psychology*, 30(3), pp. 407–414.

recommendations for changes in content or methods, and impressions of the wellness plan as a tool to support behavior change.

### 5.8. Procedures

The 6-hour psycho-educational program was offered twice per month on campus at a cancer center in southern California and three times over the course of the study off campus. New-hire RNs including new graduates attended the course as part of the orientation process. Incumbent staff and noncancer center employees electively scheduled themselves to attend.

Introduction to the study was completed prior to the course by the primary investigator and coinvestigator. Consenting was accomplished by the Research Assistant and Project Director. Once consented, the participants completed the demographic survey, the MBI-HSS, and the PIR technique. Immediately following the course, the MBI-HSS and the PIR technique were repeated. The wellness plans were completed as the final component of the course content.

The primary investigator and the coinvestigator cofacilitated the presentation of the course. A syllabus was used to ensure that the course content was offered in a consistent manner. The course content includes discussion of the stress response, the relaxation response, coping patterns (general and those associated with the nursing profession), guided imagery, and creation of the wellness plan. The methods used to support the didactic presentation included art making, guided imagery practice, and development of actual wellness plans. Throughout the program, opportunities for dialogue and discussion with the participants were encouraged.

### 5.9. Data analysis

Data were coded, entered into SPSS, and verified. Descriptive statistics were used to describe the sample. Paired sample $t$ tests were performed on pre- and postintervention MBI subscales, EE, DP, and PA. Cronbach's coefficient alpha was used to verify the internal consistency of the subscales for this study. Pearson's product–moment correlation coefficient was used to examine the relationship between demographic variables and the MBI subscales.

## 6. Results

### 6.1. Demographic characteristics

The results of the demographic data describe the course participants as predominately female (76%) between the ages of 20 and 60 years, with 35% younger than 40 years and 42% older than 40 years (Table 4). The group was an ethnically diverse unit of 32% White and 47% other. The largest non-White group identified was Asian. The predominant religious preference was Roman Catholic (25%).

Most participants identified themselves as married/partnered (56%). The range of hours worked was 12 to 96, with a mean of 38 hour/week. A segment of 15% reported working more than 40 hour/week on a regular basis. Most participants identified themselves as staff nurses (74%). Years in nursing practice showed a relatively balanced distribution from 0 to 35 years of practice with a decline appearing at more than 35 years. Participants who were new hires to the cancer center and incumbent staff members accounted for 60% of the course participants. Community health care providers accounted for 40% of the study participants.

A number of the demographic questions were not answered by an average of 19% of the participants. This seems to be a selective response by the participants because a review of the data shows that the unanswered questions were part of an otherwise complete response. Analysis of missing data to determine if differences occurred across groups (comprehensive cancer center vs. community health care provider) showed no significant differences.

Table 4
Demographic characteristics of study participants

| Demographics ($n = 248$) | | |
|---|---|---|
| Characteristics | $n$ | % |
| Gender | | |
| Female | 189 | 76 |
| Male | 9 | 4 |
| Declined to respond | 50 | 20 |
| Age | | |
| 20–30 years | 39 | 16 |
| 31–40 years | 48 | 19 |
| 41–50 years | 44 | 18 |
| 51–60+ years | 57 | 23 |
| Declined to respond | 60 | 24 |
| Ethnicity | | |
| White/Caucasian | 78 | 32 |
| Asian/Asian American | 68 | 27 |
| Latino, Hispanic, and Mexican American | 32 | 13 |
| Black | 10 | 4 |
| Other | 8 | 3 |
| Declined to respond | 52 | 21 |
| Religion | | |
| Roman Catholic | 63 | 25 |
| Protestant | 21 | 9 |
| Jewish | 3 | 1 |
| None, no religion | 11 | 4 |
| Nondenominational | 3 | 1 |
| Other | 71 | 29 |
| Declined to respond | 76 | 31 |
| Marital status | | |
| Married/Partnered | 138 | 56 |
| Single/Divorced/Widowed | 92 | 37 |
| Other | 10 | 4 |
| Declined to respond | 8 | 3 |
| Years in nursing | | |
| 0–5 years | 72 | 29 |
| 6–15 years | 61 | 25 |
| 16–25 years | 32 | 13 |
| 26–35+ years | 43 | 17 |
| Declined to respond | 40 | 16 |

## 6.2. Maslach Burnout Inventory-Human Services Survey

Preintervention EE subscale scores were high ($\geq 27$) for 38% of the participants and decreased to 26% postintervention. Preintervention DP scores were high for 13% of the respondents and decreased to 9% postintervention. Preintervention PA scores were low ($\geq 40$) for 45% of the participants and increased postintervention to 52%.

