



## Quantitative Research

# Jin Shin Jyutsu® Self-Help Reduces Nurse Stress

## A Randomized Controlled Study

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**Purpose:** The purpose of this research was to explore the impact of Jin Shin Jyutsu (JSJ) Self-Help on personal stress and the caring efficacy of nurses. **Design:** A randomized, controlled comparison study, with crossover design was conducted. **Method:** Stress and caring efficacy were measured via surveys at baseline, posteducation, and again 30 to 40 days after completion of the JSJ educational intervention. Self-reported stress was the primary endpoint as measured with the validated Personal and Organizational Quality Assessment–Revised 4 Scale (POQA-R4) survey. Caring Efficacy was measured using the Coates Caring Efficacy Scale. **Findings:** A total of 41 nurses consented and completed the study; 18 were in the education group and 23 were in the control group. Changes in stress were sustained in the education group for the POQA-R4. Changes observed in the control group were not sustained. Statistical differences were observed when comparing education and control from baseline to final surveys for measures of emotional vitality and buoyancy. Increases in nursing caring efficacy were observed in both groups. Scores were consistently higher in the education group. Statistically significant differences were observed from baseline to final measure for the education group. **Conclusions:** Results show JSJ as a viable option for stress reduction in nurses.

**Keywords:** *Jin Shin Jyutsu; stress; nurse stress; self-care; self-help; caring efficacy; Watson*

Twenty percent of new nurses abandon their nursing position within a year because of job stress (Calisi, 2017). While challenging to estimate, nurse employee stress and burnout costs are estimated at approximately \$250 to \$300 billion annually (Milliken et al., 2007). A more recent publication estimates the cost of turnover, per nurse, as over \$20,000 in the United States (Duffield et al., 2014).

The American Nurses Association (2017) Health Risk Appraisal identifies workplace stress as the top work environment health and safety risk. In addition to keeping up with the increased challenges of our

constantly changing world, nurses are expected to provide a caring therapeutic presence for their

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patients. The reality is that one cannot give from an empty well, and the link between nursing burnout and self-care has been acknowledged by the health care profession (McElligott, 2013). The pressing need to retain qualified registered nurses in the workforce and the high cost of workplace stress make it imperative to introduce interventions to support stress management for the nursing population. Raising levels of self-awareness and connectedness are ways to reduce stress (Perez, 2016).

## Purpose

The purpose of this study was to evaluate the effect of educating nurses in Jin Shin Jyutsu (JSJ) Self-Help on nurses' personal and organizational stress and their perceptions of their caring efficacy for patients. This randomized controlled study provided an opportunity to increase the body of knowledge that supports JSJ Self-Help as a valuable modality for nurses' daily self-care. Nurses were randomly assigned to attend classes on JSJ Self-Help or to a control group that did not attend classes. This study built on the groundbreaking work of Lamke et al. (2014) by adding randomization and a comparison group.

## Background

JSJ is an art of harmonizing the life force energy of the body, mind, and spirit. Its roots can be traced back thousands of years (A. Burmeister & Monte, 1997). It was recovered from ancient references and further developed by Jiro Murai in Japan in the early 1900s. It was introduced to the United States in the 1950s by his senior student, Mary Burmeister (1994; Jin Shin Jyutsu, 2020). JSJ is a gentle, noninvasive form of energy practice which utilizes 26 sets of key locations called Safety Energy Locks (SELs) located along the major energy channels of the body to promote the body's self-healing mechanism. This gentle touch may be applied by oneself (JSJ Self-Help) or by a practitioner to restore balance in the energy as it flows throughout the body. Energy therapies are ways to interact with one's own or another person's energy field to balance, harmonize, and restore the free flow of energy through the body (Slater, 2013). An essential component of JSJ is the cultivation of self-awareness through the practice of JSJ Self-Help (M. Burmeister, 1994; Hill, 2011; Riegger-Krause, 2014). JSJ addresses both the practice of self-care as

well as self-awareness. As demand increases for health care that encompasses holistic options, and health care shifts toward prevention, this research explores the efficacy of JSJ Self-Help as a component of holistic self-care, specifically studying the impact on personal and organizational stress and nurses' perceptions of their caring efficacy for patients. Many believe that the balance of energy in the body directly effects the body's physical and emotional health (Slater, 2013). These modalities and practices have shown to be useful in reducing anxiety, accelerating healing, and promoting health and a greater sense of wellness (Thornton, 2013).

