2011

The Effects of Mindful Yoga Practice on Psychological Well-Being Among College Students

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THE EFFECTS OF MINDFUL YOGA PRACTICE ON PSYCHOLOGICAL WELL-BEING
AMONG COLLEGE STUDENTS

BY
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A Specialist Thesis submitted to the
Department of Educational Psychology and Learning Systems
in partial fulfillment of the
requirements for
Mental Health Counseling
MS/EdS Degree.
Abstract

This study investigated the effects of Yoga with or without mindfulness as a mental health and wellness intervention. College students (N = 79; 5 Male, 74 Female) were randomly assigned to one of three groups: yoga with an emphasis on mindfulness (Y-EM) (N = 26), yoga with no emphasis on mindfulness (Y) (N = 28), or a control group (N = 25). It was hypothesized that both yoga groups would be superior to a control group in improving psychological health, and that the mindfulness yoga group (Y-EM) would be the most effective. After participation in four weekly, 45 minute yoga sessions, an ANCOVA on posttest scores measuring aspects of psychological well-being showed statistically significant differences and large effect sizes between the intervention group(s) and the control group on measures of positive affect, mental health, relaxation, and mindfulness. The overall results provided partial support for the hypotheses, but high attrition rates and sample size limitations precluded more definitive conclusions.
The Effects of Mindful Yoga Practice on Psychological Well-being among College students.

As the cost of health care increases, the use of non-traditional complementary alternative treatments, also known as complementary alternative medicine or therapeutic recreation, has become more prevalent (Sareen, Kumari, Gajebasia & Gajebasia, 2007). The use of such interventions can act as a powerful complementary and/or supplemental treatment to relieve mental and physical negative symptoms. The rise in popularity, awareness, and application of such non-traditional healthcare has become evident with the establishment of the National Center for Complementary and Alternative Medicine (NCCAM) as a branch of the National Institute of Health. The practice of yoga is among the empirically supported treatments that can be both a proactive and reactive measure to enhance psychological well-being (O’Neill, 2001).

**Yoga.** Yoga is “the practice of yoking together or unifying body and mind” (Kabat-Zinn, 1990). Although traditionally an Eastern practice, it has gained much popularity in Western cultures as a lifestyle, form of recreation, and as a method to alleviate mental and physical ailments (Birdee et al., 2008). Yoga was designed to promote whole body health and fitness with an additional goal of inner peace and freedom (O’Neill, 2001). There has been much variability in the yoga techniques and styles examined in the context of healthcare interventions (Khalsa, 2007).

Most variations of practice emphasize one or more of the following components: mindfulness/meditation (Dhyana), physical postures (Asanas), and rhythmic breath control (Pranayama) (Khalsa, S. 2007; Cheikin, 2003; Iyengar, 1979). Although various styles of yoga exist within the West, the style of Hatha yoga has become the more widely known and prevalent (Salmon, Lush, Jablonski, & Sephton, 2009). Hatha yoga is comprised of all three of the
In recent years, more emphasis within Western cultures has been placed on the posture (asana) components—leading to many individuals practicing yoga primarily as a form of physical exercise (Khalsa 2007; Salmon, Lush, Jablonski, & Sephton, 2009). However, unlike other forms of exercise, yoga practice can provide the opportunity for self-observation of internal physiological and psychological states. Serber (2000) discusses the differences between exercise and yoga, and after noting the benefits of physical exercise on combating the stress response, it was explained that the primary difference between yoga practice and other forms of exercise is yoga’s facilitation of self-awareness. This physical activity and self-awareness, along with other components of yoga may further enhance the effects of exercise alone to benefit mental health. As the practice of yoga becomes more popular in physical health/fitness clubs, possible neglect of the mindfulness components within yoga classes may occur. Empirical investigations of the efficacy of the mindfulness component within yoga could help facilitate its emphasis in such programs.

**Research on Yoga.** The majority of yoga research before 2004 was not published in peer reviewed journals, and was lacking well-designed randomized controlled trials. Those studies that were well-designed randomized experiments had relatively small sample sizes (Khalsa, 2004b; Arias, 2006). Within the past 5-7 years there has been resurgence in the quantity and quality of yoga research studies. Research initiatives have shown that yoga treatments may alleviate both psychological and physical negative symptoms. This includes anxiety, depression, epilepsy, asthma, multiple sclerosis, and cardiovascular disease, among others (Arias, Steinberg,

The benefits of yoga have become evident across the mental health and wellness continuum. For instance, patients in an inpatient psychiatric hospital showed significant decrease on various negative mood states immediately following exposure to a 45 minute Hatha yoga series (Lavey, 2005). Moadel et al. (2007) found that cancer patients who participated in a 12 week Hatha-based yoga program exhibited higher levels of psychological well-being and lower levels of distressed mood than patients in the control condition. In fact, in a review of research literature examining the psychological effects of yoga as a complementary and alternative medicine for cancer patients, Smith & Pukall (2008) was able to find sufficient evidence to suggest that yoga may serve as an effective intervention among that population.

In a controlled study investigating the effects of Hatha yoga on psychological symptoms and cortisol levels, women who considered themselves stressed more than 50% of the time within the previous 3 months participated in a 12 week long yoga course (1.5 hour class per week). Those in the intervention group displayed significantly lower levels of perceived stress, state and trait anxiety, and depression, with significantly higher levels of well-being compared to a wait-list control group (Michalsen, et al., 2005).

Kirkwood et al. (2005) conducted a literature review focusing on the effectiveness of yoga on anxiety symptoms. Although they noted that the eight studies reviewed were lacking methodological rigor, positive indications for the effectiveness of yoga for anxiety were evident. More recently, a better controlled study examined the effectiveness of differing levels of yoga involvement on the reduction of anxiety and mood disturbance among musicians (Khalsa, Shorter, Cope, Wyshak, & Sklar, 2009). Participants that were involved in a yoga lifestyle
intervention and participants that were only involved in a yoga & meditation class intervention did not significantly differ on these symptoms post intervention. However, both showed significantly less depression and general anxiety compared to the control group on the Profile of Mood States (POMS) assessment following the 2 month yoga interventions (Khalsa, et al., 2009). Additionally, Telles, Gaur, & Balkrishna (2009) investigated the effects of a style of yoga primarily consisting of breathing exercises, with complementary yoga postures and loosening exercises. Significant decreases in state anxiety were found directly following the 2 hour yoga practice class (3x per week). A lesser, but significant decrease in state anxiety also occurred directly following a 2 hour yoga theory class with no yoga practice. In a pilot study that examined the effectiveness of a yoga intervention on stress among caregivers of Dementia patients, Waelde and Thompson (2004) found that depressive and anxiety symptoms were significantly reduced after a six-session intervention. Lastly, in a yoga immersion program in which participants attended 11.5 hours of Hatha yoga classes each weekend for 2 months, the practitioners were found to have increased body awareness, positive affect, decreased negative affect, and improved life satisfaction (Impett, Daubenmier, Hirschman, 2006).

Each component of Hatha yoga has been found to have merit as an intervention apart from its interplay between the other components within yoga. For instance, breathing techniques and associated exercises have been shown to regulate emotions (Arch & Craske, 2006), and can increase coherence between the sympathetic and parasympathetic nervous systems which reduce anxiety symptoms (Brown & Gerbarg, 2005). Field (2011) recently reviewed past literature with a purpose of identifying the effectiveness of yoga styles that include exercise with physical postures (asanas). However, it was mentioned that the majority of the studies reviewed also included the other techniques within the intervention such as breathwork and/or mindfulness.
Without controlling for the effects of one component, it is difficult to provide sufficient evidence for the effectiveness of any one component of yoga (Field, 2011). For the purposes of the current study, the psychological benefits of mindfulness are of most interest and are discussed next.

**Mindfulness and its Research.** Mindfulness is classified as a form of meditation that has been utilized to aid in psychological wellness. Multiple definitions exist for this construct. Kabat-Zinn (1990) states that mindfulness is “a systematic approach to developing new kinds of control and wisdom in our lives, based on our inner capacities for relaxation, paying attention, awareness, and insight” (p. 2). Jacobs et al. (2011) operationally defines mindfulness as “a multifaceted construct involving careful observation and labeling of internal or external experiences in a non-reactive, non-judgmental manner (p. 666)”.

Mindfulness is similar to another traditional form of meditation known as concentrative meditation in that they both promote focus and attention among practitioners. However, it differs by facilitating a more broadened state of present awareness and attention that is nonjudgmental and non-analytical in nature. The focus is more fluid by allowing the practitioner to shift attention from moment to moment rather than rigidly concentrating on a single identified object for an extended period of time (Kristeller, 2007). Primary therapeutic activities that promote mindfulness are practicing breath awareness, open-focus mindfulness techniques, and/or guided mindfulness meditation. By bringing focus and attention to breath, it disengages analytical thinking and emotional reactivity, while additional slowing of the breath also enhances coherence between the parasympathetic and sympathetic stress response. Open focus mindfulness involves bringing attention to the current sensations of the body and the mind on a moment to moment basis, while also disengaging the analytical and emotional reactivity. Guided mindfulness involves mindful engagement in the present self with an emphasis on physical
sensations of the body and/or mind (e.g., muscle tension/relaxation, depressive thoughts, or interpersonal feelings). Emphasis is placed on altering those states in a positive manner after achieving awareness of the self (Kristeller, 2007). Similarly to positive psychology philosophies, the primary goal of mindfulness is to help people find what is right, rather than to point out what is wrong with an individual or situation (Hamilton et al., 2006). It is also congruent with positive psychology processes such as flow, forgiveness, hope, and resilience (Hamilton et al., 2006).

Mindfulness, apart from its inclusion in yoga, has itself become an effective treatment (Jacobs et al., 2011). For instance, Telles, Mohapatra, and Naveen (2005) found that a mindfulness meditation (Vipassana) that involved breath awareness, body awareness, and philosophical thoughts led to a significant shift in heart rate variability—indicating higher congruence between the sympathetic & parasympathetic nervous system compared to a non-meditation group. Thus, the intervention suggested that mindfulness improves mental health by reducing stress levels. The empirically supported psychological benefits of mindfulness has been reflected in the development of mindfulness-based programs such as Mindfulness Based Cognitive Therapy (MBCT), Acceptance and Commitment therapy (ACT), Dialectical Behavior Therapy (DBT), and Cognitive-Behavioral Stress Reduction (CBSR) (Carmody & Baer, 2008; Smith et al., 2008). Jon Kabat-Zinn was the first to utilize the traditionally Eastern tradition of mindfulness meditation in the Western culture as the key component in his Mindfulness Based Stress Reduction (MBSR) intervention (Hamilton, Kitzman & Guyotte, 2006). Because of yoga’s effectiveness in promoting mindfulness, Kabat-Zinn included the practice of yoga as one of the primary components in MBSR.

A number of studies have investigated the effectiveness of MBSR as a treatment for physical and psychological symptoms. In a well-designed randomized trial, Carmody & Baer
(2008) examined the influence of an 8 session long (1x/week) MBSR treatment program on individuals who had been experiencing stress-related symptoms. The results provided further evidence to support that MBSR treatments increase mindfulness. It was also suggested that the findings of improved stress levels and increases in psychological well-being were mediated by enhanced mindfulness skills. The empirical evidence emphasizing the success of MBSR as a psychological treatment has further augmented consideration of yoga alone as a psychological health intervention. A thorough review of MBSR research is available in Grossman, Niemann, Schmidt, & Walach (2004).

Few studies have attempted to isolate and compare two or more of the yoga components (mindfulness, breathing, physical postures) in order to suggest primary mechanisms of change within Hatha yoga practice as a whole. Subramanya & Telles (2009) examined the difference between a meditative yoga intervention that involved movement through various postures and a meditative yoga intervention involving the same awareness and relaxation cues, but with instructions to lay still in a single posture known as the corpse posture (shavasana). Significant decreases were found in state anxiety after both interventions, with a higher degree of difference for the condition with the posture movement, indicating a more powerful effect of yoga involving physical exercise. Another study investigated the influence of Sudarshan Kriya yoga (SKY) without the cyclical breathing component compared to the full SKY series which involves rhythmic hyperventilation, normal breathing, and relaxation sequences. Results showed no statistically significant reductions in depression and anxiety scores following 4 weekly classes, and no significant differences between the full and partial versions. Further, no control group was included in the design, and randomization is unknown (Rohini, Pandey, Janakiramaiah, Gangadhar, & Vedamurthachar, 2000).
Purpose of Current Study. No study to date has examined and compared the effectiveness of yoga with or without the mindfulness element to acquire more information about the mechanisms of change within yoga practice. The purpose of the present study was to examine the comparative effectiveness of yoga with or without the mindfulness meditation component, using a dismantling research approach. Furthermore, although the quality has improved, much of prior yoga research has suffered from methodological weaknesses such as lack of randomization or control groups, lack of clarity about the yoga elements studied (which impedes understanding, replication and/or generalizability of findings), and small sample sizes. In addition, much of the research has been on clinical populations (as opposed to the general population), has employed limited outcome measures, and has generally focused on longer versions of yoga (lasting six weekly sessions or more). The present study aimed to address many of these concerns by testing two protocol-driven types of yoga (with or without mindfulness) in a randomized controlled trial, in a brief format (4 sessions) and in a general, non-clinical population, while using a variety of measures of mental health and well-being.

The present study employed a pre-post experimental design, with two treatment conditions and a control group. Individuals participated in one of two series of yoga courses. One series involved participation in yoga that involves all three components (postures, breathing, and mindfulness). This intervention group is referred as The Yoga Emphasizing Mindfulness (Y-EM) group. The yoga instructor of the Y-EM group placed particular emphasis on the mindfulness states of internal and external awareness, attention, and a non-judgmental attitude through verbal encouragement during instruction. The other series omitted the mindfulness component, leaving purely the practice of postures and breathing. This group will be referred to as the Yoga without Emphasis on Mindfulness group (Y group). A third group was the control group. It was
hypothesized that both yoga groups would be superior to the control group, but the mindfulness yoga group (Y-EM) would be the more effective of the two.

Methods

Power Analysis

Based on an a priori power analysis using the software G*Power, for a large effect size (partial eta squared = .14) and power .80 with an alpha level of .05, for an ANCOVA with three groups and one covariate, a total sample size of 64 was needed. A total sample of 90 was targeted to account for possible attrition between conditions.

Sampling procedures

The study was advertised through a College of Education subject pool in which students enrolled in the department were provided course credit for participation. Students were also recruited through advertisement in various undergraduate courses and flyer distribution across campus. Approximately 1500 students were approached during the recruitment process (see Figures 1 and 2).

Participants

Participants consisted of Florida State University graduate and undergraduate students. The recruited participants who completed the pre-intervention assessments (N=79; 5 Male, 74 Female) were aged 18-55 (M =21.90, SD = 5.65 ). Of the initial participants, 63% identified as White/Caucasian, 14% identified as Hispanic/Latino, 9% as Asian American, 6% as African American, 5% as Middle Eastern, and 3% identified as “other”. All participants were yoga practice novices (previously practiced yoga 0-3 times, and were no longer practicing at the time of the study). The initial participants were randomly assigned to either the Y-EM group (N= 26;
1 male, 25 female), the Y group (N= 28; 1 male, 27 female), or the control group (N= 25; 2 male, 23 female).

From these 79 prospective participants, 25 were randomly assigned in the control group and 54 were assigned to an intervention group. Of the intervention groups, 38 attended the first session (Y-EM = 20; Y = 18). Attrition throughout the course of the study further contributed to a reduced number of final participants that completed both the pre and post intervention assessments (N = 33) (Y-EM = 15; Y = 9; Control = 8). The participants were encouraged to continue attending any remaining yoga classes in the event of being absent for one or more of the sessions. Only those individuals who attended 3-4 sessions were included in the final analysis. This criteria were chosen due to speculation of limited treatment effects following 1-2 weeks of yoga practice. Consequently, a total of 5 participants within the Y-EM group were excluded from the analysis due to the established criteria. The final participants in the analysis (N = 27) (Y-EM = 10; Y = 9; Control = 8) consisted of individuals with an age range of 18-39 years old (M =22.19, SD = 4.90). Of the final participants, 44% identified as White/Caucasian, 19% as Hispanic/Latino, 15% as Asian American, 11% were Middle Eastern, 7% identified as African American, and 4% identified as “other”. Please see Figures 1 and 2 for a detailed flow chart of the recruitment/participation rates throughout the study. The effective attrition rate (from completing the pre-measures and attending the first session, to completing at least 3 sessions and the post measures) for both treatment groups was 50%, while that of the control group was 68%.

Instructor characteristics

A total of four yoga instructors (2 male; 2 female) were recruited from various yoga studios within the Tallahassee community. All instructors were registered yoga teachers (RYT®s) with the Yoga Alliance®, a national education and support organization for yoga in the
United States. The instructors’ experience with the physical yoga postures and how they relate to the human anatomy and physiology (both healthy and unhealthy movement patterns) provided the participants with a safe environment for yoga practice. Each instructor received $200 for their participation in the study.

