

THE EFFECTS OF A GUIDED RELAXATION EXERCISE
ON PERCEIVED STRESS AND PHYSIOLOGICAL STRESS INDICATORS
IN MEDICAL-SURGICAL NURSES

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Abstract

Nursing is known to be a high-stress profession, and as such, nurses are susceptible to employee absenteeism, reduced job satisfaction, and job burnout. Furthermore, the ability for such workers to think clearly and be able to demonstrate empathy is a key factor in delivering quality patient care. A number of stress management programs, such as hypnosis, meditation, and mindfulness-based stress reduction, have been introduced into workplace settings with the intent to reduce the effects of stress on employees. This study implemented a short relaxation exercise to determine whether a brief intervention, compared to a long intervention, would affect perceived stress and physiological stress indicators in nurses. A total of 10 nurses were recruited, 9 of which were female and 1 of which was male. Subjects participated in a 2-week study consisting of 4 total sessions. The first week involved collecting baseline data, such as heart rate and blood pressure, in addition to subjects filling out surveys that measured stress levels. The second week consisted of the behavioral intervention and involved listening to two short relaxation scripts. Physiological and self-report measures were collected pre- and post-intervention. Results indicated a significant decline in systolic blood pressure from pre-intervention to post-intervention. Furthermore, results revealed a decrease in diastolic blood pressure, heart rate, perceived stress, and negative affect score. There was also an increase in positive affect score from pre-intervention to post-intervention. Various factors, such as limited sample size and varied nurse workload, may account for the lack of significant findings. These results support previous research findings and support the hypothesis that a stress management intervention helps reduce

physiological stress factors as well as reduce perceived stress. High-stress occupations, such as nursing, should implement stress management programs

Nursing is known to be a high-stress profession. Nursing-related occupational stress has been linked to employee absenteeism (Stein, 2001), reduced job performance (Lancero & Gerber, 1995), reduced job satisfaction (Oman, Hedberg, & Thoresen, 2006), burnout (Ruysschaert, 2009), and decreased patient satisfaction (Rutledge, Stucky, Dollarhide, Shively, Jain, Wolfson, & Dresselhaus, 2009). Professionals in such high-stress and demanding occupations are especially susceptible to experiencing such symptoms, such as those mentioned previously, from stress (Cohen-Katz, Wiley, Capuano, Baker, Deitrick, & Shapiro, 2005). Nursing is an occupation in which the ability to think clearly and empathize with patients is a key aspect in the delivery of quality care. Such clear thinking and empathy are also key for preventing medical errors. Caregivers who experience chronic stress have been known to describe themselves as having compassion fatigue, a term that refers to a decrease in empathy towards social problems (Austin, Goble, Leier, & Byrne, 2009). Thus, to reduce the occurrence of compassion fatigue, nurse burnout, and job turnover, numerous interventions have been introduced into a variety of workplace settings with the goal of reducing worker stress.

A number of interventions aimed at reducing the effects of stress in the workplace have been studied. In general, stress management programs introduced into work settings have been found to reduce physiological symptoms, such as hypertension, and increase job satisfaction, as well as job performance (Stein, 2001). One studied form of intervention aimed at reducing stress in the nursing population is self-hypnosis. Ruysschaert (2009) proposes that techniques such as self-hypnosis should be implemented in fields where caregivers are exposed to high levels of stress, and therefore are more susceptible to burnout and compassion fatigue.

Meditation is another form of behavioral intervention that is used in the hopes of reducing stress and burnout in professionals exposed to high levels of stress. This technique aims to help an individual produce a relaxed body and calm mind. Meditation has been found to beneficially influence an individual's mood, heart rate, anxiety levels, and blood pressure (Stein, 2001). In a study conducted by Raingruber and Robinson (2007), nurses had the choice of partaking in three types of self-care interventions: 1) Reiki healing sessions, 2) yoga, or 3) meditation. Each participant was given a journal to describe personal feelings and changes in work practices as a result of the behavioral intervention. Many participants reported increasing their ability to focus on patient needs, as well as gaining awareness of enhanced problem solving abilities (Raingruber & Robinson, 2007). One limitation that Raingruber and Robinson (2007) discuss is the lack of physiological or standardized stress measures in their study. Using physiological stress indicators, such as blood pressure and heart rate, would allow for more quantifiable data, rather than relying solely upon self-reported data.