There is an increasing volume of evidence-based literature regarding the use of JSJ in health care. JSJ interventions have been shown to be beneficial in patients with many different health care conditions including both emotional and physical stress (Lamke et al., 2014), breast cancer (Searls & Fawcett, 2011), multiple myeloma (Shannon, 2002), heart transplants (Sempell, 2000), heart rate reduction (McFadden & Hernandez, 2010), and cognitive function due to traumatic brain injury (McFadden et al., 2011). Studies performed at the Markey Cancer Center showed that among people living with cancer, use of JSJ resulted in a significant decrease in reports of pain, stress, and nausea (Bradley et al., 2012).

JSJ has been a cornerstone of the Integrative Medicine Department at our medical center for over 25 years when a small number of nurses were trained in the modality. The program has grown; at the last recorded measurement approximately 15,000 bedside sessions were given using integrative modalities in 23 units at the hospital to help patients with relief of pain, stress, anxiety, and nausea (Rowan et al., 2016). In addition to JSJ sessions provided to patients, nurses taught some patients and their families JSJ Self-Help to empower them to relieve stress, and to minimize anxiety and discomfort.

Lamke et al. (2014) investigated the efficacy of JSJ self-care training for nurses and the effect on stress, physical health, emotional health, and caring efficacy. Results showed statistically significant ( $p \leq .05$ ) increases in positive outlook, gratitude, motivation, calmness, communication effectiveness, and nurses' caring efficacy. Decreases in anger, resentment, depression, stress symptoms, time pressure, and morale issues were also observed. Participants reported fewer muscle aches, sleeplessness, and headaches (Lamke et al., 2014). The results of the Lamke study aligned with previous research that showed a

relationship between a reduction of perceived stress and job satisfaction (Mariano, 2013).

## Theoretical Framework

Our study incorporates the ideals of holistic nursing based on Watson's (2012) theory of human caring. Important aspects of this theory are stress reduction strategies that encompass various methods of self-care practices. These self-care practices contribute to the environmental field of caring consciousness and the creation of a healing culture. Among Watson's theoretical concepts are the use of self, the caring process, and the spiritual nature of human beings (Watson, 2018). Not only does Watson talk about caring for the patient but she also includes caring for self. The Caring Science perspective is part of a relational ontology where caring consciousness encompasses the connection of human beings honoring the wholeness of body-mind-spirit in self and other beings (Watson, 2018). JSJ is an example of an energy healing modality that aligns with caring consciousness and affects the human-to-human interaction. By practicing JSJ Self-Help, an individual is potentially cultivating transpersonal caring relationship concepts such as inner harmony, balance, and authentic presence.

## Design

The study was a randomized, controlled comparison study. Two groups were compared: those who received JSJ Self-Help education (intervention group) and those who did not receive education (control group). An important component of the intervention group was the expectation that participants practice 20 minutes of JSJ Self-Help each day. The aim was to evaluate stress and caring efficacy via surveys at baseline, posteducation (Time 2; T2), and again 30 to 40 days after completion of the JSJ Self-Help education (Time 3; T3). All participants completed surveys at the same time points, related to their baseline survey.

Due to lower than anticipated enrollment, an additional group (Cohort 2) was recruited and randomized to a second set of classes. New participants were randomized to either the intervention group or the control group using a continuation of the original computerized randomization schedule. The same instructor taught both groups.

Participants in the original cohort who were in the control group had the option of taking the classes in the Cohort 2 intervention group (with a new consent but without randomization). The offering of an intervention to an individual previously randomized to the control group is referred to as a modified *crossover design* (Hulley et al., 2013; Polit & Beck, 2018). The time between the start of the first and second cohort was 2 months.

At the completion of the study, any participants who had not received education were offered optional educational sessions. The longitudinal design of the study provided initial insight about the enduring nature of the changes observed.

## Method

This research study was approved by the local institutional review board. All participants signed an informed consent prior to participating in the study.

### Recruitment and Sample

Recruitment was done using emails, through information gathered during committee and staff meetings, and through posters/fliers on various hospital units. Individuals self-identified as being interested in study participation. Consenting participants were randomized 1:1 to either the intervention group or the control group. Participants who were in the control group of Cohort 1 could re-consent and participate in the intervention group of Cohort 2.