All three criteria for burnout (i.e., high EE, high DP, and low PA scores) were met by 4% of the study participants preintervention. Postintervention, none of the study participants met all three of the criteria for burnout. The relationship between demographic variables and the MBI subscales was examined using Pearson's product–moment correlation coefficient. Results showed low correlations of .14 to .17 for selected variables providing inadequate support for identifying important demographic characteristics.

Differences between comprehensive cancer center employee responses and those of the community health care providers were found only in scores for PA. Comprehensive cancer center employees scored significantly lower than community health care providers (mean score = 35.5 vs. 38.7; $p < .000$).

## 6.3. PIR technique

Criteria for low levels of stress were met by 57% of the participants. Criteria for moderate levels of stress were met by 10%, and 32% met the criteria for high levels of stress. The drawings contained at least one intensifier (clouds, lightening, and puddles) 39% of the time.

## 6.4. Wellness plan

Intention statement analysis revealed responses in all five categories for a total of 333 statements. The emotion category, with 43% of the responses, is the largest category. Examples of intention statements from the emotion category are, "I want to feel calmer and less angry..." and, "I am

Table 5
Summary of intention statements and domains of experience ($n = 333^a$)

| Variable | $n$ | % |
|---|---|---|
| Emotional | | |
| "I am strong, healthy and interested in surrounding myself with joyful positive relationships." | 142 | 43 |
| Physical | | |
| "I want to stay fit and healthy..." | 112 | 34 |
| Cognitive/Mental | | |
| "I want to be conscious of my life in its smallest details, colors, sounds, textures, tastes that please me." | 71 | 21 |
| Social | | |
| "I want to be more open to people or family that is here with me." | 16 | 5 |
| Spiritual | | |
| "I am in the process of creating a deeper spiritual awareness and connection." | 8 | 2 |

<sup>a</sup> More than one intention statement was identified for some of the wellness plans.

Table 6
Self-care strategies as categorized by the participants in their wellness plans ($n = 145^a$)

| Activities | $n$ | % |
|---|---|---|
| **Physical** | | |
| Yoga/Stretching | 54 | 37 |
| Biking/Jogging | 57 | 39 |
| Healthy lifestyle | 17 | 12 |
| Massage | 3 | 2 |
| Deep breathing | 3 | 2 |
| No response | 11 | 8 |
| **Emotional** | | |
| Deep breathing | 27 | 19 |
| Talk to friends | 32 | 22 |
| Hobbies | 38 | 26 |
| Positive feelings | 21 | 14 |
| Diary | 11 | 8 |
| No response | 16 | 11 |
| **Spiritual** | | |
| Prayer | 64 | 44 |
| Church | 30 | 21 |
| Meditation | 12 | 8 |
| Inspirational reading | 9 | 6 |
| Reflection | 18 | 12 |
| No response | 12 | 9 |
| **Cognitive/Mental** | | |
| Affirmations | 53 | 37 |
| Reading | 22 | 15 |
| Learning | 21 | 14 |
| Distractions | 19 | 13 |
| Positive intentions | 17 | 12 |
| No response | 13 | 9 |
| **Social** | | |
| Family/Friends | 119 | 82 |
| Activities | 10 | 7 |
| Couple time | 3 | 2 |
| Concerts | 1 | 1 |
| Me time | 1 | 1 |
| No response | 11 | 7 |

<sup>a</sup> Wellness plan accrual for data collection began in year 2 of the study.

strong, healthy and interested in surrounding myself with joyful positive relationships." The physical category is the next largest category with 34% of the total responses. An example of a physical intention statement is, "I want to stay fit and healthy..." The cognitive category has 21% of the total responses, and an example of a cognitive intention is, "I want to be conscious of my life in its smallest details, colors, sounds, textures, and tastes that please me." The social domain of experience represented 5% of the total response. "I want to be more open to people or family that is here with me" is an example of an intention statement of this category. The spiritual category has 2% of the total responses, and an example of an intention statement is, "I am in the process of creating a deeper spiritual awareness and connection." The striking feature of the intention statements is that they were highly individualized and profoundly personal (Table 5).

The strategy statements were sorted by the participants into five categories: physical, spiritual, mental, emotional, and social (Table 6). Exercise (37%), prayer (44%), affirmations (36.5%), deep breathing (19%), and friend/

Table 7
Summary of course evaluations (*n* = 248)

| Topic | *n* of yes | % of yes |
| --- | --- | --- |
| Appropriate content | 231 | 93 |
| Useful teaching methods | 248 | 100 |
| Recommended program changes/additions | 70 | 28 |

family support (82%) were most often identified as strategies selected by the course participants.