Similar to meditation is an approach called mindfulness-based stress reduction (MBSR). It is believed that mindfulness meditation may provide a unique way to foster empathy and stress coping. This technique encourages suspending judgment, focusing on the here and now, attending to and listening to whatever emotions or thoughts arise, and remaining focused and relaxed (Bleddoe & Murphy, 2004). In Bleddoe and Murphy's (2004) study, the effects of an 8-week MBSR course on stress and empathy were examined in nursing students. Participants were asked to listen to guided meditation audiotapes at home and to complete journal assignments. After the 8-week course was finished, 14 of 16 participants reported that they felt more competent to handle stressful

situations. Many participants reported that as a result of the course they learned to value personal time more, returned to focusing on the breathing during stressful times, and felt more patient.

Although numerous studies have examined the effects of behavioral interventions, they have frequently utilized long-term interventions rather than brief interventions. In one study, participants in an eight-week meditation class showed a significant decrease in their perceived stress compared to the control group, as well as an increase in job satisfaction (Oman et al., 2006). Because of the fast-paced nature of a hospital environment, a briefer intervention would be ideal for nurses. Such an intervention would allow them to avoid the deleterious effects of stress while having more time for job responsibilities. For that reason, this particular study will allow nurses to participate in a short behavioral intervention to help teach relaxation skills in the workplace.

Many nurses find themselves overwhelmed and overburdened by stress and their patient workload. Nurses can be so intent on taking care of the patients that their own personal needs are ignored or unfulfilled. Although it may at first seem like a selfless endeavor for a nurse to sacrifice his or her self-care for the sake of a patient, a sustained delay in the fulfillment of personal needs will inevitably lead to worker dissatisfaction and heightened stress. The more that nurses attend to themselves, the more likely they are to be able to convey spiritual support to others (Felgen, 2004). Furthermore, the importance of self-care becomes evident in attaining a balance in mind, body, and spirit. Finding a balance among these three elements is necessary to provide quality care to each patient and family.

Historically, spirituality has played a central role in caregiving in the nursing profession (Nightingale, 1860/1969). Despite spirituality's central role in caregiving, the stress management literature suggests that interventions and strategies for reducing stress among nurses have rarely included such principles (Richards, Oman, Hedberg, Thoresen, & Bowden, 2006). The Seton Healthcare Family is a non-profit organization that provides healthcare services to Central Texas. The hospital system incorporates spiritual and reflective activities into the workplace for employees and staff, but there has yet to be any long-standing class for stress management. A stress management technique that integrates spiritual practices would be ideal for such a healthcare setting.

Aims and Hypotheses

The purposes of this study were to: (1) assess the effectiveness of a short guided meditation on reducing overall stress among nurses; (2) determine the feasibility of a brief-two week intervention in a fast-paced setting.

These aims were met through the use of a brief, guided relaxation exercise. The study consisted of four total sessions over the course of two weeks. Week one data collected baseline measurements for blood pressure, heart rate, perceived stress, and positive and negative affect. During week two, physiological and self-report measures were collected prior to participants listening to two recorded guided meditations. Following completion of the scripts, each participant had their physiological and self-report measurements collected again. Pre-intervention data was compared to post-intervention data to determine if physiological or perceived stress changed as a result of the intervention. In addition, week one (baseline) data was compared to the post-intervention data. This was done because of concerns that the pre-intervention data could

have been biased by changes in physiological and self-report measures in anticipation of the relaxation exercise.

The hypotheses were: (1) there will be a significant decrease in systolic blood pressure measurements from pre-intervention to post-intervention; (2) there will be a significant decrease in diastolic blood pressure measurements from pre-intervention to post-intervention; (3) there will be a significant decrease in heart rate from pre-intervention to post-intervention; (4) there will be a significant decrease in perceived stress values on the Perceived Stress Scale from pre-intervention to post-intervention; (5) there will be a significant decrease on the negative construct scores on the PANAS from pre-intervention to post-intervention; and (6) there will be a significant increase on the positive construct score on the PANAS from pre-intervention to post-intervention.