### Inclusion and Exclusion Criteria

Male or female participants were required to be nurses employed in direct patient care ( $\geq 50\%$  bedside care) at the facility. Nurses who were pregnant were excluded from the study because no research exists about the use of JSJ Self-Help during pregnancy. There is literature reporting that acupuncture induced contractions, and induced labor during pregnancy (Betts & Budd, 2011). Some of the SELs are located along the acupuncture meridians. Therefore, pregnant women were excluded as a precaution.

Participants in the study agreed to attend educational sessions, practice JSJ Self-Help, and complete surveys at requested intervals. Control group participants agreed to complete the surveys at the same requested intervals. Participants agreed not to initiate

any new self-care practices (i.e., yoga, meditation) during the study duration. Nurses who were actively practicing JSJ Self-Help prior to the start of the study were excluded.

### Randomization

For this study, a computerized 1:1 randomization schema was generated. Equal distribution of participants within each block size of six was used for this study. Randomization assignments were provided sequentially based on the order that consent forms were signed by participants.

### Intervention Procedures

Three 2-hour classes of instruction on JSJ Self-Help were given to the intervention groups (both Cohort 1 and Cohort 2) taught by a single researcher who was a holistic nurse, as well as a JSJ practitioner, and a JSJ Self-Help instructor. The instructor met these participants on the first day of classes having no prior involvement of obtaining consents, or the randomization process.

A combination of handouts and Mary Burmeister's Self-Help *Jin Shin Jyutsu® Is Books 1* (M. Burmeister, 1994) and *Book 2* (M. Burmeister, 1981) was used to introduce and instruct the nurses in JSJ Self-Help practices. In the first class, the principles of the practice of JSJ were explained, the locations of the SELs were shared, and the nurses practiced identifying these locations on their bodies under the guidance of the instructor. In addition, the main harmonizing flows and other flows found in *Jin Shin Jyutsu® Is Book 1* were demonstrated and practiced by all participants under instructor supervision. The second session (a week after the first session) and third session (2 weeks after the second session) covered the remainder of *Jin Shin Jyutsu® Is Book 1* and all of *Book 2*. The sessions (per cohort) took place over a 1-month period. All participants, regardless of randomization group, completed surveys at the same time points, relative to their baseline survey. Participants in the intervention group were requested to practice JSJ Self-Help for 20 minutes daily and report adherence throughout the study.

### Measures

In addition to demographic information, two instruments were utilized in this randomized,

comparative, two-arm study: The Personal and Organizational Quality Assessment–Revised 4 scale (POQA-R4) and Caring Efficacy Scale (CES). Both instruments rely on self-report by the participants.

*The Personal and Organizational Quality Assessment–Revised 4 Scale.* POQA-R4 is a workplace environment quality assessment designed by the Heart Math Institute (2009). The POQA-R4 utilizes four workplace subscales: Emotional Vitality, Emotional Stress, Organizational Stress, and Physical Stress. These subscales measure perception of enhancement or detraction from an efficient performance in the work environment. Multiple measures of internal validity have been reported yielding Cronbach's alpha ranging from .76 to .92 for the four subscales (HeartMath Institute, 2009).

Emotional Vitality enhances organizational performance and assesses positive emotional energy and optimism. This subscale reflects the extent that nurses have emotional energy available for investment in their work and personal lives. It also measures contentment and inner peace with their lives both at work and at home. Higher levels of Emotional Vitality support positive organizational performance.

Emotional Stress reflects the degree to which employees report anxiety, depression, unhappiness, anger, and resentment, which are negative emotions. This subscale also measures difficulty controlling feelings and emotion. Low scores are desirable.

Organizational Stress is the measure of the employees' feelings of negative factors that are stressors in their work and personal lives. This subscale measures stress related to job function.

Last, Physical Stress is an overall assessment of negative physical symptoms related to stress, such as fatigue and poor health (HeartMath Institute, 2009). Both symptoms and feelings of stress are measured with this sub-scale. Again, low scores are desirable.