**Procedures**

The study took place in the spring semester of 2012. The first stage began with a pre-intervention group meeting where the participants were provided with brief rationale for the study, the inclusion criteria, procedures, and risks/benefits of participation. All participants were asked to abstain from yoga practice outside of the study during the six week project period (week #1: pre-treatment assessment; weeks #2-5: intervention; week #6: post-treatment assessment). Consent forms were provided and signed. Individuals who consented spent the remaining 30-45 minutes completing the pre-intervention assessments.

Following the pre-intervention meeting the participants were emailed their random assignments into either the control group, or one of two treatment groups: Yoga-Emphasis on Mindfulness (Y–EM); Yoga without mindfulness (Y). Students in the Y group attended a 5:30 yoga class, and those in the Y-EM group attended the 6:30 class. Participants in the intervention groups were instructed to appear the following week for the first class in the yoga intervention series. They attended a total of four consecutive weekly classes, and completed the post-intervention assessments in the week following the final class. The control group was asked to return five weeks from the pre-intervention meeting to complete the post-intervention assessments.

To provide adequate space for yoga practice, participants in the intervention conditions were also randomly assigned to one of two campus locations for their yoga practice. Each
location was used for both conditions. The yoga instructors were paired to one of the 2 locations, and each instructor pair provided instructions for both treatment conditions by leading a 5:30 & 6:30 class. This was done to control for any instructor effects between the two conditions. Each class lasted approximately 45 minutes. In both conditions the female instructor followed a script by verbally directing the participants through a yoga series. The male instructor acted as a model by physically performing the series along with the participants. The two yoga condition scripts were identical with the exception of the omission of instructor mindfulness cues and commentary within Group Y (See full scripts and a corresponding diagram of physical postures in Appendices A and B). The mindful (Y-EM group) script was a transcription of the standardized yoga routine developed by Kabat-Zinn in his Mindful-Based Stress Reduction program (Kabat-Zinn, 1990). To prevent a disruption in the natural flow of the series in the Y group, the mindfulness directives within the script were replaced by alternative verbal cues that either emphasized continuation of the pose that was being activated, and/or reminders to continue breathing. Each replacement statement lasted approximately the same amount of time as the former statement. The criteria for mindfulness cues included any directives involving awareness, a focus of attention, or non-judgment. An example of the differences between instructor directives for each condition is presented below:

Y-EM group

...And we’ll just finish up by simply becoming aware of lying here. Allowing the eyes to close, if we feel comfortable with it. And becoming aware of the wavelike movements of breathing at the belly. And as we lie here, just letting go of the thoughts and memories, of what we’ve done, what we’ve asked our body to do up to this point, and just becoming aware of being right here right now. Centered and focused. Riding the waves of each breath. On each out-breath letting go and sinking deeper into the floor and into a state of relaxed stillness and awareness. And in the stillness, aware of things as they are. The experience of your body as a whole and of the sensations and feelings of your body as pure sensation and feeling...
Y group

...And we'll just finish up by closing our eyes, if we feel comfortable with it... Slowly breathing in... and out....On each out-breath letting go, and sinking deeper into the floor... and into a state of relaxed stillness (hold for 5 breaths)....

This replacement procedure was necessary in order to ensure that the two experimental groups were of equal duration (45 minutes). Previous to the intervention stages, the yoga instructors provided feedback and rated the script of the Y group, to ensure that mindfulness cues were removed and replaced by appropriate non-mindfulness yoga instructions. They also rated the instructions for group Y to ensure that they represented natural yoga practice, as it could happen in a yoga studio. These ratings supported that the procedure implemented in Y group was successful (See Appendix C for a copy of the Instructor Quality of Yoga Intervention surveys).

Two different asana (posture) sequences were utilized within both treatment groups. They corresponded to the two guided mindfulness meditation yoga series created by Kabat-Zinn in his MBSR treatment. Participants in both intervention groups were guided through Sequence I for weeks 1-2 and through Sequence II for weeks 3 - 4. The first sequence began and ended with participants on their backs in the corpse pose, also called savasana, and included a series of prone (lying on the belly) and supine (lying on the back) positions on the floor. The sequence promoted health in the central core area of the body by fostering strength, flexibility, and a range of motion. The second sequence began standing in the mountain pose, also called tadasana, and ended back on the floor in corpse pose. This series further utilized the abdominal muscles, but most of the poses were standing, upright postures (Salmon et al., 2009). In addition to the weekly classes, participants were encouraged to practice at home. They were instructed to keep an At-Home Practice log that reported the frequency and duration of yoga practice outside of the study classes.
All participants who fully participated in the study (attended weeks 1-6) were entered into a drawing among their intervention group to win a package of 5 free yoga classes from a local yoga studio ($50 value). The drawing occurred after completion of the post intervention assessments during the post-intervention meeting.

Measures

Kentucky Inventory of Mindfulness Skills (KIMS)

The Kentucky Inventory of Mindfulness Skills (KIMS) measures mindfulness by assessing the following mindfulness skills: observing, describing, acting with awareness, accepting (or allowing) without judgment. There are a total of 39 items in which individuals are asked to rate on a 1 to 5 likert-type scale, the extent to which each statement is true (1 = Never or very rarely true; 2 = Rarely true; 3 = Sometimes true; 4 = Often true; 5 = Very often or always true) (see Appendix D for complete measure). The total mindfulness scores can range from 39-190 with the higher scores indicating higher levels of mindfulness skills. Good content validity, test-retest reliability, and internal consistency (Chronbach alpha scores ranging from .76 to .91) have been established for this measure a college population (Baer, Smith, & Allen, 2004). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .95.

Positive and Negative Affect Scales (PANAS)

The Positive and Negative Affect Scales (PANAS) is a 20 item scale that measures the presence and intensity of positive and negative emotions. For each item the participants were asked to rate the degree that they have experienced a particular emotion during the past 2 weeks on a likert-type scale of 1 to 5 (1 = very slightly or not at all; 2 = a little; 3 = moderately; 4 = quite a bit; 5 = extremely) (see Appendix E for complete measure). Potential scores range from 10 to 50 for both scales. Higher scores for both constructs indicate higher levels of affect.
(positive or negative respectively). The alpha reliabilities for this assessment are consistently high, ranging from .86-.90 for the positive affect scale, and .84-.87 for the negative affect score. The correlation between the positive and negative scales has been found to be low, which indicates that a small percentage of their variance is attributed to each other (Watson, Clark, & Tellegen, 1988). In the current study, the internal consistency was good with a Cronbach alpha coefficient of .74 for the positive affect scale and .82 for the negative affect scale.

**Perceived Stress Scale (PSS)**

The Perceived Stress Scale (PSS) is a 10 item likert scale that measures current perceptions of stress by asking to rate how often during the past month specific feelings have occurred (0 = Never; 1 = Almost Never; 2 = Sometimes; 3 = Fairly Often; 4 = Very Often) (see Appendix F for complete measure). The scores can range from 0 to 40 where the higher scores indicate higher levels of stress. The coefficient alpha for the PSS is .85 (Cohen, Kamarck, & Mermelstein, 1983). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .91.

**State Trait anxiety Inventory (STAI)**

The State Trait Anxiety Inventory measures state anxiety, which is generally defined as a more subjective or transitory anxiety that varies from one experience to the next, and also trait anxiety, which is often viewed as a type of disposition that consistently influences how the world is perceived. For state anxiety scales, respondents are asked to rate on a 4 point likert scale how they feel “right now, at this moment” (1= Not at all; 2 = Somewhat; 3 = Moderately so; 4 = Very much so). The trait anxiety scales ask respondents to rate how they “generally feel” using a seperate 4 point likert scale (1 = Almost never; 2 = Sometimes; 3 = Often; 4 = Almost always) (see Appendix G for complete measure). The scores for both types of anxiety can range from 20
to 80, with the higher scores indicating higher levels of anxiety. The average internal consistency alpha coefficients were .93 and .90 for the State and Trait anxiety respectively. It is also reported to have high levels of concurrent, convergent, divergent, and construct validity (Spielberger, 1983). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .95.

**Smith Relaxation States Inventory 3 (SRSI3)**

The Smith Relaxation States Inventory 3 measures 18 relaxation states, and also includes assessment of 3 stress states. It is comprised of 38 items, and individuals are asked to rate the degree that they experience certain feelings on a likert scale of 1 to 6 (1 = Not at all; 2 = A little; 3 = Moderately; 4 = Moderately; 5 = A lot; 6 = Maximum) (see Appendix H for complete measure). The third version of the SRSI is not yet fully assessed in terms of psychometric properties. However, previous versions have indicated a reliability with a Chronbach alpha ranging from .60 to .88 (Smith, 2001). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .94.

**Smith Relaxation States Inventory 3d (SRSI3d)**

The Smith Relaxation States Inventory 3d is similar to the SRSI3 version, however, it emphasizes disposition by asking the frequency of each internal experience. There are also 38 items that are rated on a 1 to 6 likert scale (6 = A lot, more than once a day; 5 = Once a day; 4 = About once every other day; 3 = About once a week; 2 = About once a month (less than once a week); 1 = Rarely or never, less than once a month) (see Appendix I for complete measure). Similar to the SRSI3, its Cronbach alpha is based on the previous version (ranges from .60 to .88) (Smith, 2001). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .93.
Center for Epidemiologic Studies Depression Scale (CES-D)

The Center for Epidemiologic Studies Depression Scale (CES-D) is a 20 item scale that measures current depressive symptoms such as depressed mood, feelings of guilt, worthlessness, helplessness, hopelessness, psychomotor retardation, and decreases in sleep & appetite. Individuals are asked to rate the frequency of emotions/behaviors on likert-type scale from 0 to 3 (0 = Rarely or none of the time (less than 1 day); 1 = Some or a little of the time (1-2 days); 2 = Occasionally or a moderate amount of time (3-4 days); 3 = Most or all of the time (5-7 days) (see Appendix J for complete measure). High internal consistency (general population - Cronbach alpha = .85) as well as adequate levels of test-retest reliability (correlations of .45 to .70) have been found for this measure (Radloff, 1977). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .89.

Mental Health Continuum short form (MHC-SF)

The Mental Health Continuum short form was designed to assess current levels of mental health, and includes both a cumulative score and subscale scores that assess emotional, social, and psychological well-being (Keyes, 2005a). It is a 14 item assessment in which individuals are asked to rate how they have been feeling and functioning within the past month of taking the test. Each item has a likert-scale from 0 to 5 (0 = Never; 1 = Once or twice; 2 = About once a week; 3 = About 2 or 3 times a week; 4 = Almost every day; 5 = Every day) (see Appendix K for complete measure). Possible scores range from 0 to 70 with higher scores indicating better mental health. The construct validity of this scale has been well supported, as evidenced by an alpha level of .81 for the cumulative score (Keyes, 2005a). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .92.
Outcome Questionnaire-45 (OQ-45)

The Outcome Questionnaire-45 (OQ-45) is a 45 item questionnaire that was designed to assess psychological well-being through three subcategories: symptomology, and interpersonal and social role issues. Together, these constructs assess overall psychological and social functioning. Individuals are asked to rate the frequency of their current feelings during the past week on a scale of 0 to 4 (0 = Never; 1 = Rarely; 2 = Sometimes; 3 = Frequently; 4 = Almost always) (see Appendix L for complete measure). Scores range from 0-180 with the higher scores indicating lower levels of psychological and social functioning and higher levels of distress. The cumulative score of the assessment has been considered a high internal consistency assessment with a coefficient of .93, and has also had a strong test-retest reliability of .84 (Mueller, Lambert, & Burlingame, 1998). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .95.

Satisfaction with Life Questionnaire (SWLQ)

The Satisfaction with Life Questionnaire (SWLQ) is a subjective measure based on the individual’s own criteria for degree of life satisfaction. There are a total of 5 items where responses to satisfaction questions are based on a 7-point likert scale (1 = Strongly disagree; 2 = Disagree; 3 = Slightly disagree; 4 = Neither agree or disagree; 5 = Slightly agree; 6 = Agree; 7 = Strongly agree) (see Appendix M for complete measure). Scores range from 5 to 35 in which the higher scores indicate higher levels of life satisfaction. The scale has been found to have good psychometric properties (Pavot & Diener, 1993) in which a 2 month test-retest stability correlation coefficient was .82, and internal consistency reliability alpha of .87 (Diener, Emmons, Larsen, & Griffen, 1985). In the current study, the internal consistency was high with a Cronbach alpha coefficient of .84.
Data Analysis

To examine the influence of the mindfulness component within yoga practice, post intervention assessment data was gathered and compared between all three conditions. In order to increase the sensitivity of the ANOVA test, the variance in the post score analysis that was due to the influence of the pre scores was removed. Thus, a one-way Analysis of covariance (ANCOVA) where the pre-treatment scores were used as covariates, was utilized for each psychological measure. The use of ANCOVA is recommended in research designs like this, over the use of ANOVA on change scores, or a repeated measures ANOVA (Dimitrov & Rumrill, 2003).

The necessary ANCOVA assumptions of normality, linearity, homogeneity, and reliability of covariate measurements were assessed and approved prior to the analysis. Based on the covariate adjusted post-intervention means, significant differences were found between groups on a subset of the psychological wellness assessments. Post-hoc Bonferroni tests were utilized to compare the mean differences between the groups for all measures. The results of ANCOVA for each measure are presented below and are also presented in Table 1.

Results

Positive and Negative Affect Scale: Positive Affect Scale

ANCOVA for the PANAS (positive affect scale) showed significant differences between groups on the positive affect scores of the Positive and Negative Affect Scale (PANAS), $F(2, 23) = 4.50, p = .022$, partial eta squared = .281. According to Cohen (1988), this effect size is considered very large. (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). Specifically, the yoga group with mindfulness cues ($M = 38.21$) exhibited significantly higher positive affect scores than the control group ($M = 28.74$), $p = .019$, while the yoga group with no mindfulness
cues ($M = 34.0$) did not have significantly higher scores than the control group ($M = 28.74$), $p = .376$. No significant difference was found between the Y-EM group and the Y group on this measure, $p = .573$. See Figure 3 for a graphical presentation of the covariate-adjusted post treatment means between groups.

**Mental Health Continuum short form**

ANCOVA for the MHC-SF showed significant differences between the Y-EM group and the control group, and also between the Y group and the control group, $F (2, 23) = 12.0, p = .000$, partial eta squared = .511. According to Cohen (1988), this effect size is considered very large. (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). The Y-EM group indicated significantly higher scores on the MHC-SF ($M = 48.27$) than the Control group ($M = 35.67$), $p = .002$, while the Y group ($M = 51.0$) also indicated significantly higher scores compared to the control group ($M = 35.67$), $p = .000$. Thus, both the yoga with an emphasis on mindfulness and the yoga with no mindfulness cues elicited significantly higher levels of mental health than the control group. No significant differences were found between the Y-EM group ($M = 48.27$) and the Y group ($M = 51.0$) scores, $p = 1.000$. See Figure 5 for a graphical presentation of the covariate-adjusted post treatment means between groups. Upon examination of the assumptions for this measure, the Levene’s Test of Equality of Error Variance for this measure was significant ($p < .05$). However, (Pallant, 2007) states that in such a case a more conservative alpha level should be used, such as .01. The group differences on this measure were statistically significant based on an alpha level of .001. Thus, the homogeneity assumption was not violated.

**Smith Relaxation States Inventory - 3d**

The ANCOVA for the SRSI3-d showed that the Y-EM group was significantly different from the control group, while the Y group was also significantly different from the control group
\( F (2, 23) = 5.07, p = .015, \) partial eta squared = .306. According to Cohen (1988), the effect size for this measure is considered very large. (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). An inspection of means indicates that the yoga with an emphasis on mindful cues \((M = 152.93), p = .031\) and the yoga with no mindfulness cues \((M = 153.54), p = .031\) elicited a significantly higher frequency of previous relaxation states than the control group \((M = 129.75)\).

No substantial difference between means was indicated between the scores of the Y-EM group and the Y group on this measure, \(p = 1.00\). See Figure 6 for a graphical presentation of the covariate-adjusted post treatment means between groups.

**Smith Relaxation States Inventory – 3**

The ANCOVA for the SRSI3 showed a significant difference between the yoga with no mindfulness group (Y) and the control group (C), \( F (2, 23) = 7.68, p = .003, \) partial eta squared = .401 for this measure. According to Cohen (1988), this effect size is considered very large. (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). Thus, the yoga intervention with no mindfulness cues \((M = 156.93)\) induced a significantly higher degree of current relaxation scores at the time of the assessment than the control group \((M = 113.17), p = .002\), whereas the intervention designed with an emphasis on mindfulness cues did not indicate statistically significantly higher means \((M = 139.23), p = .075\). There was no statistically significant difference found between the Y group and the Y-EM group, \( F (2, 24) = 7.68, p = .314\). An examination of the means suggests marginal effects where the Y group intervention \((M = 156.93)\) indicated higher levels of current relaxation than the Y-EM group intervention \((M = 139.23)\) and control group \((M = 113.17)\). See Figure 7 for a graphical presentation of the covariate-adjusted post treatment means between groups.
Kentucky Inventory of Mindfulness Scale

A significant difference between the yoga with no mindfulness group (Y) and the control group was found by the ANCOVA on the KIMS, $F(2, 23) = 4.36, p = .025$, partial eta squared = .275. According to Cohen (1988), this effect size is considered very large. (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). Contrary to predictions, the group with the yoga intervention in which the mindfulness cues were removed (Y) indicated significantly more mindfulness ($M = 140.20$) than the control group ($M = 120.61$), $p = .028$, whereas the yoga group with an emphasis on mindfulness cues (Y-EM) produced non-significant differences ($M = 136.03$) from the control group ($M = 120.61$), $p = .093$. No significant difference was found between the Y group and the Y-EM group, $p = 1.0$. See Figure 8 for a graphical presentation of the covariate-adjusted post treatment means between groups.