Methods

Participants

All participants were registered nurses recruited from the medical-surgical unit at Seton Medical Center Hays in Kyle, Texas. A total of 10 participants were recruited, of which 9 were female and 1 of which was male. The sample of participants was limited to nurses who worked full time on the medical-surgical unit at the hospital and were between 25 and 55 years of age. Flyers were posted in the unit break room to recruit participants. Those who expressed an interest in the study were then emailed with further information regarding the study. Approval to conduct this study was obtained by both the Texas State Institutional Review Board and the Seton Institutional Review Board.

Materials

The materials used in this study were two self-report scales. The Perceived Stress Scale (PSS) is a psychological instrument used to measure the degree to which situations in one's life are assessed as stressful, uncontrollable, or unpredictable. The PSS consists of 10 items that are each rated on a five-point Likert scale, ranging from 0 (*never*) to 4 (*very often*). Each rating is indicative of how often a participant has felt or thought a certain way within the past month. In a study conducted by Roberti, Harrington, and Storch (2006), the PSS-10 was administered to a group of around 300 undergraduates to determine the internal consistency, convergent reliability, and divergent reliability. Cronbach's α was calculated to determine internal consistency. For the PSS-10 Total Score Cronbach's α was 0.89; for the Perceived Helplessness factors (6 of 10 items) it was 0.85; and for Perceived Self-Efficacy (4 of 10 items) it was 0.82. It was also found that there was convergent validity among the PSS-10 and scales that measured anxiety and depression, as well as divergent validity among the PSS-10 and scales that measured conceptually distinct concepts. An example of a question is: "In the last month, how often have you found that you could not cope with all the things that you had to do?"

The second survey used was the Positive and Negative Affect Schedule (PANAS), a 20-item self-report scale consisting of 10 positive affect (PA) constructs and 10 negative affect (NA) constructs developed by Cohen, Kamarck, and Memelstein (1983). The PANAS was administered to a sample of over 1,000 people and evaluated using confirmatory factor analysis. Results indicated that the PA constructs were negatively correlated with depression, anxiety, and stress, whereas the NA constructs were positively correlated with depression, anxiety, and stress. Furthermore, the internal consistencies of the PANAS PA and NA scales were calculated using Cronbach's α .

Cronbach's α for the PA scale was 0.89 (95% CI = 0.88-0.90), and 0.85 (95% CI = 0.84-0.87) for the NA scale (Crawford & Henry, 2004). Examples of positive states used on the scale are: interested, strong, and determined. Examples of negative states used on the scale are: distressed, irritable, and nervous. Each participant was asked to rate each of the 20 constructs on a scale of 1 to 5 (1= Very slightly or Not at all; 5=Extremely). The PANAS measures how a person is feeling in the present moment.

The measurements and interventions took place in the Tranquility Room, a small room located down the hall from the nurses' station. The room is intended to provide a quiet place to escape from the hectic work area where nurses and other staff can spend a few minutes alone. There is a recliner chair located inside the room that participants sat in while listening to the relaxation scripts.

All physiological measurements were collected using an automatic blood pressure machine manufactured by BioMed (clinical engineering ID: 745659). Blood pressure cuffs were fitted to each participant's arm.

Design

This study used a within-subject research design to assess changes in perceived stress and physiological stress indicators. There was no intervention introduced in the baseline condition (A), which consisted of the first two sessions. In the next and final two sessions, participants received the relaxation intervention (B). This experimental design was chosen to allow for the observance of behavior before the intervention, during the intervention, and following the intervention. At each session, self-report forms were completed and physiological measurements were collected.

Procedure

Prior to beginning the research study, all participants were informed of their rights and the study procedures, risks, and benefits. Informed consent was then obtained before beginning the first session. The time commitment for each participant involved two weekly sessions for three consecutive weeks. The first week involved collecting baseline data, including self-report and physiological measures. The two self-report scales used throughout this study were the Perceived Stress Scale (PSS) and the Positive and Negative Affect Schedule (PANAS). In addition to completing the two self-report scales, participants had their blood pressure and heart rate recorded following completion of the study. These measurements occurred between 11:00 and 13:00 during the workweek to control for diurnal variation in stress-related hormones.