*Caring Efficacy Scale.* The CES is a tool used to assess nurses' belief in their ability to develop a caring relationship with their clients (Coates, 1997). The CES is a Likert-type scale of self-report based on Watson's theory of transpersonal caring (Watson, 2009, 2018). Furthermore, the CES utilizes Bandura's (1997) social learning theory. This theory states that self-efficacy is the optimistic belief and confidence that one can achieve their desired outcome. Together, these theories assess the nurses' belief in their ability to establish a caring relationship with

Table 1. Demographics

Demographic	Intervention Group, <i>n</i> = 18 (%)	Control Group, <i>n</i> = 23 (%)	Total, <i>N</i> = 41 (100%)	<i>p</i>
Gender				
Male	0	1 (4)	1 (2)	>.999
Female	18 (100)	22 (96)	40 (98)	
Marital status				
Married	12 (67)	15 (65)	27 (66)	>.999
Single	3 (17)	6 (26)	9 (22)	.706
Separated	1 (6)	1 (4)	2 (5)	>.999
Divorced	1 (6)	1 (4)	2 (5)	>.999
Widowed	1 (6)	0 (0)	1 (2)	.439
Median income				.095
Range: \$70,000-100,000	15 (83)	13 (57)	27 (66)	
Race/ethnicity				
White	13 (72)	16 (70)	29 (71)	.852 <sup>a</sup>
Black	1 (6)	2 (9)	3 (7)	>.999
Asian	2 (11)	2 (9)	4 (10)	>.999
Other	1 (6)	0 (0)	1 (2)	.439
Missing	1 (6)	1 (4)	2 (5)	>.999
Primary degree				
Associate	7 (39)	6 (26)	13 (32)	.384 <sup>a</sup>
Diploma	0 (0)	3 (13)	3 (7)	.243
BSN	10 (56)	11 (48)	21 (51)	.622 <sup>a</sup>
Master's	1 (6)	1 (4)	2 (5)	>.999
Missing	0 (0)	3 (13)	3 (7)	.243

Note: *p* values (Fisher's exact used unless otherwise noted).

<sup>a</sup>*p* value calculated using two proportions.

their clients. The validity of the CES is established with reported Cronbach's  $\alpha = .84$  (Watson, 2009).

## Data Analysis

A comparison of demographics between groups was conducted (see Table 1). A Mann–Whitney analysis was utilized to detect any statistically significant difference in scores between the intervention and the control groups (between-group differences) for the POQA-R4 and the CES. Reported in the text of this article are changes between first (baseline) and last survey (30-40 days after the last education class; T3). Between-group analyses for additional time points (baseline to T2 and T2 to T3) of the POQA-R4 are noted in Table 2.

Changes in scores of the POQA-R4 and changes in scores of the CES were evaluated for both the intervention group and the control group to detect changes over time within the group assignment (within-group differences). Within-group differences

were also analyzed to detect changes in POQA-R4 subscales of Emotional Vitality, Emotional Stress, Organizational Stress, and Physical Stress. To detect within-group differences of POQA-R4 subscale scores, from the baseline to the last measure, a Wilcoxon rank sum test was used. The Wilcoxon rank sum test was also used to detect within-group differences for the CES.

## Findings

Fifty-eight individuals consented to be in this study; 17 individuals withdrew from participation. Forty-one nurses (*N* = 41), including one male (control group), completed the study; with 18 (44%) in the intervention group and 23 (56%) in the control group. Seven (*n* = 7) individuals crossed over from the control group (Cohort 1) to the intervention group (Cohort 2) and are included in the group numbers provided. Demographics were analyzed based on the original randomization group.