State Trait Anxiety Inventory

The ANCOVA indicated no statistically significant differences between any of the three groups for the STAI, $F(2, 23) = 2.55, p = .100$, partial eta squared = .182. However, a large effect size was found which likely would have been significant with a larger sample. According to Cohen (1988), this effect size is considered large. (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). Specifically, no significant differences existed between the Y-EM and control group, $p = .118$, between the Y group and control group, $p = .332$, and between the two yoga groups, $p = 1.00$. However, an inspection of the means for each group indicates possible marginal effects in which the Y-EM group ($M = 69.01$) showed lower levels of anxiety than both the Y group ($M = 72.53$) and the control group ($M = 84.40$). See Figure 9 for a graphical presentation of the covariate-adjusted post treatment means between groups.

Center for Epidemiologic Studies Depression Scale
No significant differences were found by an ANCOVA between any of the three groups for the CES-D, $F(2, 23) = 2.68$, $p = .090$, partial eta squared = .189. However, a large effect size was found which likely would have been significant with a larger sample. According to Cohen (1988), this effect size is considered large. (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). Specifically, no significant differences existed between the Y-EM and control group, $p = .130$, between the Y group and control group, $p = 1.00$, and between the two yoga groups, $p = .271$. However, an inspection of the means may suggest a marginal effect in which the Y-EM group ($M = 10.24$) showed the lowest levels of depression, followed by the Y group ($M = 15.95$) and control group ($M = 17.37$) with the highest levels of depressive symptoms. See Figure 10 for a graphical presentation of the covariate-adjusted post treatment means between groups.

**Perceived Stress Scale**

According to the ANCOVA, there were no significant differences between any of the three conditions for the PSS, $F(2, 23) = 1.45$, $p = .256$, partial eta squared = .112. However, a medium-large effect size was found which likely would have been significant with a larger sample. According to Cohen (1988), this effect size is considered moderately large. (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). Specifically, no significant differences existed between the Y-EM and control group, $p = .309$, between the Y group and control group, $p = .961$, and between the two yoga groups, $p = 1.00$. After the means are compared, there may be a marginal effect in which the Y-EM group indicated the lowest levels of stress ($M = 13.91$), followed by the Y group ($M = 15.97$), and then the control group with the highest stress levels ($M = 19.27$). See Figure 11 for a graphical presentation of the covariate-adjusted post treatment means between groups.
Outcome Questionnaire-45

The ANCOVA showed no significant differences between any of the three conditions for the OQ-45, $F(2, 23) = 2.73$, $p = .087$, partial eta squared = .192. However, a large effect size was found which likely would have been significant with a larger sample. According to Cohen (1988), this effect size is considered large (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). Specifically, no significant differences existed between the Y-EM and control group, $p = .110$, between the Y group and control group, $p = .246$, and between the two yoga groups, $p = 1.00$. However, after further examination of the means between groups, a marginal effect may exist in which the Y-EM group ($M = 45.73$) indicates the highest level of functioning followed by the Y group ($M = 48.70$) and then the control group ($M = 64.0$) with the lowest level of functioning. See Figure 12 for a graphical presentation of the covariate-adjusted post treatment means between groups.

Satisfaction with Life Questionnaire

The ANCOVA indicated no significant difference between any of the three conditions on the SWLQ, $F(2, 23) = 2.08$, $p = .148$, partial eta squared = .153. However, a large effect size was found which likely would have been significant with a larger sample. According to Cohen (1988), this effect size is considered large (.01 = small; .06 = medium; .14 = large) (Pallant, 2007). Specifically, no significant differences existed between the Y-EM and control group, $p = .232$, between the Y group and control group, $p = .293$, and between the two yoga groups, $p=1.00$. Marginal effects may exist in which the Y-EM group showed the highest level of life satisfaction, followed by the Y group and the control group with the lowest satisfaction. See Figure 13 for a graphical presentation of the covariate-adjusted post treatment means between groups.
Discussion

The current study investigated the influence of the mindfulness component within MBSR-based Hatha yoga on psychological well-being. This was done by removing all mindfulness instructor cues within one condition to make comparisons to both the full yoga classes (Y-EM) and to a control group. In response to weaknesses in previous literature, unique aspects of the study included a standardized/protocol driven intervention, a control condition with random assignment, comprehensive outcome measures, a general non-clinical population, and provided preliminary results for a brief intervention. It was hypothesized that both yoga groups would be superior to the control group, but that the mindfulness yoga group (Y-EM) would be the more effective of the two. The implications of the results are limited due to the small sample sizes (and related attrition) and treatment duration. Due to the sample consisting primarily of women, the generalizability of the results will apply mostly to that gender. However, consistently strong effect sizes among almost all of the measures may indicate similar results among larger samples, or samples with increased yoga exposure.

Statistically significant results were found on 5 of the 11 measures, including the Positive and Negative Affect Scale, the Mental Health Continuum Short Form, both versions of the Smith Relaxation States Inventory, and the Kentucky Inventory of Mindfulness Scale. The participant scores on the PANAS provided partial support for the hypotheses. As predicted, the Y-EM group elicited significantly higher levels of positive affect compared to the control group, while the Y group did not indicate significantly higher scores on this measure compared to the control group. These results are similar to the previous findings of Impett et al. (2007), who examined the effects of yoga from an embodiment perspective. It was suggested that yoga’s emphasis on internal states and awareness inhibits self-objectification tendencies that involve the observation
and evaluation of one’s own appearance from the perspective of other individuals. Self-objectification has been associated with increases in negative affect and decreases in positive affect, while turning one’s focus inward (embodiment) facilitates positive affect and decreases in negative affect. The idea that yoga, and particularly the mindfulness component enhances embodiment and consequently positive affect (Impett et al., 2007) is further confirmed by the significant positive affect findings of the Y-EM group.

The significant findings in general mental health (MHC-SF) and relaxation within the recent past (SRSI3d) supported our hypothesis that both yoga groups would show higher improvements than the control group. Although there were no significant differences between the yoga intervention group scores, the direction of the post-test means was incongruent with our hypothesis (although such results should be considered with caution). The Y group mean scores indicated higher levels of mental health and frequency of previous relaxation than the Y-EM group for those measures. The MHC-SF findings were similar to the increased overall quality of life and well-being measures found by Moadel et al. (2007) when a 12 week yoga intervention was compared to a control group. The lack of significant difference between the intervention groups are congruent with the findings from Gonchech & Smith (2004) when they found no significant differences between PMR and yoga stretching interventions on states of relaxation.

The results on the SRSI3 and the KIMS partially supports our hypothesis in that one of the yoga groups indicated significantly higher improvements than the control group. Incongruent with our predictions, the Y-group indicated significantly higher relaxation levels than the control group, however lower relaxation scores were indicated by the Y-EM group, and the improvements of the Y-EM group were not significantly higher than the control group. The findings on the Mindfulness measures between groups were incongruent with both the research
design intention and the hypothesis that indicated that the Y-EM group would elicit higher levels of mindfulness. Although the yoga condition with no emphasis on mindfulness was developed by extracting the mindfulness cues from the MBSR series, the results of the Y-group indicated higher levels of mindfulness than the Y-EM group, but significantly higher levels of mindfulness compared to the control group. Thus, the treatment condition that was designed to promote mindfulness (Y-EM group) did not induce more mindfulness qualities than the group that was designed to withhold mindfulness cues. This is perhaps the most surprising of the findings.

Further examination of the instructor script differences between groups as it relates to the flow and timing of verbal directives may illuminate possible contributing factors for the unexpected results. As mentioned previously, the Y group condition was formed by altering the MBSR yoga series script via the extraction of verbal mindfulness cues and directives. Through this process, a portion of the mindfulness cues were replaced with further instructions to continue holding various poses, breathing, and relaxing (without providing directives for areas of attention and/or awareness). Additionally, despite equivalent between group class durations and attempts to match verbal instruction lengths, the Y-EM mindfulness directives that were provided in conjunction with the physical poses provided more details of specific instructions. This led to less instances of overall instruction and consequently more silence throughout the Y class period. Kristeller (2007) states that mindfulness is both a product of physical relaxation and the engagement of attentional processes. Perhaps the higher frequency and duration of overall instructional cues within the mindfulness condition induced less relaxation states than the Y group that included more silence. This silence may have provided the space for facilitation of relaxation and an inadvertent focus on their internal states.
Additionally, practice effects must be considered. Perhaps the shortened length of yoga exposure negatively affected the power of the intervention. Similar insignificant findings have occurred within previous studies with 3-4 weekly class interventions (Cohen, Warneke, Fouladie, Rodriguez & Chaoul-Reich, 2004). The majority of past research with significant results has involved longer treatment durations and frequencies. Several studies also indicate that amount of time spent devoted to mindfulness practice is positively correlated with the level of symptom reduction (Carmody & Baer, 2007).

There was a total of approximately 10 minutes (out of the 45 minute series) of mindful instructor cues that were identified and removed from the MBSR yoga transcription (Y-EM group) to form the Y group. This limited degree of mindfulness and the corresponding limited degree of difference between the groups once the mindfulness cues were extracted may have contributed to the non-significant findings between intervention groups. Additionally, perhaps the limited amount of exposure and practice of mindfulness was not enough to illicit mindfulness within the Y-EM group, and the associated symptom reduction. Future studies that include additional mindfulness materials within the mindfulness intervention may have findings more indicative of the effects of the mindfulness component. As previous evidence has suggested, breathing and relaxation has been identified as a powerful intervention. Thus, the positive improvements of the yoga interventions may have been a function of the breathing and relaxation components that are more easily achieved in briefer interventions.

No significant differences were found between groups on the negative affect scores of the PANAS, the State Trait Anxiety Inventory, the Center for Epidemiologic Studies Depression Scale, the Perceived Stress Scale, the Outcome Questionnaire, and the Satisfaction with Life Questionnaire. However, the direction of group means was congruent with predictions that the
Y-EM group would indicate higher levels of psychological wellness for all of these measures. The effect sizes were large, indicating that with a larger sample size group differences would have likely been significant.

The high attrition rates throughout the study and the associated small sample sizes most likely contributed to the lack of statistically significant findings. However, the strong effect sizes for most of the measures suggests that it may be reasonable to predict that the results would be significant with higher sample sizes. Indeed, power analysis shows that a total sample of 64 would be needed for large effect sizes of partial eta squared of .14 or higher to be statistically significant. The higher attrition rates for the study may be explained by having primarily a volunteer student sample, which could have contributed to low motivation for study completion. Attrition could be also partially explained by the fact that participants who were participating in the study for class credit may have had less incentive to complete all sessions and post-treatment measures, given that they could receive the necessary class credit by only completing the pre-intervention measures and fewer than 3-4 sessions. Perhaps better attendance could have been achieved from a non-student sample. The 6 weeklong duration of the study may have also further contributed to lower completion rates.

Additionally, the efforts to balance external and internal validity within the study may be a limitation of the current study. Only adequate internal and external validity was achieved with the study design. The interventions were highly scripted and thus highly controlled. However, there may have been error in the removal of all mindfulness cues within the Y group script. Although attempts were made to avoid a decrease in external validity with the Yoga Instructor Quality of Intervention Surveys, generalizability to real-world classes was hindered.
Despite the inconclusive evidence in support of the hypothesis that the mindfulness yoga would elicit more improvement, there are indications of its positive influence by the differential attrition/attendance rates throughout the duration of the study. Nearly twice as many individuals within the Y-EM group attended the final yoga session (n= 15) in relation to the Y group (n = 9) and control group (n = 8). See Figure 2 for a representation of attrition rates. Although no follow-up participant reaction data was gathered regarding their subjective responses to the interventions, it could be speculated that individuals within the mindfulness condition had a more positive and/or valuable experience than the individuals in the yoga without mindfulness condition. However, it should be noted that differences between the two treatment groups would be expected to be smaller in general, and therefore would require larger sample sizes to become more apparent. Lastly, the current study provides some preliminary support for the value of briefer Yoga interventions, of 4 sessions duration.

Research to date has been lacking well-designed investigations of the primary mechanisms of change within Hatha yoga practice. The current study provided a preliminary randomized controlled trial to investigate this topic. The major findings indicated that both the yoga groups (Y-EM & Y groups) were effective interventions when compared to the control group. Thus, it provided support for brief yoga interventions with or without the mindfulness in a general college population. This was most evident with the significant measures. No differences between the two intervention conditions were found. In the future, differences may become evident with longer treatment duration, larger samples, or with a stronger mindfulness emphasis within the Y-EM intervention. However, due to the limitations of sample size, as well as a lesser degree of exposure to the yoga intervention, far-reaching conclusions cannot be made without hesitation. Future studies with these qualities will be needed to investigate the influence of
mindfulness within Hatha yoga practice. This will enable optimal informed use of yoga as a complementary and alternative treatment.
References


Figure 1. Participation rates and random assignment throughout the recruitment process.
**Figure 2.** Attrition rates from the time of the first week of yoga intervention to the post-testing.
Table 1
Pretest Means, Adjusted Posttest Means, Standard Deviations, and Analysis of Covariance results for each measure of psychological well-being (N = 27)

<table>
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<tr>
<th>Measure</th>
<th>Y-EM group (n = 10)</th>
<th>Y group (n=9)</th>
<th>Control group (n=8)</th>
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<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
<td>Pretest</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
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<td>SWLQ</td>
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Figure 3. Post-assessment adjusted means across groups on the PANAS-positive scores measure.
Figure 4. Post-assessment adjusted means across groups on the PANAS-negative scores measure.
Figure 5. Post-assessment adjusted means across groups on the MHC-SF.
Figure 6. Post-assessment adjusted means across groups on the SRSI3d.
Figure 7. Post-assessment adjusted means across groups on the SRSI3.
Figure 8. Post-assessment adjusted means across groups on the KIMS.
Figure 9. Post-assessment adjusted means across groups on the STAI.
Figure 10. Post-assessment adjusted means across groups on the CES-D.
Figure 11. Post-assessment adjusted means across groups on the PSS.
Figure 12. Post-assessment adjusted means across groups on the OQ.
Figure 13. Post-assessment adjusted means across groups on the SWLQ.
Appendix A

Yoga Posture Diagrams: Weeks 1-2 Series

1. Low back pressed against floor
2. Low back arched; pelvis stays on floor
3. Both sides
Yoga Posture Diagrams: Weeks 3-4 Series
shoulder rolls: do in forward, then backward directions

raise up
squeeze together in front
let drop
squeeze together in back

neck rolls: do in one direction, then the other

10 11 12 13
Appendix B
Yoga Scripts

Intervention Group Y (No emphasis on mindfulness)

**Weeks 1-2 only**
The yoga series we are about to do involves some simple body movements with deep relaxation. By practicing the series regularly—at least once a day, you are nourishing and strengthening your body. And participating in the process of optimizing your state of well-being and health.

As we go through our yoga series, you should follow along as best you can... doing what you feel capable of, and refraining from anything that does not seem to be appropriate for you at this time. Let your own knowledge of your body override my indications of how long to hold any position we may be doing. We are basically working at the limits of what we can do—and not doing more than we can handle. If you do this work regularly—every day with care, as we are learning how to do it, you will soon realize that your limits are changing and dissolving by themselves.

If you wish to skip something we may be doing, just try assuming a comfortable posture, and closing your eyes until you are ready to come back in. Remember to breathe diaphragmatically, and through the nose as much as possible. And to work with the eyes open sometimes, and closed at other times. This will allow you to experiment with what you like best. And let’s just stay here breathing for a moment...with your eyes closed, or open. (take 55 seconds/ 8 breaths)

So now, let’s begin by lying back on our backs in a comfortable position... on your mat or pad on the floor. And settle your body into what we call the corpse pose, or the corpse position. You’re just lying on your back with your feet falling away from each another. And the arms alongside your body with the palms open towards the ceiling—if that is comfortable to you. (take ½ breath)

And just breathing at your belly...In and out. The abdomen expanding on the in-breath... and deflating on the out-breath as if you have a little balloon in your belly...and it’s just expanding and deflating gently of its own accord, and you’re not forcing it. And gently close your eyes at this point--if you are comfortable with it. And just sink your body into the mat each time you breathe out...as your muscles let go, and as any residual tension, or strain, or stress left over from what you’ve been doing leaves your body on each out-breath...And on the in-breath just breathing in a sense of relaxation (take 1 breath). And I’ll let you just breathe here for a moment (hold for 5 breaths--about 30 sec)

Let’s begin now on an in-breath—just taking a deep breath in—and as we do it stretching the arms up over the head, for the entire duration of the in-breath... so that it's a slow
purposeful stretch. And when you reach the floor with the hands, just holding the breath for a moment, and stretching the entire body out. The fingers in one direction, and the heals in the other. Not too strenuously, but just having your entire body stretching right through the fingertips...and the wrists, and the elbows, and the armpits, and shoulders, ribcage, the entirety of your body stretching...every joint. (hold for 2 breaths) And then on the out-breath, the arms slowly, slowly, come back down... And at a certain point they make contact with the floor. And your arms should relax and let go as the muscles relax...and the floor takes on the work of holding them up. And now just lie there breathing. Your belly should be rising and falling (take 5 breaths).