During the second week, participants were administered the PSS and the PANAS prior to having their blood pressure and heart rate measured and recorded. Upon completion of the surveys, participants listened to two four and a half minute relaxation scripts on a recorder. The relaxation sessions took place in the Tranquility Room, which is a quiet room where staff members are encouraged to spend time to take a break from the hectic workplace. Participants were asked to find a comfortable position in the recliner chair before beginning the relaxation exercises. After the participant had listened to both relaxation scripts, they had their blood pressure and heart rate recorded for a second time. They also completed both the PSS and the PANAS after the intervention. Participants were then free to resume work.

Results

Physiological Data: Pre-Intervention to Post-Intervention

A paired-samples t test was calculated to compare the mean pre-intervention heart rate score to the post-intervention heart rate score. The mean for the pre-intervention heart rate score was 72.35 ($sd = 7.12$) and the mean for the post-intervention was 71.45 ($sd = 6.7$). No significant difference from pre-intervention to post-intervention was found ($t(19) = .74, p > .05$), thereby not supporting hypothesis 3.

To determine if there was a decrease in systolic blood pressure from pre-intervention to post-intervention, a paired-samples t test was conducted. The mean pre-intervention systolic blood pressure score was 115.80 ($sd = 9.02$) and the mean for the post-intervention was 113.15 ($sd = 7.87$). A significant decrease from pre-intervention to post-intervention was found ($t(19) = 2.76, p < .05$). These results support hypothesis 1.

Just as for systolic blood pressure, to determine if there was a decrease in diastolic blood pressure from pre-intervention to post-intervention, an additional paired-samples t test was run. The mean score for the pre-intervention diastolic blood pressure was 71.10 ($sd = 12.07$) while the mean post-intervention score was 68.80 ($sd = 9.33$). Although the mean diastolic blood pressure score decreased from pre-intervention to post-intervention, no significant results were found ($t(19) = .98, p > .05$).

| | Pre-Intervention Mean Score | Post-Intervention Mean Score |
|--------------------------|-----------------------------|------------------------------|
| Systolic Blood Pressure | 115.80 | 113.15* |
| Diastolic Blood Pressure | 71.10 | 68.80 |
| Heart Rate | 72.35 | 71.45 |

Figure 1. Physiological data pre-intervention mean scores compared to post-intervention mean scores.

*Indicates finding is significant at $p < .05$ level

Self-Report Data: Pre-Intervention to Post-Intervention

A series of paired-samples t tests were run for the self-report data to compare pre-intervention scores to post-intervention scores to determine if there were any significant decreases. For the PSS scale, the mean pre-intervention score was 21.05 ($sd = 5.22$), and the mean for post-intervention was 20.55 ($sd = 6.07$). Despite the decrease in mean score from pre-intervention to post-intervention, no significant decrease was found ($t(19) = .827, p > .05$).

In comparing the mean scores for the PANAS positive constructs from pre-intervention to post-intervention, the mean pre-intervention score was 31.70 ($sd = 9.23$) while the mean post-intervention score was 32.70 ($sd = 10.68$). Although the mean score increased after the intervention, there were no significant results found ($t(19) = -1.51, p > .05$). The finding did not support hypothesis (6).

The mean scores for the PANAS negative constructs were hypothesized to decrease from pre-intervention to post-intervention. The mean pre-intervention score was 11.75 ($sd = 2.38$) and the mean post-intervention score was 11.10 ($sd = 2.38$). Once again, although the scores changed in the predicted direction, decreasing in this particular case, no significant results were found ($t(19) = 1.86, p > .05$).

| | Pre-Intervention Mean Score | Post-Intervention Mean Score |
|--------------------------|-----------------------------|------------------------------|
| Perceived Stress Scale | 21.05 | 20.55 |
| PANAS Negative Construct | 11.75 | 11.10 |
| PANAS Positive Construct | 31.70 | 32.70 |

Figure 2. Self-report data pre-intervention mean scores compared to post-intervention mean scores.

Physiological Data: Week One to Post-Intervention

Data collected from week one was compared to data collected post-intervention to determine if participants in the pre-intervention measurements had already begun to relax in anticipation of the intervention. The week one data were not followed by a relaxation exercise; instead, participants immediately returned to work.