**Table 2.** Between-Group Differences POQA-R4 Distribution of Scores, Median (Range)

Variables	Baseline			Time 2			Time 3			Change Between Baseline and Time 3		
	Education	Control	<i>p</i>	Education	Control	<i>p</i>	Education	Control	<i>p</i>	Education	Control	<i>p</i>
Emotional Vitality	4.19 (1.86 to 6.71)	4.5 (1.93 to 6.43)	.85	5 (2.29 to 6.79)	4.93 (2.21 to 6.64)	.54	5.53 (3.07 to 6.86)	4.82 (2.21 to 6.64)	.18	0.64 (0 to 1.71)	0.29 (-0.93 to 2)	.02
Organizational Stress	3.89 (2.50 to 5.50)	3.78 (2.28 to 6.28)	>.99	3.69 (1.75 to 6.11)	3.5 (1.56 to 6.25)	.81	3.61 (1.89 to 5.38)	3.73 (1.61 to 6.33)	.66	-0.39 (-1.44 to 0.67)	0.07 (-1.89 to 1.39)	.29
Emotional Stress	2.03 (1.27 to 4.93)	2.4 (1.13 to 4.73)	.46	1.77 (1.27 to 4)	1.87 (1.2 to 4.133)	.55	1.57 (1.27 to 3.87)	1.93 (1 to 4.933)	.06	-0.37 (-1.73 to 0.47)	-0.4 (-2.13 to 0.6)	.35
Physical Stress	3.05 (1.63 to 4.40)	3.3 (1.70 to 5.40)	.55	2.65 (1.7 to 4.89)	2.89 (1.6 to 4.8)	.31	2.35 (1.4 to 6)	2.8 (1.8 to 5.78)	.1	-0.65 (-2.05 to 1.6)	-0.47 (-1.52 to 1.18)	.3

Note: *p* values calculated using Mann-Whitney. POQA-R4 = Personal and Organizational Quality Assessment-Revised 4 Scale.

**Table 3.** Within-Group Differences Baseline to Time 3 Education Group POQA-R4 Distribution of Scores, Median (Range)

Variables	Baseline	Time 2	Time 3	Changes Between baseline and Time 3	
				<i>Mdn</i> (range)	<i>p</i>
Emotional Vitality	4.19 (1.86 to 6.71)	5 (2.29 to 6.79)	5.527 (3.07 to 6.86)	0.64 (0 to 1.71)	<.001
Organizational Stress	3.89 (2.5 to 5.5)	3.694 (1.75 to 6.11)	3.61 (1.89 to 5.36)	-0.39 (-1.44 to 0.67)	.01
Emotional Stress	2.03 (1.27 to 4.93)	1.767 (1.27 to 4)	1.57 (1.27 to 3.87)	-0.37 (-1.73 to 0.47)	<.01
Physical Stress	3.05 (1.65 to 4.4)	2.65 (1.7 to 4.89)	2.35 (1.4 to 6)	-0.65 (-2.05 to 1.6)	.01

Note: *p* values calculated using Mann–Whitney. POQA-R4 = Personal and Organizational Quality Assessment–Revised 4 Scale.

**Table 4.** Within-Group Differences Baseline to Time 3 Control Group POQA-R4 Distribution of Scores, Median (Range)

Variables	Baseline	Time 2	Time 3	Changes Between Baseline and Time 3	
				<i>Mdn</i> (range)	<i>p</i>
Emotional Vitality	4.5 (1.93 to 6.43)	4.93 (2.21 to 6.64)	4.82 (2.21 to 6.64)	0.29 (-0.93 to 2)	0.22
Organizational Stress	3.78 (2.28 to 6.28)	3.5 (1.56 to 6.25)	3.73 (1.61 to 6.33)	0.07 (-1.89 to 1.39)	0.59
Emotional Stress	2.4 (1.13 to 4.73)	1.87 (1.2 to 4.13)	1.93 (1 to 4.93)	-0.4 (-2.13 to 0.6)	0.04
Physical Stress	3.3 (1.7 to 5.4)	2.89 (1.6 to 4.8)	2.8 (1.8 to 5.78)	-0.47 (-1.52 to 1.18)	0.11

Note: *p* values calculated using Mann–Whitney. POQA-R4 = Personal and Organizational Quality Assessment–Revised 4 Scale.

## Demographics

Most of the participants were married ( $n = 27$ , 66%) and had a bachelor's degree ( $n = 20$ , 49%). The most frequent age range was 51 to 60 ( $n = 15$ , 37%). Most nurses worked in acute care ( $n = 13$ , 32%), but the sample included representatives of mother–baby, cardiac, management and ambulatory care. The median income for both groups was \$80,000. The ethnicity of participants was almost identical in each group. Most participants identified as White (71%), four identified as Asian (two in each group), and three as Black. There was no difference in demographics between the groups.