Now let's bend both knees so that the feet will be flat on the floor, and spread approximately a foot apart. The knees are pointing up towards the ceiling. Your arms are still relaxed alongside your body. And we'll do our pelvic tilts by first contracting our belly, and just lifting the tailbone slightly off the floor. And pushing the base of the spine and the lower back down into the floor. And then tilting the pelvis the other way, so that you make a space between the floor and your back—and there's a nice little archway there, that you can put your hand underneath. And if you keep your hand there, once again tilting the pelvis the other way, so that you're pushing down on the hand. And just the tailbone slightly coming up off of the floor—but not the pelvis. And just gently rocking back and forth—a nice oscillatory motion, moving the pelvis. Just tilting the pelvis back and forth. And just doing this at your own pace... as you breathe naturally. (allow them to do this for 4 breaths—or 4 tilts after you finish reading)

And then when you're ready, just slowly coming to a stop. And wrapping both arms around your shins—drawing the knees up towards your chest. And just squeezing gently...squeezing your knees down towards your chest. And if you like rocking a little bit from side to side, as you breath. And if you want, raising the head up so that you're basically massaging the muscles of your back as you do this—and your muscles on either side of the spine. And you can even try making circular motions as you do it—round in both directions, one after the other. (wait for 2 breaths) And then try just shifting so that you're holding onto one knee, and stretching the other leg out. Starting perhaps with the left leg, and just stretching it out on the floor as you squeeze the right knee down towards the chest. Holding on with both hands—onto the knee, and onto the shin, and if you want, bringing the head up in the direction of the knee. And perhaps if you can, putting the forehead on the knee—or just stopping wherever you wind up at this particular time. And not immediately backing away from it, but just breathing with it. So let's just breathe here now. (hold for 3 breaths)

And now switching so that with the head down on the floor, you're drawing the left knee up towards the chest... and stretching out the right leg all the way. And again if you want, raising the head up, and breathing here, wherever you happen to stop. Know your limits--where you need to stop, or even back off. But if you can...just stay at these limits a little longer than you might ordinarily. (hold for 3 breaths) And then when you're ready, just stretch them back out. Lying back down on the floor, presuming the corpse posture, and breathing in and out through your belly. The abdomen expanding gently on the in-breath and falling back towards your spine on each out-breath. (hold for 5 breaths)
Now when you’re ready, see about rolling over and coming up onto your hands and knees. And in this position, we’re going to breathe out and arch the back—letting the head come down, and do our cat stretch. We’re really arching the back as high up as it will go, and the head comes down between the arms. (hold for 2 breaths) And then after a moment or two reversing it on the in-breath, letting the belly come down, the pelvis tilt down, and the head come up as you breath in. And stretching up with the head looking back. (hold 2 breaths) And then exhaling again, and arching the back once more (1 breath). And then once again breathing in, and rolling the belly. Making the curve in the back in the other direction, and looking up (1 breath). And then exhaling once more. Arching the back, lowering the head, and then this time...as you breath in and lower your belly, straighten out the spine, & stretch the right leg up in the air. Lifting it up behind you, and as well raising the left arm. Stretching that out, so that you’re basically breathing and balancing... head lifted up, and the left arm and the right leg. And just stay here breathing. It takes some muscles, strength in the back, and the shoulders to do it. Working on strengthening your back, (hold for 5 breaths)

And when you’re ready, lowering the knee to the floor, and the hand. And begin exhaling and arching the back back up. Stretching here, and then reversing what we just did. Stretching those muscles now in the back, instead of strengthening them. Your muscles should be relaxing and lengthening. And then again on the in-breath, lowering the belly, raising the head, and this time straighten the spine again, and the left leg, & the right arm are ready. And breathing here requires a certain amount of balance, and just breathing as you do this, just holding this pose... (hold for 2 breaths). Keep holding it here for a bit. (hold for 3 breaths) And when you're ready, once again lowering the knee and the arm. Hands and knees on the floor, and arching the back as before... Then head down and try to get a good stretch on your back—without over-doing it, just easing up to your limits. total in sequence: 2 cat stretches, & then straighten spine into the balance; then 1 more cat stretch & reversal.

And when you’re ready, lying back down once again on your back. (allow them to lay down). And for a moment with your hands lying alongside your body, and your feet falling away from each other, breathe in... and out... through your belly. And then once again let’s just draw both our knees up towards the chest, and do what we were doing before—just squeezing the knees towards the chest. And bringing the head up, and rocking from side to side. Gently massaging the spine and the muscles on either side of the spine, to your own capacity—not over-doing it. Not trying to push through anything, but just gently massaging your back. If it’s more comfortable to have your head down on the floor, then just doing it that way. (2 breaths) And then when you’re ready, putting your feet down on the floor as before. And doing a few pelvic rocks or pelvic tilts at your own pace... just to again loosen up the pelvis and loosen up the small of the back, get the belly contracting in rhythm with the spine. (wait for 2 rocks). And if you do it at any speed with your head relaxed, and your neck relaxed, your whole body will be moving in response to your just moving your pelvis. Rock your whole body back and forth... And when you’re ready, just relaxing and stretching back out... begin breathing rhythmically through your belly. (hold 5 breaths)
Now let's do the half bridge pose. Which again involves bringing the feet to the floor and the knees up to the ceiling—but a little closer to the buttocks than they were before... and stretching the arms up over the head on the floor. And when you're ready, now lifting the pelvis. This isn't tilting, but lifting the whole pelvis and lower back off the floor. And staying in this half bridge pose with the body resting on the back of the head and neck, and the shoulders, and arms, and on the feet. And the rest of the body is arched...And you're just breathing here. If your thigh muscles begin to fatigue a little bit, just try to hold it there. And just stay here with the breathing, letting the arms be completely relaxed... the face... back of the head and neck... as you stay here breathing. If you need to come down at some point before I say to, just bring your pelvis down to the floor. And when you're ready bring it back up. Taking responsibility for doing this your way, and the way you will get the most benefit out of it. Expand the abdomen on the in-breath—and this posture has lots of room to expand. And as it deflates on the out-breath... if you haven't done so already, just lower your pelvis back to the floor, and stretch the arms once again back down alongside your body—stretching out the legs.

And allowing your body once again, to just relax and let go, and sink into the mat. (hold for \( \frac{1}{2} \) a breath). And just lie here for a moment in the stillness. (hold for 3 breaths) You're nourishing yourself in this way—contributing to strengthening your body and controlling your health to some extent. And improving the quality of your health. (hold for 2 breaths).

Now let's do a simple twist stretch where we lace the fingers together behind the head and draw the feet up towards the buttocks again. But this time together, knees together as well... breathing in and out a few times. And when you're ready letting the knees go over gently to the right. As far as they'll go to the floor. Gently... If the left foot will come up off the floor and be on top of the right foot, the left knee may or may not be touching the right knee. Just letting it hang—not forcing it. And then turning with your head, and looking to the left, and looking beyond your left elbow. And breathing in and out with this posture as you try to relax into it. Where you're just allowing gravity to pull you down, and you're not resisting, and every time you breath in, the abdomen stretches, the chest stretches...and the belly stretches. Every time you breath out, just sinking a little bit more into the stretch. As you let go... your muscles should let go and lengthen. (hold for 2 breaths)

And then on an in-breath bringing the knees back up to the vertical. And then letting them go over to the floor in the other direction—to the left. That will bring your right foot off of the floor on top of the left. Right knee over the left, and perhaps touching it. And turning with the head and looking to the right. And again, just settling in on each outbreath. Letting your body fall into the floor... straight down—each point going straight down. And we'll stay here for a moment in this posture (hold for 2 breaths). And when you're ready, bring your knees back to the perpendicular. Releasing the hands and stretching back out in the corpse posture. (hold for 5 breaths)

So now let's bend the left knee so that the foot is on the floor alongside the right knee. (let everyone get in the position) . And we will just take a deep breath in... and as we breathe
out, letting the right leg come up with the knee straight—as far as it will go, if possible. All the way up to the perpendicular, so that it’s up towards the ceiling. But if not, just wherever you wind up is fine. And then maintaining this posture and your breathing. (Hold for ½ breath) Since your arms, your shoulders, and your face, are not involved in what you’re doing, relax these parts completely…Remember to breathe here...in... and out. (hold for ½ breaths)

And if you like you can move the foot—just crank the foot around the ankle a few times in each direction. Moving the muscles that are involved in this activity…as you breathe… And those of you who choose to, can intensify this a little bit more by stretching out your left leg if you like, or by taking some time to lift the head up towards the knee as you take hold of the leg beyond the knee. And that will stretch the back out a little bit more. (hold for 3 breaths). And then when you’re ready, slowly letting the leg come back down… taking your time. Letting it come back slowly all the way down to make contact with the floor. Continue breathing as you do this. Relax your body so that the muscles can let go from having done some lifting, and contracting… and they release and lengthen. And then reverse the positions of the legs now so that the right leg is bent and the foot is alongside the left knee (wait for everyone).

And when you’re ready, taking a deep breath in, and allowing the left leg to come up as far as it will go, and just settling in here while the leg is up. Letting your back relax,…and your shoulders, your arms, and your face...(holding for 2 breaths) and if you like, cranking the foot around (hold for 2 breaths). And then those of you who were doing the more intense stretches just going ahead and doing that at your own pace if you feel like it. Whatever it is that you’re doing, just continue and remember to breathe, and the contraction of the abdominal muscles will do part of the lifting. And when you’re ready, slowly, inch by inch, letting the left leg come back down. And you may have your eyes closed at this point, or open, but do this slowly. Once it makes contact with the floor, relax all of your muscles to sink deep into the floor. And just stretching out the other leg. We’ll stay here for a moment, breathing. (hold for 5 breaths)

And when you’re ready, we’ll now roll on over to our left side (wait for everyone). And prop your head up using your left hand… and put the right hand on the floor in front of your belly, and now we’ll get settled for a moment just breathing… wait for everyone to get in position. and when you’re ready, on an in-breath slowly lifting the right leg up to the side. Straight up… and just holding it here wherever it winds up… and breathing… Perhaps closing your eyes. And if you would like, you can crank the foot a few times around the ankle in both directions. (do this for 3 breaths) Raising up perhaps a little higher… and a little higher. Breathing…, but asking yourself whether you can handle this—in terms of your own body and your own limits at this particular time.

If it’s too intense, backing off is okay… just breathing through the intensity. And when you’re ready slowly letting the leg back down and slowly taking your time. And when it does come down, release your muscles and relax. And if you like, when you’re ready, on
another in-breath raising the right leg back up once again, and just breathing with it here. (2 breaths) And slowly letting it come down. (Wait for them to come down)

And then rolling over onto your other side, propping your head up with your right hand now. Lying on the right side. And when you're ready, lifting the left leg up as high as it will comfortably go. The left hand in front of the belly on the floor. Cranking the foot around the ankle a few times in both directions. (3 breaths). And then lowering slowly... the whole way down. And then if you feel up to it, raising up once again. And we'll hold here. (2 breaths) And slowly back down. (wait for them to come down)

And then lets roll over onto your belly. (wait for them to get in position) And in this position, lets lie on the left side of your face—with your arms alongside your body, and your palms open towards the ceiling. And now in this position your belly should be pressing against the floor each time you breath in, and you should be relaxing against your belly when you breath out. Allowing your whole body to just sink into the floor with each exhalation. Head, shoulders,...the arms,... the back,... the pelvis, trunk, the legs, they just fall into the floor. And letting the floor, or whatever you’re on, hold you up. (hold for 3 breaths)

And then in this position we’re going to move the head now—so that the chin is on the floor. And then, without using our hands at all, and slowly, as we breathe in, lift the right leg up with the knee straight... and just holding it here as you breath (hold 1 breath)...Your buttocks & whole back on the right side should be involved in lifting this heavy weight. And just breathing, and lifting your leg. (2 breaths) And when you’re ready, just slowly letting the leg come down. And relaxing on the right side of your face now, sinking into the floor. (3 breaths) And then with your chin off the floor once again... on an in-breath, raising the other leg up as much as possible... keeping the arms completely relaxed, your face completely relaxed,... and just letting the back muscles do the work. (2 breaths) And again slowly come down. And relax here. (5 breaths)

And now when you’re ready, putting our chin on the floor once again. (hold ½ breath) And then just lifting the head up slowly... and the neck, and the shoulders, and the chest. Keeping the feet on the floor, and just lifting in what we call the lower cobra. As if you were a snake and had no arms or legs, and you are just using your trunk muscles. In particular, your back muscles, and neck, and head muscles should lift you up... breathing as high up on the ribcage as you can get. The belly should rise a little bit higher each time you breath in. And just breathing, lifting, looking somewhat back over your head if you can. (hold for 2 breaths). And when you’re ready, slowly, slowly... slowly, coming down. And resting on the left side of your face, and just again allowing your body to sink into the floor as the muscles release and let go... and lengthen and soften. (hold for 5 breaths).

And when you’re ready, rolling over now back onto your back. (wait for everyone) And then bringing your knees up to your chest, and putting your hands flat on the floor below the buttocks... If you have high blood pressure, and have been told by a doctor that you shouldn’t be doing poses that may increase your blood pressure, then just sit this one out, and relax while lying back on your back. Everyone else, once you get into the pose, it's important to refrain from turning your head to the right or left. If you would like to look over at Javier/Brandon at the front of the room for guidance, you can do so now before
attempting the pose yourself. If necessary, you can roll out of the pose again and then glance over. So whenever you’re ready, just push down with your hands, and roll your tailbone off the floor until your knees move towards your forehead—or some place in this direction, and then let your hands hold & support your lower back—fingertips pointing towards your tailbone. And just stay there hanging upside down with the feet kind of up in the air. The knees bent, and your lower back off the floor... and you're resting on the back of your neck and head, and shoulders. And just breathing in this upside down position—if you feel comfortable with it. (hold for 2 breaths)...And then rolling back out of it onto the floor... And relaxing with the feet back down and stretched out. The hands alongside the body.

And we’ll just finish up by closing our eyes, if we feel comfortable with it... Slowly breathing in... and out....On each out-breath letting go, and sinking deeper into the floor... and into a state of relaxed stillness (hold for 5 breaths).

And as we come to an end now, you might want to take a moment and give yourself some credit, and acknowledge having taken the time to do this...and recognize that by doing it as we’ve been practicing... it compliments and amplifies the natural healing processes of our bodies...and that this is very much a time that you’re using to work on yourself ...to develop greater strength and flexibility. In becoming more flexible and creative in our relationship to life itself. In developing a deeper appreciation for one’s life, and the limits associated with it. So we'll take a few moments to allow you to be in the stillness—completely relaxed, and at one with yourself...Centered and balanced. I’ll let you stay here for a couple of moments... and we’ll let you know when it’s time to get up. (7 minutes).

**Weeks 3-4 only**

Let’s begin this Hatha yoga sequence with some standing postures. Remember that we will be exploring our boundaries and our limits in a gentle but determined way...Not trying to beat the body into shape, but simply nourishing it with this special kind of activity... On a regular basis as we have been doing.

For some of these standing postures, you might want to do them on occasion in front of a full length mirror, to give you an external view of what is involved. Remember throughout—to breathe diaphragmatically as much as possible.

Now let’s begin by standing with both feet flat on the floor... (wait for them). The arms alongside your body... just dangling in an erect, relaxed posture. The feet may be 2 or 3 inches apart. (hold for ½ breath). And on an in-breath, we will just stretch the arms up to the side, with the elbows straight—and locking hold of the thumbs. Just stretching up as we complete this in-breath as far as we can...staying on the flats of our feet... And then continuing to breathe as we stretch (hold for 3 seconds). Your elbows and armpits should be stretching... You should be stretching your pelvis & ribcage...Just stretch your body from head to toe in this position. Just breathing here as we stretch (hold for 5 seconds). And when you’re ready, unlocking the thumbs and stretching the palms out to the sides as you slowly lower your arms. You may experience some tingling as you do this. Your wrists
will be bent—fingers pointing towards the ceiling as they come down. And slowly, slowly, letting your arms come down until they are simply dangling—limp by your side... And if you will, allow your eyes to close... And just breathe in...and out here. Until I indicate that it’s time to move on...(hold for 3 seconds). Just breathe in... and out at your own slow pace (hold 5 seconds).

Now let's take another deep breath in, and this time just stretch the right arm up. And we'll do what we call picking grapes—where we just try to reach something that’s just out of reach... as we continue to breathe. And if you like, lifting the left heal at the same time, and just stretching up... Left arm is down alongside your body... reaching, & stretching (hold 3 breaths). And then slowly lowering the right arm... And then raising the left arm and the right heal... and again picking these grapes that are just out of reach. The stretch should come out of your left leg and left hip. Just stretching, reaching...and breathing (hold 3 breaths). And slowly coming down (hold ½ breath).