To determine if there were any differences in the mean physiological variable scores from the first week's baseline data compared to the post-intervention data, another series of paired-samples *t* tests were run. The first test conducted compared the mean scores for heart rate, finding that the mean score for week one (sessions 1 and 2) was 73.45 (*sd* = 5.50) and the mean score for the two post-intervention sessions was 71.45 (*sd* = 6.71). No significant difference from week one to post-intervention was found ($t(19) = 1.17, p > .05$).

The mean scores for systolic blood pressure for week one and post-intervention were calculated. The mean score for week one was 115.30 (*sd* = 11.98) and the mean score for post-intervention was 113.15 (*sd* = 7.87). No significant difference was found between mean scores for systolic blood pressure from week one compared to post-intervention ($t(19) = 1.29, p > .05$).

Similarly, the mean scores for diastolic blood pressure for week one and post-intervention were also calculated. The mean score during week one was 70.90 ($sd = 12.87$) and the mean score for post-intervention was 68.80 ($sd = 7.87$). No significant difference was found between mean scores for diastolic blood pressure from week one compared to post-intervention ($t(19) = 1.10, p > .05$).

Self-Report Data: Week One to Post-Intervention

To determine whether or not the two scores from week one and post-intervention were significantly different from each other for self-report data, a series of paired-samples t tests were conducted. The first test compared the mean scores on the PSS scale for week one and post-intervention. For week one, the mean score was 23.15 ($sd = 5.05$) and for post-intervention, the mean score was 20.55 ($sd = 6.07$). There was no significant difference in the mean scores from week one compared to post-intervention ($t(19) = 3.16, p > .05$).

For the positive constructs on the PANAS, the mean score for week one was 30.45 ($sd = 7.34$), and the mean score for post-intervention was 32.70 ($sd = 10.68$). No significant difference was found between the mean scores for week one and the mean scores for post-intervention sessions ($t(19) = -1.56, p > .05$).

Similarly, results for the negative constructs on the PANAS revealed that the mean score for week one was 12.30 ($sd = 2.72$), and the mean score for post-intervention was 11.10 ($sd = 2.38$). There was no significant difference in the mean scores for the negative constructs on the PANAS from week one compared to post-intervention ($t(19) = 2.00, p > .05$).

Discussion

The results indicate that physiological stress indicators and perceived stress decreased as a result of the guided relaxation exercises. Although many of the variables did not decrease at a significant level, the direction in which the variables changed were consistently in accordance with the hypotheses. As results indicated, hypothesis (1), which stated that systolic blood pressure would significantly decrease from pre-intervention to post-intervention, was supported by the findings. Although diastolic blood pressure did not significantly decrease from pre-intervention to post-intervention, thereby not supporting hypothesis (2), the mean score decreased. Furthermore, although heart rate did decrease from pre-intervention to post-intervention, it did not decrease significantly enough to support hypothesis (3).

Various factors may account for the lack of significant findings for physiological data. When returning after the participant had listened to the guided relaxation scripts, some participants remained still in the recliner whereas other participants would be adjusting their position and moving about. Such movement may have caused an increase in heart rate. A suggestion for future studies would be to utilize a blood pressure machine that is capable of collecting blood pressure and heart rate after a specific interval of time. If physiological variables had been collected just prior to the end of the guided meditations, as opposed to afterwards, the data collected may have been different.

Results for the self-report scales indicated that both perceived stress and the mean score for the negative construct scale on the PANAS decreased from pre- to post-intervention, but did not decrease significantly enough to support the hypotheses. Similarly, the mean score for the positive construct scale on the PANAS increased as

expected, but did not increase enough to produce significant findings, thereby not supporting hypothesis (6).

Future studies should use a scale that measures stress in the present moment rather than asking about perceived stress over the past month, as did the PSS version used in this study. A more accurate report of stress felt in the moment before listening to the guided relaxations as well as a more accurate report following completion of the scripts might have revealed a greater discrepancy between perceived stresses.