## Personal and Organizational Quality (POQA-R4)

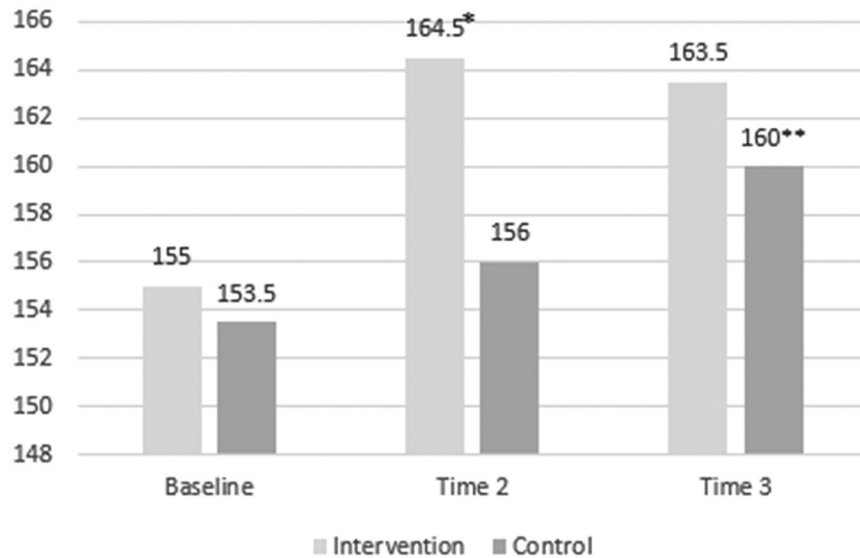
POQA-R4 scores between the intervention group and the control group did not differ at baseline. The overall scores for the POQA-R4 did not differ significantly between groups at any time point ( $p > .05$ ). However, both between-group and within-group differences were observed in subscale scores.

Between-group differences showed a statistically significant difference from baseline to T3, for Emotional Vitality. Cronbach's alpha for the POQA-R4 was .66; including only the positive subscale measures of Emotional Vitality, Emotional Buoyancy, and Emotional Contentment the Cronbach's alpha jumped to .930.

Within-group differences from baseline to last measure for the intervention group were statistically significant in all subscales: Emotional Vitality, Emotional Stress, Organizational Stress, and Physical Stress ( $p < .05$ ), showing consistent improvement from baseline to T3. See Table 3.

Within-group differences for the control group were noted to be statistically significantly different from baseline to T3 only for Emotional Stress. See Table 4.

*Emotional Vitality Scale.* In this study, the control group had a higher baseline value for Emotional Vitality ( $Mdn = 4.5$ , range = 1.93 to 6.43) versus the intervention group ( $Mdn = 4.9$ , range 1.86 to 6.71). There was no statistical difference between the groups at baseline for this variable.



**Figure 1.** Caring Efficacy Scale between groups

\* $p = .006$  value of Caring Efficacy Scale for intervention group from baseline to Time 2. \*\* $p = .025$  value of Caring Efficacy Scale for control group from Time 2 to Time 3.

Between-group median values from baseline to T3 showed a statistical difference (control group 0.286 to intervention group 0.643,  $p = .0234$ ). More improvement in Emotional Vitality was observed in the intervention group.

Within-group differences for Emotional Vitality were explored. Despite the initial higher value of Emotional Vitality for the control group, this study found a steady increase in Emotional Vitality over time for the intervention group. The within-group comparison of the baseline measure ( $Mdn = 4.187$ , range 1.857 to 6.714) to T3 ( $Mdn = 5.527$ , range 3.071 to 6.857) for the intervention group was significant ( $p < .001$ ).

The within-group difference for the control group from baseline ( $Mdn = 4.5$ , range 1.929 to 6.429) to T3 ( $Mdn = 4.821$ , range 2.214 to 6.643) was not statistically significant.

**Emotional Stress Scale.** The Emotional Stress scale was higher for the control group ( $Mdn = 2.4$ , range 1.133 to 4.733) than the intervention group ( $Mdn = 2.033$ , range 1.267 to 4.933) at baseline.

Between-group differences at T3 approached significance ( $p = .0568$ ). Comparing median differences from baseline values and T3 between the groups (intervention group difference  $-0.367$  to control group  $-0.4$ ) did not show statistical significance,  $p = .3501$ .

Within-group differences for Emotional Stress were interesting. Within-group differences in Emotional Stress decreased between baseline and the final measure (T3), for both groups. These within-group findings were statistically significant for both the intervention group ( $p < .01$ ) and the control group ( $p = .04$ ) when comparing differences from baseline to T3.