Now let's again take a deep breath in, and stretch the arms up to the side as we did to begin with. Locking the thumbs together... and this time just stretching, bending over to the right side—keeping the head between the arms, and just breathing as you hang over the right hip. Just finding the place where you stop...at the limit of your body... and breathing here as you stretch in this particular bend. You should be stretching the left side of your body here (hold for 5 breaths). And then inhaling and bringing the arms up, and straightening out again...(hold 1 breath) And on the exhalation going over to the left...just stretching here. If you like, you can let go of the thumbs and just have the arms be parallel, as you stretch out the right side bending over the left hip... just breathing here...(hold 2 breaths). And when you're ready, coming back up. Stretching up one last time (hold ½ breath). And slowly lowering the arms to the side as before. And just letting them dangle here as we once again close the eyes and center ourselves in the standing posture. And breathe here... In and out, through the belly (hold 2 breaths).

Now let's roll the shoulders around in a forward direction to work the neck & shoulder regions. Remembering that you can break it down into 4 separate movements. The first being raising the shoulders up towards the ears as far as they’ll go. and squeezing them together in front of the chest, and then letting them drop. You’ll just relax here...And then try to squeeze your shoulders together behind the back... touching the shoulder blades together. The arms are passive in this, and just hang the whole time So continue this with a big rowing...rolling motion as you move the shoulders around (wait for them to complete 6 forward rolls). And when you’re ready, back in the other direction (wait for 6 reversed). And then just coming back to stillness... just standing here (hold 1 breath).

And then when you’re ready... let’s do our neck rolls where you lower the chin to the chest, and then move the head so that slowly the left ear is over the left shoulder and then keep on going until the head is all the way back. And the right ear over the right shoulder, and finally bringing the chin back across the chest...And just moving in this way... breathing in for the first half as the head goes back, and out for the second half as the head comes forward... in a big...slow... circular movement. And letting your eyes make a big circle around the room as you do it. (after saying last sentence, wait 3 head rolls) And then when...
you’re ready, reversing the direction (wait 5 head rolls). And then coming back to standing... to move into a neutral position...(wait to get in position). And begin centering... grounding yourself with your feet flat on the floor. Letting the body be completely relaxed, as you breathe (hold 2 breaths).

Now let’s work at some balancing—and at the same time, strengthening the muscles on the side of the body. Let’s begin by slowly letting the weight shift from both feet over onto just the left foot...And as we do that, raising the arms up, so that they’re parallel to the floor. And just raising the right leg up as much as it will come... And staying here breathing. And perhaps focusing on a spot on the wall, and just holding it here... standing on the left leg. The right leg out to the side; the arms stretched out to the side... and breathing here... And trying to maintain your balance as best you can (hold 25 more seconds). And when you’re ready... slowly, letting the leg come down, and the arms come down at the same time—so that the weight gradually shifts from the left foot to being taken on by both feet (wait 3 sec). And then when you’re ready... breathe while raising the arms up again...And as you do, raising the left leg up now...letting your right leg hold all the weight... Stretching out with the arms, raising the leg up as far as you can, and just holding it here... balancing... and breathing. Using the focus of your eyes on a spot to keep you concentrated and balanced. (hold 20 seconds). And perhaps raising the leg up a little more—a little higher. Stretching the arms out, breathing deeply into the belly (hold 5 seconds). And when you’re ready, slowly letting the leg and the arms come back down (wait for them to come down). And just coming to rest here... standing (hold 2 breaths).

Now let’s put our hands on our hips, and gently turn just from the waist—over the right shoulder. Just looking behind you as far as you can...keeping the hips facing forward, and turning the head and the chest (hold 10 seconds)... And then coming back to center (wait 2 sec). And turning—looking over the left shoulder now in the same way...Breathing (hold 10 seconds). And then back to center (wait 2 sec). And then keeping your hands on your hips...Now turning from the ankles so that you’re turning the whole body—accept for the feet, to the right as far as you can. Tracking with the eyes—going as far as you can to the right... Breathing as you do it (hold 8 seconds). And when you’re ready, slowly coming back through center, and turning from the ankles all the way to the left. When you get as far as you can—just breathing with it (hold 10 seconds). And then coming back to center—letting the hands dangle once more (hold 1 breath).

When you’re ready, doing a forward bend... Lets bend the knees slightly, and take a deep breath in. And stretching the arms up over the head as we did before... Deep breath in, and then on the exhalation just bending over from the waist and hanging. Coming down until your head is hanging towards the floor. The arms are hanging towards the floor, or touching the floor... And just resting in this position...hanging... and breathing, with the knees slightly bent... And every time you breath in, your in-breath should expand against the ribcage, and stretch the back a little... And as you breath out, just surrendering to the gravitational pull and letting the muscles lengthen and relax... as your head sinks a little bit deeper—a little bit further down towards your knees, and the floor (hold 1 breath). Slow, deep, diaphragmatic breathing here (hold 1 breath).
And if you like, while you’re down here… you might want to stretch one arm out—say the right, until it’s parallel to the floor...And just holding it here... breathing...(hold for 2 breaths), and letting it come back down. And then stretching the left arm up and out... until it’s parallel with the floor... and breathing with it (hold 2 breaths).... And then letting it down... Just hanging & breathing. And then when you’re ready, slowly standing back up with the lower part of your spine first—so that you’re straightening first the hips, and then the central part of the back, and then the upper back. And then—and only then, raising the head back up. Coming into a balanced standing position. If you care to, closing your eyes and breathing in and out... And just letting everything settle (hold 2 breaths).

And now we’ll do the chair—which involves stretching both arms out in front of you, and having the feet a body-width apart. And then imagine that you’re sitting down on a chair that’s not there. An imaginary chair. And just coming down to a sitting position as best as you can, with your head and back as erect as you can keep them. Although your back will probably be bent forward some in this pose. So you’re slowly bending the knees, and sitting down until you’ve reached a point where you’re as close as possible—as if there were a chair there...As much as possible, just stay there breathing (hold 3 breaths). You may experience this posture in your ankles, or in the small of your back.... And just stay here for a bit longer, using your strength to maintain this, and your arms are helping you balance... and remember to breathe. See if you can drop down a little bit lower—just staying at your limit wherever it may be (hold ½ breath). And when you’re ready, just standing back up, and letting your arms hang.... And if you’d like just shaking them out a little. And taking a long, deep breath in (1/2 breath)... and just letting it out (1/2 breath)... Letting out all of the tension and fatigue—that builds up from doing something like that... Just let it leave with the out-breath (hold 2 breaths).

And now let’s do the tree... which involves taking the right foot, and drawing it up the leg—putting it as high as you can manage—on the inside of your left leg...preferably not directly on the knee. Perhaps high up on the thigh, perhaps lower on the thigh, or even below the knee. Wherever you can manage to put it. And then as best you can, balancing on the left leg, and bringing the palms together in clapping position over your chest (hold 1 breath). And just breathing like this (hold ½ breath)...and picking out a spot either on the wall, or on the floor 3 or 4 feet in front of you. And focusing your gaze on that spot (hold ½ breath). And then when you’re ready, stretching the arms up over your head—as far as they’ll go. And clasping your fingers together—pressing the upper arms against your ears. And breathing deeply down into your abdomen on each in-breath...and releasing out from the abdomen from your belly on each out-breath... And just balancing here in the tree. Stretching up... If possible keeping the left knee straight (hold 5 breaths).

When you’re ready, slowly unclasping your hands and letting the arms come down to the side. And when they are about horizontal, lifting the knee up, and bringing the right foot down alongside the left foot—as the arms come down. Sort of as if you were making a three point landing, and totally under your control. Let’s just take a deep breath in & out here (hold 1 breath). And then allowing the weight to shift to the right foot as you shift the left foot and place it inside the right leg... wherever it will go... And starting with the palms over the chest... And when you’re stabilized with the balancing... stretch your arms up over the
MINDFUL YOGA PRACTICE AND PSYCHOLOGICAL WELL-BEING

head, and clasp the hands again. Press the upper-arms against your ears as you breathe, and balance (5 breaths). Stretching a little bit higher (1/2 breath)...And then undasping the hands, and slowly letting the arms come down until they're horizontal...when you'll lift the left knee up and slowly come down with the arms and the foot... And then you're standing again on both feet (wait for everyone). Allowing your eyes to close...And just try to center your body as a whole, as you stand there, breathing through your belly (stay for 3 breaths).

And then, when you're ready, sitting down... And we'll do some stretches from a sitting position (wait for them to sit). Now let's begin by bringing the soles of the feet together, with our knees flopped out to the side—and lacing the fingers beyond the toes... And slowly drawing the heals in towards the pelvis—towards the perineum... as you sit up straight... Now, be careful not to yank or pull on your feet, but just move them in until you need to stop. And then if you need to, you can re-adjust as we stay in this pose—by gently pushing your knees down towards the floor with your hands, or progressively moving your feet in closer towards you... And as you stay here, remember to breathe down into your belly (hold 5 breaths).

Okay, now let's sit with the left leg stretched out in front of you, and bring the right foot in again--on the inside of the thigh as far up towards the pelvis as it will go... Now be careful, as with all of these postures, to do them slowly—so that you're not jerking and pushing yourself beyond your limit, and pulling muscles... And when you're ready, sitting up straight, and taking a deep breath in as you stretch the arms up over head, and lock the thumbs together... So just gently breathe in as you stretch up, and then on the outbreath reaching towards your toes, and lowering the head between the arms—over the left leg—just hanging wherever you wind up...If you like, you can take hold of the leg with the hands, and just gently each time you breath out, encouraging the forehead to come down a little bit further towards the leg... towards the knee, between the arms (hold for ½ breaths).

And when you're ready taking a deep breath in, and raising the arms, and then head and chest up again... so that you're sitting up straight again, stretching, breathing... And then on the outbreath doing the same thing again—coming forward and down... (hold ½ breath) And as you breathe in, the in-breath itself enhances the stretch, and each outbreath allows you to come down a little bit further—relaxing a little bit more into the stretch itself. The back of your body should be stretching here... Also, the muscles in the back of your leg...Just lengthen as you allow those muscles to relax and let go (hold 1 breath)...And then when you're ready, on an in-breath, stretching the arms back up (hold ½ breath), and then coming forward as far as you can...(hold 2 breaths).

And then when you're ready, raising up with the head between the arms, and coming back up... stretching up over the head... the fingers and thumbs locked... And breathing, expanding your chest fully in each in-breath... now just let your arms come down to the side until they make contact with the floor... And then just relaxing here for a moment (hold 2 breaths).

And now switching legs so that the right leg is out straight, and you're bringing the left foot so that it is on the floor—and on the inside of the right thigh (hold for everyone)...And when you're ready, taking that deep breath, and bringing your arms up as before. And
locking your thumbs together... breathing in this position. Your neck, back, or shoulders may be tight here. Now as a reminder, we don't want to over stretch here—just come to your limit. There may be a little discomfort, but making sure not to reach a point of pulling muscles or tearing anything...And when you're ready, on an outbreath coming forward and down—with the head between the arms, and hanging over the right leg now. And again, if you would like...taking hold of your leg with your hands... and on each outbreath encourage your head to come down a little more...encouraging your back to come down a little bit more as you sink into the posture (hold 5 breaths).

And when you're ready, inhale and come forward with the arms, and then up...Taking a few deep breaths as you bring the arms straight up over the head—sitting up straight...(hold ½ breath)And once again on an outbreath, coming forward and down over the leg (hold 1 breath). And in each outbreath letting go of the tension in any regions in the back of the leg, or the back itself...or in the shoulders... letting go of the fatigue... the effort... and just breathing here in the relaxed stillness. Just remain in this particular configuration for a bit (hold 2 breaths). And again when you're ready, in an in-breath...coming forward over the right foot—lift the arms, and sit up straight... breathing & stretching...and slowly bringing the arms down to the side, letting them float down until they make contact with the floor... and relax them (hold ½ breath).

And then while sitting up, place both legs in front of you, and just gently shake them out a little bit as you support yourself with your hands behind your back. Just shaking the legs out at the knees, and flapping your feet back and forth (wait 1 breath). Now just lay back down on your mat on your back in the corpse position—with the hands lying alongside your body without touching...and your palms open towards the ceiling—if that's comfortable... and with the feet falling apart from one another...And just breathing here (hold ½ breath)...And we’ll stay here as you breathe in and out from your belly. As your body sinks into the floor with each out-breath... just allow yourself to let go for a little while (hold 3 breaths).

And now let’s do the half bridge to reverse the stretch in the back somewhat, and balance it. And we do this by bending both knees so that the feet are flat on the floor, about a body width apart (wait for everyone)... and not taking hold of the ankles with the hands unless you can reach them. This isn't necessary—just reach your hands on the floor alongside your body (hold ½ breath).

When you’re ready, taking a deep breath in... and as you do, just lifting your pelvis off of the floor. And you can clasp your hands together below the arch in your back...Your shoulder blades and your head just rest on the floor in this position... with your thighs as parallel as possible to the floor. And your pelvis as high up as it will go... And just breathing in this position...right up into your belly. You should be able to see your belly expand every time you breath in... and recede every time you breath out... And in this position the chest is fully expanded, and you can breathe quite deeply in and out. (hold 1 breath). Some fatigue may be setting in—in the lower back or thighs... Try as much as you can, to maintain this posture with minimal muscular involvement, so that you’re just resting here as still as
possible... as if you were a statue in this particular configuration... Allowing your face to relax... and your arms (hold 1 breath).

And when you're ready, slowly lowering the pelvis back to the floor... and stretching back out, in the corpse with your arms alongside your body... and then when you’re ready lets draw both knees up to our chest, and wrap our arms around our shins... and just squeeze the chest as we rock a little from side to side... and gradually stretch out the back once again... Rocking from side to side... And then if you like, raising the head up, and this time rock from front to back... just gently rock as best you can, within your limits (wait to rock back & forth 3x). And when you're ready, once again, just stretching back out on your back (wait for them)...And letting go... relaxing... sinking into the floor, as your muscles release (hold 1 breath). Now we’ll lay here for several moments...breathing through our belly...slowly breathing in...and breathing out... and I'll let you know when we'll move on....(wait 7 minutes).

Now as we wrap up our time together tonight, just remember what it means for you to engage yourself in this kind of work... this way of giving yourself some time and energy... Giving yourself some nourishment that helps you nourish and maintain your health... We encourage you to try to make time on a regular basis, to continue using this yoga as we’ve been practicing...perhaps every-other-day...You could also use other postures that you may have picked up from your own experiences... It will provide a form of strengthening for your muscles, and your musculoskeletal system... and provides a time for stretching & relaxing yourself, as part of your daily routine—even if it’s just for 10 or 15 min—but on an ongoing basis... And as you do this over the weeks and months, and years, you'll be able to observe your limits, and dwell at your limits just enough, to observe the changes as you grow... and as you become stronger... and more flexible... and more balanced.
**Intervention Group Yoga-EM (Emphasis on Mindfulness)**

**Yoga Script**

**Weeks 1-2 only**

The yoga series we are about to do involves some simple body movements with deep relaxation. By practicing the series regularly—at least once a day, you are nourishing and strengthening your body. And participating in the process of optimizing your state of well-being and health.

As we go through our yoga series, you should follow along as best you can… doing what you feel capable of, and refraining from anything that does not seem to be appropriate for you at this time. Let your own sensitivity to your body override my indications of how long to hold any position we may be doing. And in the process of developing a deeper awareness and sensitivity to ourselves, we are basically working at the limits of what we can do at any given moment. It is important to be aware of these limits, and to dwell at their boundary long enough to experience them. But it’s just as important not to push beyond them. Instead, we are going to be looking deeply into them at each moment with full acceptance of them, and not trying to force ourselves to be different from how we are right now. If you do this work regularly—every day with care and attention, as we are learning how to do it, you will soon notice that your limits are changing and dissolving by themselves.

Now the best results will be achieved by not trying to achieve anything at all… even relaxation. It’s enough to simply do what it says to do, as best you can. Paying full attention to exactly how your body is feeling in each moment. If a stretch is producing the sensations of tingling, pulling, tugging, pins and needles, prickling, or hot feelings, burning, radiating, penetrating, or anything else, just feel what it is. Try to really notice what you’re feeling as precisely as possible. Even asking yourself: “What am I feeling right now? What is this feeling in my knee, my back, my leg etc.? Exactly where is it? What qualities does it have? Is my mind reacting to it, or responding to it?

If you wish to skip something we may be doing, just try assuming a comfortable posture, closing your eyes, and visualizing or sensing yourself doing what I am describing—in as much detail as possible. Remember to breathe diaphragmatically, and through the nose as much as possible. And to work with the eyes open sometimes, and closed at other times. Experimenting with the level of concentration you can achieve.

So now, let’s begin by lying back on our backs in a comfortable position… on your mat or pad on the floor. And allowing your body to settle into what we call the corpse pose, or the corpse position. You’re just lying on your back with your feet falling away from each another. And the arms alongside your body, with the palms open towards the ceiling—if that feels comfortable to you. (take ½ breath).