Future studies should also work with participants to schedule consistent weekly sessions. It was difficult for nurses to make time to participate in the study, especially during the sessions that involved more time to listen to the relaxation scripts. Because the data needed to be collected between 11:00 and 13:00, it was especially hard for nurses to make time due to medication administration deadlines as well as lunch breaks. Making appointment times for each participant during a day they are scheduled to work may help with collecting data in a timely manner.

Limitations

The results of this study are limited by a small, self-selected sample from a single hospital. The small sample was not representative of the population as a whole, and furthermore, with such few data points to analyze, the occurrence of an outlier could have skewed the results.

Furthermore, schedule changes and unpredictable high patient workloads made it hard for the nurses to complete the intervention as scheduled. The delay in collecting full data sets for each participant could mean the data is not completely comparable.

Another limitation is the lack of consistency in collecting blood pressure measurements. Some of the participants would readjust their posture or would begin talking before the physiological measurements were measured, thereby possibly affecting their blood pressure and heart rate. Because physiological measurements were collected anywhere from one to two minutes after the participant had completed listening to the relaxation scripts, there is a possibility the data collected is not representative of the participant's actual physiological state immediately following completion of the tapes. A final limitation would be the use of a less sensitive self-report measure for stress. The PSS-10 consists of questions that relate to the "past month" rather than pertaining to stressful experiences or feelings experienced in the present moment. The use of a more sensitive measurement might reveal more subtle changes in perceived stress from pre-intervention to post-intervention.

Conclusion

This study examined the effects of a reproducible, feasible, low-cost intervention in reducing psychological stress as well as physiological stress indicators. The findings indicate that the guided meditation intervention decreased physiological variables, in this case blood pressure and heart rate, as well as decreasing perceived stress and the negative affect constructs. The intervention also resulted in an increase in positive affect constructs. Although systolic blood pressure was the only variable that changed at a significant level, the remaining variables changed in the predicted direction, but did not produce significant results.

Previous literature has examined similar stress management techniques in a variety of populations from college students to nursing students to registered nurses. One such

study developed and evaluated a stress management program based on the arousal-attribution stress model and found that nursing students who were randomly assigned to the experimental group reported significantly lower anxiety and depression than the control group (Johansson, 1991). The focus on the previously mentioned populations is justified by the high-levels of stress they are constantly exposed to. Implementing stress management techniques into university programs, especially those aimed at serving the sick and needy, is especially important. Burnout in such high-stress occupations leads to high job turnover rates and creates needless financial expenditures in hiring and training new employees. If students going into such professions were taught early in their careers how to effectively manage stress, cultivate empathy, display compassion, and take the appropriate time needed for the self, job stress and worker burnout would decrease. Future studies should examine the effects between programs that incorporate a stress management program into their curriculum versus programs that do not have such a technique. Determining the long-term effects of effectively managing stress in high-stress occupations not only benefits the caregivers, but also provides more opportunities to deliver quality care to those in need.

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Appendix

Guided Meditation: Releasing Stress

Find a position for your body in which you feel deeply relaxed and at ease.
Let your eyes gently close and for a few moments just focus on your breathing, noticing the beginning of each breath and the end of each breath.
Follow each out-breath to its very end, sensing it dissolving into space.
Let yourself rest in that momentary pause between the end of one breath and the beginning of another.
Expand your attention and listen to what is happening in your body and mind in that moment.
Notice how many of your thoughts are preoccupied with events, people, meetings, and experiences that are not actually present in that moment. Sense this without judgment or resistance and see whether it is possible for you to gently release those thoughts and return to an awareness of breathing.
Notice the waves of agitation, tension, or anxiety that arise with the thoughts of the past and future and how they may be impacting your body.
Come back once more to an awareness of your breathing.
Resting in calmness and ease, consciously invite into your mind an event, person, or experience that you have been preoccupied with or obsessing about.
Surround that thought with a mindful attention. Look at it directly. Can you see it as just a thought, an event in the mind?
Sense how that event in your mind is co-existing in this moment with countless other events- sounds, sensations in your body- and how they are all arising and passing together.
Move your attention between the thought, the sounds, and the bodily sensations that are present in this moment.
Notice how they all appear, last for a time, and then begin to fade or turn into something else.
Sense the natural rhythm of this arising and passing.
Notice how when any of these events are surrounded by aversion, agitation, or resistance, their lifespan is extended. When the surrounding reactions are released, the events find their place again in the natural rhythm of arising and passing.
Attend mindfully not only to the events that appear in your mind and body, but also to those subtle pauses and places of stillness between events.
Just as you are able to notice the momentary pause between an out-breath and the next in-breath, sense what is present after the fading away of a sound, a thought, or a bodily sensation.
Allow yourself to rest in the pauses and sense the possibility of resting in all the events that arise in your mind and body.
When you are ready, let your eyes open and move out of the posture.