Within-group differences observed in the intervention group show improvement at the completion of the classes and continue through the last measure (30-40 days after the last class). The decrease in stress was statistically significant ( $p < .05$ ) at T3. Decreases in Emotional Stress scores were seen in both groups. Scores were consistently lower for the intervention group throughout the study.

**Organizational Stress Scale.** Between-group differences were not statistically significant at any time point for Organizational Stress. However, within-group differences were observed.

Within-group differences for Organizational Stress decreased at each time point for the intervention group. The difference from baseline ( $Mdn = 3.89$ , range 2.5 to 5.5) to final measure ( $Mdn = 3.61$ , range 1.89 to 5.36) for the intervention group was statistically significant ( $p = .012$ ).

An initial decrease was observed in the control group from baseline ( $Mdn = 3.778$ , range 2.278 to



**Table 5.** Caring Efficacy Scale Differences Within-Group and Between-Group Scores

Time	Education Group	Within-Group $p^a$	Control Group	Within-Group $p^a$	Between-Group $p^b$
Baseline to Time 1	9.5	.006	-1	.709	.012
Time 1 to Time 2	1.5	.423	4	.025	.271
Baseline to Time 2	8.5	.006	5	.118	.065

<sup>a</sup> $p$  value calculated using Wilcoxon signed-rank. <sup>b</sup> $p$  value calculated using Mann-Whitney.

6.278) to T2 ( $Mdn = 3.5$ , range 1.556 to 6.25), but the decrease was neither sustained at T3 nor significant for the control group.

**Physical Stress Scale.** Physical stress decreased in both the intervention group and the control group at all the time points. Between-group differences for physical stress were not significant at any time point.

Within-group differences for Physical Stress subscale showed decreases in the intervention group to a greater degree than decreases observed in the control group, from baseline to T3. When comparing the baseline measure ( $Mdn = 3.05$ , range 1.65 to 4.4) to T3 ( $Mdn = 2.35$ , range 1.4 to 6) for the intervention group, the difference was statistically different ( $p = .01$ ). Within-group differences from baseline to T3 were not statistically significant for the control group.

### Caring Efficacy Scale

There was no significant difference in CES scores between intervention group and control group at baseline, indicating similar caring efficacy for both groups.

Between-group differences in CES were observed between baseline and T2 ( $p = .012$ ) and approached significance when comparing differences from baseline to T3,  $p = .065$ .

Within-group differences for the intervention group were observed between the baseline ( $Mdn = 155$ ) and final measure ( $Mdn = 163.5$ ); the difference was statistically significant ( $p = .006$ ).

Within-group differences for the control group did not statistically differ from baseline to T3 (see Figure 1 and Table 5). The overall Cronbach's alpha for the CES scores in this study was .943.

### JSJ Self-Help Frequency of Practice (Intervention Group)

Participants were asked to practice JSJ Self-Help 20 minutes per day and to self-report the frequency

of practice. Most ( $n = 15$ , 88%) practiced at least three times per week.

## Discussion

The intent of this study was to determine the effectiveness of JSJ Self-Help as a stress management modality for nurses. Based on pre and post surveys, findings show statistically significant reductions in emotional, organizational, and physical stress, with an increase in emotional vitality and caring efficacy. Differences between the intervention group and the control group were observed for Emotional Vitality. The findings indicate that nurses having JSJ Self-Help education had increased reserve to handle emotional situations.

The improvement in the control group for caring efficacy was an unanticipated finding. The reason for this increase is not known. It is possible that reading the questions on the surveys raised awareness of the need for healthy habits. The study took place at an ANCC (American Nurses Credentialing Center) Magnet®-designated facility that supports a healing culture and healthy workplace environment. It is possible that participants were influenced by the core healthy culture; additionally, participants may have attended non-JSJ activities aimed at decreasing stress. Nevertheless, sustained decreases in stress and support of emotional vitality were observed in this study only in those who were educated in JSJ Self-Help.