And just bringing your attention to your breathing at your belly—the abdomen expanding on the in-breath, and deflating on the out-breath—as if you have a little balloon in your
belly... and it's just expanding and deflating gently of its own accord, and you're not forcing it. And allowing your eyes to be gently closed at this point--if you feel comfortable with it. And just letting your body sink into the mat each time you breathe out... as your muscles let go. And as any residual tension, strain, or stress left over from what you've been doing leaves your body on each out-breath...And on the in-breath just breathing in a sense of vitality and lightness... and renewed energy. (take 1 breath)

Let's begin now on an in-breath—just taking a deep breath in—and as we do it stretching the arms up over the head, for the entire duration of the in-breath... so that it's a slow purposeful stretch. And when you reach the floor with the hands, just holding the breath for a moment, and stretching the entire body out. The fingers in one direction, and the heals in the other. Not too strenuously, but just feeling your entire body stretching right through the fingertips...and the wrists, and the elbows, and the armpits, and shoulders, ribcage—the entirety of your body stretching... every joint. (hold for 2 breaths) And then on the out-breath, now just letting the arms slowly and mindfully come back down so that you're in touch with them all the way—even though your eyes are closed, feeling your arms. And at a certain point just experiencing them make contact with the floor. And experiencing them relaxing and letting go as the muscles relax... and the floor takes on the work of holding them up... And just coming back to your belly and to the flow of your breathing. (take 2 breaths)

Now let's bend both knees so that the feet will be flat on the floor, and spread approximately a foot apart. The knees are pointing up towards the ceiling. Your arms are still relaxed alongside your body. (hold ½ breath) And we'll do our pelvic tilts by first contracting our belly, and just lifting the tailbone slightly off the floor. And pushing the base of the spine and the lower back down into the floor. And then tilting the pelvis the other way so that you make a space between the floor and your back—and there's a nice little archway there—that you can put your hand underneath. And if you keep your hand there, once again tilting the pelvis the other way, so that you're pushing down on the hand. And just the tailbone slightly coming up off of the floor—but not the pelvis. And just gently rocking back and forth—a nice oscillatory motion, moving the pelvis. Just tilting the pelvis back and forth. And just doing this at your own pace... as you breathe naturally. (allow them to do this for 4 breaths—or 4 tilts after you finish reading)

And then when you're ready just slowly coming to a stop. And wrapping both arms around your shins—drawing the knees up towards your chest. And just squeezing gently, lovingly... squeezing your knees down towards your chest. And if you like rocking a little bit from side to side, as you breathe. And if you want raising the head up so that you're basically massaging the muscles of your back as you do this—and your muscles on either side of the spine. And you can even try making circular motions as you do it—round in both directions, one after the other. (wait 2 breaths) And then try just shifting so that you're holding onto one knee, and stretching the other leg out. Starting perhaps with the left leg, and just stretching it out on the floor as you squeeze the right knee down towards the chest. Holding on with both hands—onto the knee and onto the shin, and if you want, bringing the head up in the direction of the knee. And perhaps if you can, putting the forehead on the knee— or just stopping wherever you wind up, just experiencing this as
your limit at this particular time. And not immediately backing away from it, but just breathing with it. So let’s just breathe here now.

If you notice some intense sensations at any point, just directing your breath to those regions in particular... each time you breathe in. And on the outbreath just letting go of those sensations and imagining them fall out with the outbreath. And now switching so that—with the head down on the floor, you’re drawing the left knee up towards the chest... and stretching out the right leg all the way. And again if you want, raising the head up, and breathing here... wherever you happen to stop. Listening to the messages that your body gives you about what your limits are, where you need to stop, or even back off. But if you can...just staying at these limits, and experiencing them a little more deeply than you might ordinarily. (hold for 1 breath) And then when you’re ready, just stretch them back out. Lying back down on the floor presuming the corpse posture, and bringing your attention back to breathing. The abdomen expanding gently on the in-breath... and falling back towards your spine on each out-breath. (hold for 3 breaths)

Now when you’re ready, see about rolling over and coming up onto your hands and knees. And in this position, we’re going to breathe out and arch the back—letting the head come down, and do our cat stretch. We’re really arching the back as high up as it will go, and the head comes down between the arms (hold for 2 breaths). And then after a moment or two reversing it on the in-breath—letting the belly come down, the pelvis tilt down, and the head come up as you breathe in... And feeling that stretching up, with the head looking back (hold for 2 breaths). And then exhaling again and arching the back once more (1 breath). And then once again breathing in, and rolling the belly, making the curve in the back, and the other direction, looking up (hold for 1 breath). And then exhaling once more arching the back, lowering the head, and then this time... as you breath in and lower your belly, straighten out the spine, & stretch the right leg up in the air. Lifting it up behind you, and as well raising the left arm. Stretching that out, so that you’re basically breathing and balancing... head lifted up, and the left arm and the right leg. And just stay here breathing. It takes some muscles, strength in the back, and the shoulders to do it. Working on strengthening your back (hold for 5 breaths).

And when you’re ready, lowering the knee to the floor, and the hand. And begin exhaling and arching the back, back up. Feeling the stretch—reversing what we just did. Stretching those muscles now in the back, instead of strengthening them. Letting them relax and lengthen. And then again on the in-breath, lowering the belly, raising the head, and this time straighten the spine again, and the left leg, & the right arm are ready. And breathing here requires a certain amount of balance, and just breathing as you do this. Feeling the sensations, experiencing your body in this particular posture, strange as it may seem, and just accepting yourself as you are... The feelings as they are at this particular moment, and breathing in and out with your experiences. (hold for 3 breaths) And when you’re ready, once again lowering the knee and the arm. Hands and knees on the floor, and arching the back as before... Then head down and really getting a good stretch on your back—without over-doing it, just easing up to your limits. <-- total in sequence: 2 cat stretches, & then straighten spine into the balance; then 1 more cat stretch & reversal. (Wait for them to do cat stretch & then reverse it 1x)
And when you're ready, lying back down once again on your back. (allow them to lay down). And for a moment with your hands lying alongside your body, and your feet falling away from each other, just feel what the consequences of having done this are. (wait 1 breath) And then once again let's just draw both our knees up towards the chest, and do what we were doing before—just squeezing the knees towards the chest. And bringing the head up, and rocking from side to side. Gently massaging the spine and the muscles on either side of the spine, to your own capacity—not over-doing it. Not trying to push through anything, but just gently massaging your back. If it's more comfortable to have your head down on the floor, then just doing it that way (2 breaths). And then when you're ready, putting your feet down on the floor as before. And doing a few pelvic rocks or pelvic tilts at your own pace... just to again loosen up the pelvis and loosen up the small of the back, get the belly contracting in rhythm with the spine (wait for 2 rocks). And if you do it at any speed you'll notice that if your head is relaxed, and your neck is relaxed— that your whole body will be moving in response to your just moving your pelvis. Rock your whole body back and forth... And when you're ready, just relaxing and stretching back out. Allowing your attention to once again, come to rest on your belly...and on the rhythmic movements of your belly with your breathing (hold 2 breaths).

Now let's do the half bridge pose. Which again involves bringing the feet to the floor and the knees up to the ceiling—but a little closer to the buttocks than they were before... and stretching the arms up over the head on the floor. And when you're ready, now lifting the pelvis. This isn't tilting, but lifting the whole pelvis and lower back off the floor. And staying in this half bridge pose with the body resting on the back of the head and neck, and the shoulders, and arms, and on the feet. And the rest of the body is arched... And you're just breathing here. You may begin to feel the thigh muscles as they fatigue a little bit. And just stay here with the breathing... experiencing the sensations of being in this particular posture... and as much as possible letting the arms be completely relaxed... the face... back of the head and neck... as you stay here breathing. If you need to come down at some point before I say to, just bring your pelvis down to the floor. And when you’re ready bring it back up. Taking responsibility for doing this your way, and the way you will get the most benefit out of it. Feeling the abdomen as it expands on the in-breath—and this posture has lots of room to expand. And as it deflates on the out-breath... if you haven’t done so already, just lower your pelvis back to the floor and stretch the arms once again back down alongside your body—stretching out the legs.

And allowing your body once again, to just relax and let go... and sink into the mat. And being willing to be present... noticing those thoughts that flip through your mind, And the content of them. Maybe telling you what you should be doing—what you need to do next. Maybe about the future, or about the past. And whatever they are... just letting them come and go through the mind without being particularly disturbed, or distracted by them... Or in fact, giving them any energy at all. And instead, we're focusing on your experience of the present, and the fact that you are here now... lying on the floor, and nourishing yourself in this way. Contributing to strengthening your body. Freeing yourself from tension and stress. Developing a sense of your own capacity to control your health to some extent. And
to direct your life, and improve the quality of your health and well-being. (hold for 2
breaths)

Now let’s do a simple twist stretch where we lace the fingers together behind the head and
draw the feet up towards the buttocks again. But this time together, knees together as
well...breathing in and out a few times. And when you’re ready letting the knees go over
gently to the right. As far as they’ll go to the floor. Gently... If the left foot will come up off
the floor and be on top of the right foot, the left knee may or may not be touching the right
knee. Just letting it hang—not forcing it. And then turning with your head, and looking to
the left and looking beyond your left elbow. And just feeling the stretch across the chest,
and into the left armpit, or wherever it is that you feel it. And breathing in and out with this
posture, as you try to relax into it. Drop down into a state where you’re just allowing
gravity to pull you down, and you’re not resisting. And every time you breath in, you feel
the abdomen stretch and contribute to the feeling of being stretched in the chest and belly.
And every time you breath out, just sinking a little bit more into the stretch. As you relax
and let go, as your muscles let go and lengthen (hold for 2 breaths).

And then on an in-breath bringing the knees back up to the vertical. And then letting them
go over to the floor in the other direction—to the left. That will bring your right foot off of
the floor on top of the left. Right knee over the left, and perhaps touching it. And turning
with the head and looking to the right. And again, just settling in on each outbreath. Letting
your body fall into the floor... straight down—each point going straight down. Accept the
stretch, and accept your body being in this position. Full awareness of each moment, and
full awareness of your breathing... and of the sensations associated with being in this
particular situation... this particular position. And when you’re ready, bring your knees
back to the perpendicular... releasing the hands and stretching back out in the corpse
posture. (hold for 2 breaths)

So now let’s bend the left knee so that the foot is on the floor alongside the right knee. (let
everyone get in the position). And we will just take a deep breath in... and as we breathe
out, letting the right leg come up with the knee straight—as far as it will go, if possible. All
the way up to the perpendicular, so that it’s up towards the ceiling. But if not, just wherever
you wind up is fine. That’s exactly where you’re supposed to be right now. And then
maintaining this posture and your breathing. And if you notice that your arms are getting
involved in pushing on the floor, or your shoulders are tight, or your face is tense. Just
letting these parts of your body completely relax—since they’re not involved in what you’re
doing. Focusing your attention on your belly. And even though your belly is somewhat
contracted, being involved in lifting the leg like this... it can still expand on the in-breath,
and deflate on the out-breath. And notice, if that in fact, is true for you at this time.

And if you like you can move the foot—just crank the foot around the ankle a few times in
each direction, and feel the muscles that are involved in moving the foot... as you breath... And
those of you who choose to, can intensify this a little bit more by stretching out your
left leg if you like, or by taking some time to lift the head up towards the knee as you take
hold of the leg beyond the knee. And that will stretch the back out a little bit more (hold for
3 breaths). And then when you’re ready, slowly letting the leg come back down... taking
your time. Letting it come back slowly… and totally mindfully, so that you’re really aware of it all the way down. And when it does make contact with the floor, experiencing the wave of relaxation that flows through the leg, and flows through your body… and ultimately leaves with the out-breath. As the muscles let go from having done some lifting, and contracting, they release and lengthen. And then reverse the positions of the legs now so that the right leg is bent and the foot is alongside the left knee (wait for everyone). And when you’re ready, taking a deep breath in, and allowing the left leg to come up as far as it will go. And just settling in here, and experiencing the leg being up. Letting your back relax… and your shoulders, your arms, and your face…(hold for 2 breaths) and if you like, cranking the foot around (hold for 2 breaths). And then those of you who were doing the more intense stretches—just going ahead and doing that at your own pace if you feel like it. Whatever it is that you’re doing—just being totally present, experiencing the sensations and feelings in your body as you have this leg up here.

Notice that the belly and the contraction of abdominal muscles do part of the lifting. And when you’re ready, slowly, inch by inch, letting the left leg come back down. And you may have your eyes closed at this point, or open, but just without seeing the leg, experiencing it as it comes down. And when it does make contact with the floor, again experiencing the wave of relief as the muscles let go… and as you sink deeper into the floor. And just stretching out the other leg. And coming back to your belly… and to the flow of your breathing. Full awareness of each in-breath… for its entire duration. And full awareness of each out-breath for its entire duration… A willingness to be totally present. Right now, with what you’re doing, with what you’re experiencing, and feeling at this moment. Allowing yourself to really fully experience being. (hold 1 breath).

And when you’re ready, we’ll now roll on over to our left side (wait for everyone). And prop your head up using your left hand… and put the right hand on the floor in front of your belly. And now we’ll get settled for a moment just breathing (wait for everyone to get in position). And when you’re ready, on an in-breath slowly lifting the right leg up to the side. Straight up… and just holding it here wherever it winds up… and breathing… Perhaps closing your eyes so that you can really experience in a concentrated state what this feels like. And if you want, you can even take your fingers and probe the muscles along your leg, and the hip and into your side to see what’s working and what’s not. And notice the buttock is not involved in this. And if you would like, you can crank the foot a few times around the ankle in both directions (do this for 3 breaths). Raising up perhaps a little higher… and a little higher. Breathing… experiencing the intensity, but asking yourself whether you can handle this in terms of your own body and your own limits at this particular time.

If it’s too intense, backing off its okay… just breathing through the intensity, and when you’re ready, slowly letting the leg back down and slowly taking your time. And when it does come down—again experiencing a wave of release. And if you like, when you’re ready on another in-breath—raising the right leg back up once again, and just breathing with it here (2 breaths). And slowly letting it come down. (Wait for them to come back down)

And then rolling over onto your other side. Propping your head up with your right hand now. Lying on the right side. And when you’re ready, lifting the left leg up as high as it will
comfortably go. The left hand in front of the belly on the floor. Cranking the foot around the ankle a few times in both directions (3 breaths). And then lowering slowly, in touch the whole way down. And then if you feel up to it, raising up once again. And we’ll hold here. (2 breaths) And slowly back down. (Wait for them to come back down)

And then let’s roll over onto your belly (wait for them to get in position). And in this position, let’s lie on the left side of your face—with your arms alongside your body, and your palms open towards the ceiling. And now in this position you can feel your belly pressing against the floor each time when you breath in... And relaxing against your belly when you breath out. Allowing your whole body to just sink into the floor with each exhalation. Head, shoulders... the arms... the back... the pelvis, trunk, the legs... they just fall into the floor. And letting the floor, or whatever you’re on, hold you up (hold for ½ breath). And then in this position we’re going to move the head now—so that the chin is on the floor. And then, without using our hands at all, and slowly, as we breathe in, lift the right leg up with the knee straight... and just holding it here as you breath (hold 1 breath). And if you put your hands back now, and probe your fingers along the leg and the buttocks you’ll notice that your buttock on the right side is tight, and is involved in lifting the leg in this way, and that the whole back on that side is involved in lifting this heavy weight... And just breathing... feeling... experiencing lifting your leg. And when you’re ready, just slowly letting the leg come down. And relaxing on the right side of your face now, sinking into the floor (3 breaths). And then with your chin off the floor once again... on an in-breath, raising the other leg up as much as possible... keeping the arms completely relaxed, your face completely relaxed... and just letting the back muscles do the work (2 breaths). And again slowly come down. And relax (3 breaths).

And now when you’re ready, putting our chin on the floor once again. (hold ½ breath) And then just lifting the head up slowly... and the neck, and the shoulders, and the chest. Keeping the feet on the floor, and just lifting in what we call the lower cobra. As if you were a snake and had no arms or legs, and you are just using your trunk muscles. In particular, use your back muscles, and neck, and head muscles to lift you up... breathing as high up on the ribcage as you can get. Feeling the belling rise a little bit higher each time you breathe in... And just breathing, lifting, looking somewhat back over your head if you can. (hold for 2 breaths) And when you’re ready, slowly, slowly... slowly, coming down. And resting on the left side of your face, and just again allowing your body to sink into the floor as the muscles release and let go... and lengthen, and soften (hold for 2 breaths).

And when you’re ready, rolling over now back onto your back. (Wait for everyone).

And then bringing your knees up to your chest, and putting your hands flat on the floor below the buttocks... If you have high blood pressure, and have been told by a doctor that you shouldn’t be doing poses that may increase your blood pressure, then just sit this one out, and relax while lying back on your back. Everyone else, once you get into the pose, it’s important to refrain from turning your head to the right or left. If you would like to look over at Javier/Brandon at the front of the room for guidance, you can do so now before attempting the pose yourself. If necessary, you can roll out of the pose again and then
glance over. So whenever you’re ready, just push down with your hands, and roll your tailbone off the floor until your knees move towards your forehead—or some place in this direction, and then let your hands hold & support your lower back—fingertips pointing towards your tailbone... And just stay there hanging upside down with the feet kind of up in the air. The knees bent, and your lower back off the floor... and you’re resting on the back of your neck and head and shoulders. And just breathing in this upside down position—if you feel comfortable with it (hold for 2 breaths). And then rolling back out of it onto the floor... And relaxing with the feet back down and stretched out. The hands alongside the body.