Guided Meditation: Mindfulness of Breathing

Find a posture that is as relaxed and comfortable as possible.

Gently close your eyes.

From the top of your head to the tips of your toes, gently and systematically move your attention down through the whole of your body.

As you do so, consciously relax any part of your body that is registering tension or agitation. Soften any knots of tightness that you become aware of. Pay particular attention to your face, shoulders, and hands, allowing them to soften and relax.

Let your hands rest on your legs or rest together lightly. Focus your attention for a few moments on the palms of your hands, being aware of whatever sensations are present.

Let your body relax into a sense of ease, consciously being still in your posture.

Gently bring your attention to rest within your breathing. Be aware of the whole movement of your breath from its beginning to its ending. Be aware of the expanding and relaxing of your chest and abdomen with each breath.

Now make your breath slightly deeper and fuller, sensing the movement of the in-breath as it moves into your abdomen. Don't exaggerate the movement of your breath too much, just deepen it slightly.

Bring your attention to the movement of your out-breath. Follow your outgoing breath to its very end, sensing when it has fully left your body.

With each breath you take, pay particular attention to the out-breath, to the release of your breath and your body relaxing. Sense yourself breathing out tension and agitation.

When your mind is agitated, thoughts will clamor for your attention. Each time your attention is drawn into the thoughts or images that appear, just notice them, not pushing them away but also not becoming lost within them. Give them the barest of attention, acknowledging them but knowing that this is the time for cultivating stillness and calmness.

Gently bring your attention back to be fully aware of your next out-breath. Breathe out the agitation.

You may notice that the pressing thought patterns have an impact on your body, making it feel restless. If this happens, just consciously recommit yourself to being still and relaxed within your body.

Continue focusing upon your breathing, keeping it just slightly fuller and deeper than it would normally be.

Let yourself be fully present within each out-breath, staying with it until the beginning of the next in-breath.

Notice the slightly pause between the ending of one out-breath and the beginning of the next in-breath. Let yourself rest calmly within that pause.

Sense the beginning of the next breath and your body's response.

When you are ready, open your eyes and come out of the posture.

INSTRUCTIONS:

The questions in this scale ask you about your feelings and thoughts during **THE LAST MONTH**. In each case, please indicate your response by placing an "X" over the circle representing **HOW OFTEN** you felt or thought a certain way.

| | Never | Almost Never | Sometimes | Fairly Often | Very Often |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1 | 2 | 3 | 4 | 5 |
| 1. In the last month, how often have you been upset because of something that happened unexpectedly? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. In the last month, how often have you felt that you were unable to control the important things in your life? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. In the last month, how often have you felt nervous and "stressed"? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. In the last month, how often have you felt confident about your ability to handle your personal problems? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. In the last month, how often have you felt that things were going your way? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. In the last month, how often have you found that you could not cope with all the things that you had to do? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. In the last month, how often have you been able to control irritations in your life? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. In the last month, how often have you felt that you were on top of things? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9. In the last month, how often have you been angered because of things that were outside your control? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers:

| 1 | 2 | 3 | 4 | 5 |
|-----------------------------|----------|------------|-------------|-----------|
| Very Slightly or Not at All | A Little | Moderately | Quite a Bit | Extremely |

_____ interested

_____ irritable

_____ distressed

_____ alert

_____ excited

_____ ashamed

_____ upset

_____ inspired

_____ strong

_____ nervous

_____ guilty

_____ determined

_____ scared

_____ attentive

_____ hostile

_____ jittery

_____ enthusiastic

_____ active

_____ proud

_____ afraid

to be completed by study staff

_____ PA

_____ NA