Study findings were congruent with those reported by Lamke et al. (2014) in that nurses experienced an increase in calmness, outlook, and communication and a reduction in stress symptoms, anger, and time pressure after JSJ Self-Help classes. The increase in the CES was also observed by Brathovde (2006) for nurses who practiced self-care. Although conducted over 10 years ago, this pilot study ( $N = 10$ ) showed an increase in caring efficacy after Reiki, a light touch energy modality that was taught to nurses as a self-healing intervention. In a

more recent pilot study ( $N = 15$ ) nurses were randomized to a psychomotor relaxation program consisting of two 20-minute sessions for 8 weeks. Those participating in the relaxation classes reported more relaxation and less depression. In this study, salivary cortisol was measured and supported a significant decrease in physical stress (Veiga et al., 2019). These three studies support interventions to decrease stress for nurses and other health care professionals.

The current study has importance because self-care, self-reflection, and stress management are essential to combat the demands of the nursing profession. Practicing self-care and utilizing techniques to manage stress contribute to the nurses' ability to create a therapeutic presence and a healing environment for the patient. Self-Help also facilitates a healthy work-life balance (Cino, 2016). Although self-care can help professional and student nurses cope with stressors, both groups often have difficulty finding self-care activities that are easily incorporated into their daily lives (Blum, 2014). JSJ offers a simple and effective modality to help reduce stress and increase caring efficacy. JSJ Self-Help can be done with ease at work or at home and requires no equipment. By offering JSJ Self-Help classes for nurses, a workplace can create a culture of caring and resilience. As more nursing programs focus on self-care, JSJ Self-Help can be introduced as a proactive approach of managing the stress of school and beginning careers. JSJ Self-Help is an intervention to care for oneself and to model healthy behavior for their family, colleagues, and patients.

Of interest, this study was completed prior to the COVID-19 pandemic in 2020. This was a blinded study, and therefore it was not possible to know if the nurses in the intervention group practiced JSJ Self-Help during this stressful time. JSJ Self-Help video-recorded sessions were made available to employees on the organization's social media site. The sessions were viewed approximately 8,500 times by health care workers from March 30 to April 23, 2020 (the height of the crisis for our institution). For those employees who viewed the sessions, their comments on social media were overwhelmingly positive.

### Limitations

Limitations of this study include a small sample size and the self-selection of participants. It is not known how those who chose to participate differed

from those who did not. Participants who volunteered may have had an established foundation for self-care or may have been more receptive to JSJ Self-Help and its daily practice; however, randomization resulted in the comparison of two similar groups within the overall sample.

This study controlled for JSJ Self-Help activities but did not control for other activities included in workplace improvements aimed at sustaining a culture of healing. Such initiatives may have had an impact on outcomes; however, it is likely that any impact would have been experienced equally by all participants, regardless of group assignment.

While participants in the intervention group agreed to practice 20 minutes daily, self-reported frequencies indicated that most participants reported practicing three times per week, or more. The planned reporting method for self-adherence could be modified in the future, perhaps using a daily practice log (frequency and duration) in conjunction with a daily reminder on their phone or personal device.

The step wise recruitment of two cohorts is a relative weakness of the study. The modified crossover design resulted in seven participants taking surveys as part of both the control group and the intervention group. An inherent weakness of a crossover design is carryover effect, meaning the exposure to surveys may have affected the results of these seven participants (Polit & Beck, 2018). Design limitations may be addressed in future studies by innovative recruitment measures and eliminating the modified crossover design.

### Implications for Future Research

Future studies with a larger, more diverse population would be beneficial. Moreover, expanding outreach to all health care employees in multiple settings will strengthen generalizability. Continuing future studies for a longer period would also help identify potential long-term health benefits. Explorations of frequency and duration of JSJ Self-Help and their relationship to outcomes are areas for further research. Additionally, variations in educational models may hold promise for innovative practical and efficient methods to reduce stress in individuals. Video JSJ Self-Help sessions were initiated during the COVID-19 pandemic as a method of teaching nurses at times convenient for them. The value and convenience of video sessions provide an opportunity for future research.

## Conclusion

This randomized controlled study provides Level 1 evidence supporting JSJ Self-Help as an intervention to reduce stress and increase caring efficacy reported by nurses. Findings from this study add to the body of knowledge that supports the efficacy of JSJ Self-Help in managing the physical and emotional symptoms of stress both occupationally and in their personal lives. Importantly, JSJ Self-Help can be performed by nurses at all levels and provides a feasible and worthwhile mechanism to combat stress and enhance workplace environment.

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