### 6.5. Course evaluations

The overall response to the program was extremely positive. Recommendations for additions and/or changes included music therapy, increase time to create wellness plan, address specific developmental needs of the mature worker, and offer courses twice per year (Table 7).

## 7. Discussion of findings

The results of the demographic survey show varying rates of missing data depending on the characteristics being rated. The missing data are confined to demographic data that might be perceived as facilitating identification of the respondent specifically gender, age, and ethnicity. However, for these characteristics, more than 75% of the population did respond. One of the ways to interpret this missing data is to acknowledge that the participants were concerned about maintaining their anonymity. For religion, a 31% nonresponse rate may reflect the generalized decline in religious practices in our society.

### 7.1. Personal accomplishment

PA scores on the MBI describe the respondents' feelings of satisfaction with their achievements. Low satisfaction is reflected by low PA scores. PA scores classified as "feelings of low PA" were 45% precourse and 55% postcourse. It is interesting to note that the number of low PA scores rose after the intervention. This rise may reflect a relaxing of personal defenses in response to the environment of the course, which results in the postcourse score being more indicative of core feelings regarding PA.

Differences in the PA scores between comprehensive cancer center employees and community health care providers may be interpreted as being the result of the fact that most of the comprehensive cancer center employees (50%) were on orientation and had yet to develop feelings of PA in a new work setting.

### 7.2. Emotional exhaustion

The EE subscale measures the level of emotional fatigue experienced by the respondent. The higher the EE score, the more exhausted the individual is and the more at risk he or she is to experience burnout. EE scores significant for high levels of exhaustion occurred in 37% participants precourse

and in 27% participants postcourse and are of interest. Analysis using the paired-samples *t* test showed that the EE score after the course was significantly lower ($p < .0005$). It is our belief that this is indicative of a reduction in EE and of the appropriateness of the interventions for addressing this category of experience.

### 7.3. Depersonalization

The DP subscale assesses feelings of being removed from and/or distant from the work experience. High DP scores are indicators of risk for burnout. High DP scores were 13% precourse and 10% postcourse. Analysis using the paired-samples *t* test showed that the drop in the DP score after the course was significant ($p < .0005$) and is indicative of the effectiveness of the intervention.

The MBI data suggest that the course in its current form provides interventions that successfully diminish EE and feelings of DP. However, the scores on PA indicate that there is an opportunity for cultivating new interventions that enhance positive feelings of PA in new employees.

### 7.4. Draw a person in the rain art assessment

The results of the PIR support the results measured in the MBI. This assessment contributes information about traits associated with this pool of participants as well as state related data. Combined with the MBI data, this finding underscores the potential value of this course and the need for further research.

## 8. Limitations

Engaging experienced staff nurses in developing new self-care behaviors proved to be challenging. Further examination of ways to attract nurses to participate in a self-care program including follow-up is needed. Missing demographic data are a limitation of this study. It is unclear if these missing data had an impact on the analysis of specific measures related to the interventions as those measures had a 100% response rate. Our ability to measure the impact of the wellness plans on facilitating behavior change over time was limited. It would be useful for further research to be done longitudinally to identify the processes and structures that promote robust, enduring health care habits.

## 9. Implications for practice and future research

Regular, systematic efforts to support positive nursing self-care behaviors and to resolve organizational challenges such as patient workload, conflict, and professional empowerment are needed. Nursing as a profession can support the development of positive, proactive health care behaviors, and coping strategies by individual nurses by raising the importance of positive self-care to the forefront of discourse within the profession and with our institutional partners.

The next phase of research will include a psycho-educational intervention based on the curriculum including content addressing recovery from burnout and relapse prevention. It is our intent to enhance feelings of PA by adding information that addresses compassion fatigue and loss, coping strategies, conflict resolution, and creating positive meaning systems. In addition, regularly scheduled follow-up will be implemented for both monitoring and reinforcing of behavior change.

This exploratory study is the focus on dynamics and interventions that support the individual's change process. We recognize the value of understanding the context within which these individuals practice. As a result, the role of the institution as a component of nursing stress and burnout will be examined in future research projects.

## 10. Conclusions

Psycho-educational interventions including discussion of nursing specific risk factors, practice with relaxation techniques, and exploration of coping patterns via art show promise as methods to promote positive self-care strategies. Further research is needed particularly in the area of promoting enduring change in self-care behaviors.

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