And we’ll just finish up by simply becoming aware of lying here. Allowing the eyes to close—if we feel comfortable with it. And becoming aware of the wavelike movements of breathing at the belly. (hold 1 breath) And as we lie here, just letting go of the thoughts and memories, of what we’ve done... what we’ve asked our body to do up to this point. (hold \( \frac{1}{2} \) breath) And just becoming aware of being right here... right now. Centered and focused... riding the waves of each breath. On each out-breath, letting go and sinking deeper into the floor... and into a state of relaxed stillness, and awareness. And in the stillness, you are aware of things as they are. The experience of your body as a whole. And of the sensations, and feelings of your body as pure sensation and feeling. (hold 2 breaths)

And as we come to an end now, you might want to take a moment and give yourself some credit, and acknowledge having taken the time to do this... and recognize that by doing it with care and attention as we’ve been practicing... it compliments and amplifies the natural healing processes of our bodies... and that this is very much a time that you’re using to work on yourself... to develop greater strength and flexibility. Not simply in your body, but also in one’s emotional life. In becoming more flexible and creative in our relationship to life itself. In developing a deeper appreciation for one’s life, and the feelings and the limits associated with it. So just now experiencing... in this stillness... the fullness and the depth of this moment lying here... completely relaxed... at one with yourself right now... Centered and balanced, in an intuitive knowing of who you are as your life continues to unfold from moment to moment. (hold 1 breath) I’ll let you stay here for a couple of moments, and I’ll let you know when it’s time to get up (5 minutes).

**Weeks 3-4 only**

Let’s begin this Hatha yoga sequence with some standing postures. Remember that we will be emphasizing obtaining moment to moment awareness during this sequence...and that we’re working in a nonjudgmental mode... Exploring our boundaries and our limits in a gentle, but determined way. Not trying to beat the body into shape, but simply nourishing it with this special kind of attention... On a regular basis as we have been doing.

For some of these standing postures, you might want to do them on occasion in front of a full length mirror, to give you an external view of what is involved. Remember throughout—to breath diaphragmatically as much as possible...and with awareness of your breathing as we go along.

Now let’s begin by standing with both feet flat on the floor...(wait for them). The arms alongside your body... just dangling in an erect, relaxed posture. The feet may be 2 or 3
inches apart (hold for ½ breath). And on an in-breath we will just stretch the arms up to the side, with the elbows straight—and locking hold of the thumbs. Just stretching up as we complete this in-breath as far as we can... staying on the flats of our feet... And then continuing to breathe as we stretch (hold for 3 seconds). And just feeling this stretch through the elbows and the armpits...through the ribcage...—right out of the pelvis, and anywhere else that you feel it along your body... from head to toe. Just breathing here as we stretch (hold for 5 seconds).

And when you’re ready, unlocking the thumbs and stretching the palms out to the sides as you slowly lower your arms. And you’ll probably feel some tingling. And your wrists will be bent—fingers pointing towards the ceiling as they come down. And slowly, mindfully, letting your arms come down until they are simply dangling—limp by your side... And if you will, just allowing your eyes to close (hold 2 seconds)... centering your attention in your belly. And observing the flow of your breathing (hold 2 seconds). And of course tuning into the sensations in your arms... and what the effects of just having done this simple stretch are (hold for 3 seconds).

Now let’s take another deep breath in, and this time just stretch the right arm up. And we’ll do what we call picking grapes—where we just try to reach something that’s just out of reach... as we continue to breathe. And if you like, lifting the left heal at the same time, and just stretching up... Left arm is down alongside your body...reaching, & stretching (hold 3 breaths). And then slowly lowering the right arm... And then raising the left arm and the right heel... and again picking these grapes that are just out of reach. And feeling the stretch coming right out up of the left leg, left hip... stretching, reaching, breathing (hold 3 breaths). And slowly coming down (hold ½ breath).

Now let’s again take a deep breath in, and stretch the arms up to the side as we did to begin with. Locking the thumbs together... and this time just stretching, bending over to the right side—keeping the head between the arms, and just breathing as you hang over the right hip. Just finding where you stop... and breathing here as you explore the sensations, and the limit of your body in this particular bend. The left side will be stretched, and you’ll feel it here (hold for 5 breaths). And then inhaling and bringing the arms up, and straightening out again (hold for 1 breath). And on the exhalation going over to the left...just stretching here. If you like, you can let go of the thumbs and just have the arms just be parallel, as you stretch out the right side bending over the left hip...Breathing... (hold 2 breaths). And when you’re ready, coming back up. Stretching up one last time (hold ½ breath). And slowly lowering the arms to the side as before. And just letting them dangle here... as we once again close the eyes and center ourselves in the standing posture...And bringing the attention to your belly (hold 2 breaths).

Now let’s roll the shoulders around in a forward direction. Remembering that you can break it down into 4 separate movements. The first being raising the shoulders up towards the ears as far as they’ll go, and squeezing them together in front of the chest, and then letting them drop. You’ll just relax here... And then try to squeeze your shoulders together behind the back... touching the shoulder blades together. The arms are passive in this, and just hang the whole time. So continue this with a big rowing... rolling motion as you move
the shoulders around (wait for completion of 6 forward rolls). And when you’re ready, back in the other direction (wait for 6 reversed). And then just coming back to stillness...just standing. Feeling the effects of what we've just done...The sensations in the neck and shoulder region (hold for 1 breath).

And then when you’re ready...let’s do our neck rolls where you lower the chin to the chest, and then move the head so that slowly the left ear is over the left shoulder, and then keep on going until the head is all the way back. And the right ear over the right shoulder, and finally bringing the chin back across the chest... And just moving in this way... breathing in for the first half as the head goes back, and out for the second half as the head comes forward... in a big... slow... circular movement. And letting your eyes make a big circle around the room as you do it (after saying last sentence, wait 3 head rolls). And then when you’re ready, reversing the direction (wait 5 head rolls). And then coming back to standing... to move into a neutral position...(wait for them to get in position). And begin centering... grounding yourself...And getting in touch with the feet making contact with the floor...Letting the body be completely relaxed—but at the same time, alert...poised...balanced...as you breathe (hold 2 breaths).

Now let’s work at some balancing—and at the same time, strengthening the muscles on the side of the body. Let’s begin by slowly letting the weight shift from both feet over onto just the left foot...And as we do that, raising the arms up, so that they're parallel to the floor. And just raising the right leg up as much as it will come... And staying here breathing. And perhaps focusing on a spot on the wall, and just holding it here... standing on the left leg. The right leg out to the side; the arms stretched out to the side... and breathing here... And trying to maintain your balance as best you can (hold 25 more seconds). And when you’re ready... slowly, letting the leg come down, and the arms come down at the same time—so that the weight gradually shifts from the left foot to being taken on by both feet (wait 3 sec). And then when you’re ready... breathe while raising the arms up again... And as you do, raising the left leg up now... let your right leg hold all of the weight... Stretching out with the arms, raising the leg up as far as you can, and just holding it here... balancing... and breathing. Using the focus of your eyes on a spot to keep you concentrated and balanced (hold 20 more seconds). And perhaps raising the leg up a little more—a little higher. Stretching the arms out, breathing deeply into the belly (hold 5 seconds). And when you’re ready, slowly letting the leg and the arms come back down (waiting for them to come down). And just coming to rest here... standing (hold 2 breaths).

Now let’s put our hands on our hips, and gently turn just from the waist—over the right shoulder. Just looking behind you as far as you can... keeping the hips facing forward, and turning the head and the chest (hold 10 sec)... And then coming back to center (wait 2 sec). And turning—looking over the left shoulder now in the same way... Breathing (hold 10 secs). And then back to center (wait 2 sec). And then keeping your hands on your hips... Now turning from the ankles so that you’re turning the whole body—accept for the feet, to the right as far as you can. Tracking with the eyes—going as far as you can to the right... Breathing as you do it (hold 8 secs). And when you’re ready, slowly coming back through center, and turning from the ankles all the way to the left. When you get as far as you can—just breathing with it (hold 10 secs). Be aware of your body at this time, and what it’s
feeling at various places. And then coming back to center—letting the hands dangle once more (hold 1 breath).

When you’re ready, doing a forward bend...Let’s bend the knees slightly, and take a deep breath in. And stretching the arms up over the head as we did before... Deep breath in, and then on the exhalation just bending over from the waist and hanging. Coming down until your head is hanging towards the floor. The arms are hanging towards the floor, or touching the floor... and just resting in this position...hanging... and breathing, with the knees slightly bent... And every time you breath in...feeling the actual in-breath expand against the ribcage, and stretch the back a little... And as you breath out, just surrendering to the gravitational pull and letting the muscles lengthen and relax... as your head sinks a little bit deeper—a little bit further down towards your knees, and the floor (hold 2 breaths). Slow, deep, diaphragmatic breathing here (hold 2 breaths).

And if you like, while you’re down here... you might want to stretch one arm out—say the right, until it’s parallel to the floor...And just holding it here...breathing, and letting it come back down. And then stretching the left arm up and out...until it’s parallel with the floor... and breathing with it... And then letting it down...Just hanging & breathing. And then when you’re ready, slowly standing back up with the lower part of your spine first—so that you’re straightening first the hips, and then the central part of the back, and then the upper back. And then—and only then, raising the head back up. Coming into a balanced standing position. If you care to, closing your eyes...and again focusing on your breathing at your belly... and tuning to the effects of this forward bend...Be aware of your breath...Perhaps you’ll also be aware of your heart beating... and just letting everything settle (hold 3 breaths).

And now we’ll do the chair—which involves stretching both arms out in front of you, and having the feet a body-width apart. And then imagine that you’re sitting down on a chair that’s not there. An imaginary chair. And just coming down to a sitting position as best as you can, with your head and back as erect as you can keep them. Although your back will probably be bent forward some in this pose. So you’re slowly bending the knees, and sitting down until you’ve reached a point where you’re as close as possible—as if there were a chair there... As much as possible, just stay there breathing (hold 3 breaths). You may feel this in your ankles, or in the small of your back... And just stay with the feeling of sitting here... And the strength that is required to maintain this... and your arms are helping you balance... and remember to breathe... See if you can drop down a little bit lower—just staying at your limit wherever it may be (hold ½ breath). And when you’re ready, just standing back up, and letting your arms hang... And if you’d like just shaking them out a little. And taking a long, deep breath in (1/2 breath)... and just letting it out (1/2 breath)... Letting out all of the tension and fatigue—that builds up from doing something like that... Just let it leave with the out-breath (hold 2 breaths).

And now let’s do the tree...which involves taking the right foot, and drawing it up the other leg—putting it as high as you can manage—on the inside of your left leg...preferably not directly on the knee. Perhaps high up on the thigh, perhaps lower on the thigh, or even below the knee. Wherever you can manage to put it. And then as best you can, balancing on
the left leg, and bringing the palms together in clapping position over your chest (hold 1 breath). And just breathing like this (hold ½ breath)... and picking out a spot either on the wall, or on the floor 3 or 4 feet in front of you. And focusing your gaze on that spot (hold ½ breath). And then when you’re ready, stretching the arms up over your head as far as they’ll go. And clapping your fingers together—pressing the upper arms against your ears. And breathing deeply down into your abdomen on each in-breath... and releasing out from the abdomen from your belly on each out-breath... And just balancing here in the tree. Stretching up... If possible keeping the left knee straight (hold 5 breaths).

When you’re ready, slowly unclasping your hands and letting the arms come down to the side. And when they are about horizontal, lifting the knee up, and bringing the right foot down alongside the left foot—as the arms come down. Sort of as if you were making a three point landing and totally under your control. Let’s just take a deep breath in & out here (hold 1 breath). And then allowing the weight to shift to the right foot as you shift the left foot and place it inside the right leg... wherever it will go...And starting with the palms over the chest. And when you’re stabilized with the balancing... stretch your arms up over the head, and clasp the hands again. Press the upper-arms against your ears as you breathe, and balance (5 breaths). Stretching a little bit higher (1/2 breath)... And then unclasping the hands, and slowly letting the arms come down until they’re horizontal...when you’ll lift the left knee up and slowly come down with the arms and the foot... And then you’re standing again on both feet (wait for everyone). Allowing your eyes to close... And just begin again, centering your awareness in your belly... and again centering your body as a whole, as you stand here (stay for 3 breaths).

And then, when you’re ready, sitting down...And we’ll do some stretches from a sitting position (wait for them to sit). Now let’s begin by bringing the soles of the feet together, with our knees flopped out to the side—and lacing the fingers beyond the toes... And slowly drawing the heels in towards the pelvis—towards the perineum... as you sit up straight... Now, be careful not to yank or pull on your feet, but just move them in until you’ve reached the point where your body is telling you to stop. And then if you need to, you can re-adjust as we stay in this pose—by gently pushing your knees down towards the floor with your hands, or progressively moving your feet in closer towards you... And as you stay here, remember to feel the sensations of the stretch, and breathe down into your belly (hold 5 breaths).

Okay, now let’s sit with the left leg stretched out in front of you, and bring the right foot in again—on the inside of the thigh as far up towards the pelvis as it will go... Now be careful, as with all of these postures, to do them slowly, and mindfully—so that you’re not jerking and pushing yourself beyond your limit, and pulling muscles...And when you’re ready, sitting up straight, and taking a deep breath in and as you stretch the arms up over the head and lock the thumbs together... So just gently breathe in as you stretch up, and then on the out-breath reaching towards your toes, and lowering the head between the arms—over the left leg—just hanging wherever you wind up... If you like, you can take hold of the leg with the hands, and just gently each time you breath out, encouraging the forehead to come down a little bit further towards the leg... towards the knee, between the arms (hold for 3 breaths).
And when you’re ready, taking a deep breath in, and raising the arms, and then the head and chest up again... so that you’re sitting up straight again, stretching, breathing... And then on the outbreath doing the same thing again—coming forward and down... (hold ½ breath). And as you breath in, just feeling the breath itself enhance the stretch,... and each outbreath allows you to come down a little bit further—relaxing a little bit more into the stretch itself. Feeling the muscles in the back of your body behind the knee... the hamstrings... all the muscles in the back of the leg... and feeling the muscles in the back, the neck... just lengthen as you allow them to relax and let go (hold 1 breath)... And then when you’re ready, on an in-breath, stretching the arms back up (hold ½ breath), and then coming forward as far as you can... (hold 2 breaths).

And then when you’re ready, raising up with the head between the arms, and coming back up... stretching up over the head...the fingers and thumbs locked... And breathing... feeling your chest expand fully on each in-breath... Now just let your arms come down to the side until you feel them make contact with the floor...And then just relaxing here for a moment (hold 2 breaths).

And now switching legs so that now the right leg is out straight and you’re bringing the left foot so that it is on the floor—and on the inside of the right thigh (hold for everyone)... And when you’re ready, taking that deep breath, and bringing your arms up as before. And locking your thumbs together ... breathing in this position. Feeling any places in the neck, back, or shoulders that may be tight...not over-stretching... simply coming into your limit feeling some creative stretching coming on. There may be a little discomfort, but making sure not to reach a point of pulling muscles or tearing anything...And when you’re ready, on an outbreath coming forward and down—with the head between the arms, and hanging over the right leg now. And again, if you would like... taking hold of your leg with your hands... and on each outbreath encouraging your head to come down a little more, encouraging your back to come down a little bit more as you sink into the posture (hold 5 breaths).

And when you’re ready, inhale and come forward with the arms, and then up... Taking a few deep breaths as you bring the arms straight up over the head—sitting up straight... (hold ½ breath) And once again on an outbreath coming forward and down over the leg (hold 1 breath). And directing your breath to any regions in the back of the leg, or the back itself... or the shoulders—wherever you’re feeling the stretch in particular...And in each outbreath letting go of the tension... letting go of the fatigue...the effort... and just breathing here in a state of relaxed awareness... and stillness... Just experience within yourself—living moment to moment, with your body in this particular configuration (hold 2 breaths). And again when you’re ready, in an in-breath... coming forward over the right foot—lift the arms, and sit up straight... breathing & stretching... and slowly bringing the arms down to the side, letting them float down until they make contact with the floor... and relax them (hold ½ breath).

And then while sitting up, place both legs in front of you, and just gently shake them out a little bit as you support yourself with your hands behind your back. Just shaking the legs out at the knees, and flapping your feet back and forth (wait 1 breath). Now just lay back
down on your mat on your back in the corpse position—with the hands lying alongside your body without touching... and your palms open towards the ceiling—if that’s comfortable... and with the feet falling apart from one another.
And just breathing here (hold ½ breath). Aware of your belly as it expands on the in-breath, and deflates on the out-breath... And aware of your body as a whole as you lie here in stillness... Aware of whatever thoughts that may be moving through your mind... Aware of sounds... Aware of sensations... the flux of feelings in your body in various parts of your body...just lying here in a state of moment to moment awareness... as you relax into each breath...As your body sinks into the floor in each outbreath... as you let go (hold for 5 breaths).

And now let’s do the half bridge to reverse the stretch in the back somewhat, and balance it. And we do this by bending both knees so that the feet are flat on the floor, about a body width apart (wait for everyone)... and not taking hold of the ankles with the hands unless you can reach them. This isn’t necessary—just reach your hands on the floor alongside your body (hold ½ breath).

When you’re ready, taking a deep breath in... and as you do, just lifting your pelvis off of the floor. And you can clasp your hands together below the arch of your back...Your shoulder blades and your head just rest on the floor in this position... with your thighs as parallel as possible to the floor. And your pelvis as high up as it will go...And just breathing in this position... right up into your belly...feeling, and in fact seeing your belly expand every time you breath in... and recede every time you breath out... And in this position the chest is fully expanded, and you can breathe quite deeply in and out (hold 1 breath). Be aware of the fatigue that may be setting in—in the lower back or thighs... Try as much as you can, to maintain this posture with minimal muscular involvement, so that you’re just resting here as still as possible... as if you were a statue in this particular configuration...Timeless...just what you are in this moment... and allowing your face to relax...and your arms (hold 1 breath).

And when you’re ready, slowly lowering the pelvis back to the floor... and stretching back out, in the corpse with your arms alongside your body... and then when you’re ready lets draw both knees up to our chest, and wrap our arms around our shins... and just squeeze the chest as we rock a little from side to side... and gradually stretch out the back once again...Rocking from side to side... And then if you like, raising the head up, and this time rock from front to back... just gently rock as best you can, within your limits (wait to rock back & forth 3x). And when you’re ready, once again, just stretching back out on your back... And letting go... relaxing... sinking into the floor, as your muscles release (hold 1 breath). Bringing your attention once again to your belly... And just staying in touch with your body...(hold 1 breath) Now we’ll lay here for several moments...and I’ll let you know when we’ll move on... (hold 6 minutes).

Now as we wrap up our time together tonight, just remember what it means for you to engage yourself in this kind of work... this way of giving yourself some time and energy... Giving yourself some nourishment that helps you nourish and maintain your health... We encourage you to try to make time on a regular basis, to continue using this yoga as we’ve
been practicing...perhaps every-other-day...You could also use other postures that you may have picked up from your own experiences... And introducing a little bit of this body awareness will provide a form of strengthening for your muscles, and your musculoskeletal system... and provides a time for stretching & relaxing yourself, as part of your daily routine—even if it’s just for 10 or 15 min—but on an ongoing basis... And as you do this over the weeks and months, and years, you’ll be able to observe your limits, and dwell at your limits just enough, to observe the changes as you grow... and as you become stronger... and more flexible... and more balanced.
Appendix C

Instructor Quality of Yoga Intervention Survey

Quality of Yoga Intervention

(Not at all) 1 2 3 4 5 6 7 (Absolutely)

1. The two conditions are clearly different in terms of the mindfulness components.

2. The Y group does not include mindfulness elements within the yoga instructions.

3. The Y group is representative of yoga without mindfulness interventions within the Community.

4. The Y group is a good example of a yoga series without a mindfulness intervention.

5. The flow of instructions in the Y group represent a natural yoga session
Appendix D

Kentucky Inventory of Mindfulness Skills (KIMS)

Please rate each of the following statements using the scale provided. Circle the number that best describes your own opinion of what is generally true for you.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never or very rarely true</td>
<td>Rarely true</td>
<td>Sometimes true</td>
<td>Often true</td>
<td>Very often or always true</td>
</tr>
</tbody>
</table>

I notice changes in my body, such as whether my breathing slows down or speeds up ........................................1 2 3 4 5

I'm good at finding the words to describe my feelings ........................................1 2 3 4 5

When I do things, my mind wanders off and I'm easily distracted ........................................1 2 3 4 5

I criticize myself for having irrational or inappropriate emotions ........................................1 2 3 4 5

I pay attention to whether my muscles are tense or relaxed ........................................1 2 3 4 5

I can easily put my beliefs, opinions, and expectations into words ........................................1 2 3 4 5

When I'm doing something, I'm only focused on what I'm doing, nothing else ........................................1 2 3 4 5

I tend to evaluate whether my perceptions are right or wrong ........................................1 2 3 4 5

When I'm walking, I deliberately notice the sensations of my body moving ........................................1 2 3 4 5

I'm good at thinking of words to express my perceptions, such as how things taste, smell, or sound ........................................1 2 3 4 5
I drive on “automatic pilot” without paying attention to what I’m doing. .............................................................. 1 2 3 4 5

I tell myself that I shouldn’t be feeling the way I’m feeling. .............................................................. 1 2 3 4 5

When I take a shower or bath, I stay alert to the sensations of water on my body. .............................................................. 1 2 3 4 5

It’s hard for me to find the words to describe what I’m thinking. .............................................................. 1 2 3 4 5

When I’m reading, I focus all my attention on what I’m reading. .............................................................. 1 2 3 4 5

I believe some of my thoughts are abnormal or bad and I shouldn’t think that way. .............................................................. 1 2 3 4 5

I notice how foods and drinks affect my thoughts, bodily sensations, and emotions. .............................................................. 1 2 3 4 5

I have trouble thinking of the right words to express how I feel about things. .............................................................. 1 2 3 4 5

When I do things, I get totally wrapped up in them and don’t think about anything else. .............................................................. 1 2 3 4 5

I make judgments about whether my thoughts are good or bad. .............................................................. 1 2 3 4 5

I pay attention to sensations, such as the wind in my hair or sun on my face. .............................................................. 1 2 3 4 5

When I have a sensation in my body, it’s difficult for me to describe it because I can’t find the right words. .............................................................. 1 2 3 4 5
I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.  
1 2 3 4 5

I tend to make judgments about how worthwhile or worthless my experiences are.  
1 2 3 4 5

I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.  
1 2 3 4 5

Even when I'm feeling terribly upset, I can find a way to put it into words.  
1 2 3 4 5

When I'm doing chores, such as cleaning or laundry, I tend to daydream or think of other things.  
1 2 3 4 5

I tell myself that I shouldn't be thinking the way I'm thinking.  
1 2 3 4 5

I notice the smells and aromas of things.  
1 2 3 4 5

I intentionally stay aware of my feelings.  
1 2 3 4 5

I tend to do several things at once rather than focusing on one thing at a time.  
1 2 3 4 5

I think some of my emotions are bad or inappropriate and I shouldn't feel them.  
1 2 3 4 5

I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.  
1 2 3 4 5

My natural tendency is to put my experiences into words.  
1 2 3 4 5

When I'm working on something, part of my mind is occupied with other topics, such as
what I'll be doing later, or things I'd rather be doing..........................1 2 3 4 5
I disapprove of myself when I have irrational ideas.................................1 2 3 4 5
I pay attention to how my emotions affect my thoughts and behavior..............1 2 3 4 5
I get completely absorbed in what I'm doing, so that all my attention
is focused on it......................................................................................1 2 3 4 5
I notice when my moods begin to change..................................................1 2 3 4 5
Appendix E

Positive and Negative Affect Scale (PANAS)

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 have felt this way in the past two weeks. Use the following scale to record your answers:

1 very slightly or not at all  2 a little  3 moderately  4 quite a bit  5 extremely

___ interested  ___ irritable
___ distressed  ___ alert
___ excited  ___ ashamed
___ upset  ___ inspired
___ strong  ___ nervous
___ guilty  ___ determined
___ scared  ___ attentive
___ hostile  ___ jittery
___ enthusiastic  ___ active
___ proud  ___ afraid
Appendix F

Perceived Stress Scale (PSS)

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

1. In the last month, how often have you been upset because of something that happened unexpectedly? .......................... 0 1 2 3 4

2. In the last month, how often have you felt that you were unable to control the important things in your life? .......................... 0 1 2 3 4

3. In the last month, how often have you felt nervous and “stressed”? .......................... 0 1 2 3 4

4. In the last month, how often have you felt confident about your ability to handle your personal problems? .......................... 0 1 2 3 4

5. In the last month, how often have you felt that things were going your way? .......................... 0 1 2 3 4

6. In the last month, how often have you found that you could not cope with all the things that you had to do? .......................... 0 1 2 3 4

7. In the last month, how often have you been able to control irritations in your life? .......................... 0 1 2 3 4

8. In the last month, how often have you felt that you were on top of things? .......................... 0 1 2 3 4

9. In the last month, how often have you been angered because of things that were outside of your control? .......................... 0 1 2 3 4

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? .......................... 0 1 2 3 4
Appendix G

State Trait Anxiety Inventory (STAI)

**SELF-EVALUATION QUESTIONNAIRE**

Please provide the following information:

**DIRECTIONS:**
A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

1. I feel calm .......................................................... 1 2 3 4
2. I feel secure .......................................................... 1 2 3 4
3. I am tense ............................................................ 1 2 3 4
4. I feel strained ............................................................ 1 2 3 4
5. I feel at ease ............................................................ 1 2 3 4
6. I feel upset ............................................................. 1 2 3 4
7. I am presently worrying over possible misfortunes .............. 1 2 3 4
8. I feel satisfied ........................................................... 1 2 3 4
9. I feel frightened ......................................................... 1 2 3 4
10. I feel comfortable ................................................... 1 2 3 4
11. I feel self-confident .................................................. 1 2 3 4
12. I feel nervous ......................................................... 1 2 3 4
13. I am jittery ............................................................ 1 2 3 4
14. I feel indecisive ....................................................... 1 2 3 4
15. I am relaxed .......................................................... 1 2 3 4
16. I feel content ........................................................... 1 2 3 4
17. I am worried ........................................................... 1 2 3 4
### DIRECTIONS

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you generally feel.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
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<tbody>
<tr>
<td>18. I feel confused</td>
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<tr>
<td>19. I feel steady</td>
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<tr>
<td>20. I feel pleasant</td>
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<tr>
<td>21. I feel pleasant</td>
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<tr>
<td>22. I feel nervous and restless</td>
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<tr>
<td>23. I feel satisfied with myself</td>
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<tr>
<td>24. I wish I could be as happy as others seem to be</td>
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<tr>
<td>25. I feel like a failure</td>
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<tr>
<td>26. I feel rested</td>
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<tr>
<td>27. I am “calm, cool, and collected”</td>
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<tr>
<td>28. I feel that difficulties are piling up so that I cannot overcome them</td>
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<tr>
<td>29. I worry too much over something that really doesn’t matter</td>
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<td>30. I am happy</td>
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<tr>
<td>31. I have disturbing thoughts</td>
<td></td>
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<td></td>
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<tr>
<td>32. I lack self-confidence</td>
<td></td>
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<tr>
<td>33. I feel secure</td>
<td></td>
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<tr>
<td>34. I make decisions easily</td>
<td></td>
<td></td>
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<tr>
<td>35. I feel inadequate</td>
<td></td>
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</tbody>
</table>
36. I am content ................................................................. 1 2 3 4
37. Some unimportant thought runs through my mind and bothers me ........................................ 1 2 3 4
38. I take disappointments so keenly that I can’t put them out of my mind ................................ 1 2 3 4
39. I am a steady person ...................................................... 1 2 3 4
40. I get in a state of tension or turmoil as I think over my recent concerns and interests ........ 1 2 3 4
Appendix H

Smith Relaxation States Inventory 3 (SRSI3)

HOW DO YOU FEEL RIGHT NOW? PLEASE CHECK ALL THE ITEMS USING THIS KEY.

RIGHT NOW, I FEEL THIS

<p>| | | | | | |</p>
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<tbody>
<tr>
<td>1.</td>
<td>My mind is SILENT and calm. (I am not thinking about anything).</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>My muscles feel TIGHT and TENSE (clenched fist or jaws; furrowed brow).</td>
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<tr>
<td>3.</td>
<td>I feel AT PEACE.</td>
<td></td>
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<tr>
<td>4.</td>
<td>I feel DROWSY and SLEEPY.</td>
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<tr>
<td>5.</td>
<td>Things seem AMAZING, AWESOME, and EXTRAORDINARY.</td>
<td></td>
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<tr>
<td>6.</td>
<td>Right now I recognize the wisdom of sometimes ACCEPTING things as they are.</td>
<td></td>
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<tr>
<td>7.</td>
<td>My muscles are SO RELAXED that they feel LIMP.</td>
<td></td>
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<tr>
<td>8.</td>
<td>I am HAPPY.</td>
<td></td>
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<tr>
<td>9.</td>
<td>I am WORRIESING</td>
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<tr>
<td>10.</td>
<td>I feel AT EASE.</td>
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<tr>
<td>11.</td>
<td>I feel DISTANT and FAR AWAY from my cares and concerns.</td>
<td></td>
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<tr>
<td>12.</td>
<td>I feel ENERGIZED, CONFIDENT, and STRENGTHENED.</td>
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<tr>
<td>13.</td>
<td>I am DOZING OFF or NAPPING.</td>
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<tr>
<td>14.</td>
<td>I feel THANKFUL.</td>
<td></td>
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</tr>
<tr>
<td>15.</td>
<td>I feel like I am living fully and SIMPLY in the PRESENT, not distracted by past or future concerns.</td>
<td></td>
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</tr>
<tr>
<td>16.</td>
<td>Things seem TIMELESS, BOUNDLESS, or INFINITE</td>
<td></td>
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<tr>
<td>17.</td>
<td>I feel IRRITATED or ANGRY.</td>
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<tr>
<td>18.</td>
<td>I feel JOYFUL.</td>
<td></td>
<td></td>
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<tr>
<td>19.</td>
<td>I feel SAD, DEPRESSED, or BLUE.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>20.</td>
<td>I feel AWARE, FOCUSED, and CLEAR.</td>
<td></td>
<td></td>
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<tr>
<td>21.</td>
<td>My hands, arms, or legs are SO RELAXED that they feel WARM and HEAVY.</td>
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</tr>
<tr>
<td>22.</td>
<td>I feel INNOCENT and CHILDLIKE.</td>
<td></td>
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</tr>
<tr>
<td>23.</td>
<td>My BREATHING is NERVOUS and UNEVEN (Or shallow and hurried).</td>
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</tr>
<tr>
<td>24.</td>
<td>I feel LOVING.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Things seem FRESH and NEW, as if I am seeing them for the first time.</td>
<td></td>
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</tr>
<tr>
<td>26.</td>
<td>I feel INDIFFERENT and DETACHED from my cares and concerns.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>27.</td>
<td>I feel PRAYERFUL or REVERENT.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
28. I feel PHYSICAL DISCOMFORT or PAIN (backaches, headaches, fatigue)
29. My mind is QUIET and STILL.
30. I feel ANXIOUS.
31. I sense the DEEP MYSTERY of things beyond my understanding.
32. I feel RESTED and REFRESHED
33. I feel CAREFREE.
34. TROUBLESOME THOUGHTS are going through my mind.
35. My body is PHYSICALLY RELAXED.
36. Presently I feel there's no need to try to change things that simply can't be changed.
37. I feel fully focused and ABSORBED in what I am doing
38. I feel OPTIMISTIC, HOPEFUL, or TRUSTING that I can rely on someone or something.
Appendix I

Smith Relaxation States Inventory – Disposition version (SRSI3d)
MINDFUL YOGA PRACTICE AND PSYCHOLOGICAL WELL-BEING

5. Things seemed AMAZING, AWESOME, and EXTRAORDINARY.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

6. I recognized the wisdom of sometimes ACCEPTING things as they are.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

7. My muscles were SO RELAXED that they felt LIMP.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

8. I was HAPPY.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

9. I WORRIED.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

10. I felt SAD, DEPRESSED, or BLUE.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

11. I felt AWARED, FOCUSED, and CLEAR.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

12. My hands, arms, or legs were SO RELAXED that they felt WARM and HEAVY.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

13. I felt NERVOUS, not more than ONCE A MONTH.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

14. I felt like I was living fully and SIMPLY in the PRESENT, not distracted by past or future concerns.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

15. Things seemed TIMELESS, BOUNDLESS, or INFINITE
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

16. I felt IRRITATED or ANGRY.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

17. I felt JOYFUL.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

18. I felt CALM.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

19. My mind was QUIET and STILL.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

20. I felt ANXIOUS.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

21. I sensed the DEEP MYSTERY of things beyond my understanding.
    - A LOT, more than ONCE A DAY
    - ONCE A DAY
    - About once EVERY OTHER DAY
    - About ONCE A WEEK
    - About ONCE A MONTH (less than once a week)
    - RARELY or NEVER, less than once a month

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PLEASE CONTINUE ON OTHER SIDE!
22. I felt INNOCENT and CHILDLIKE.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

23. My BREATHING was NERVOUS andUNEVEN (Or shallow and hurried).
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

24. I felt LOVING.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

25. Things seemed FRESH and NEW, like seeing them for the first time.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

26. I felt INDIFFERENT and DETACHED from my cares and concerns.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

27. I felt PRAYERFUL or REVERENT.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

28. I felt PHYSICAL DISCOMFORT or PAIN (backaches, headaches, fatigue)
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

29. I felt RESTED and REFRESHED.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

30. I felt CAREFREE.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

31. TROUBLEsome THOUGHTS were going through my mind.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

32. My body was PHYSICALLY RELAXED.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

33. I felt there's no need to try to change things that simply can't be changed.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

34. I felt fully focused and ABSORBED in what I was doing.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month

35. I felt OPTIMISTIC, HOPEFUL, or TRUSTING that I could rely on someone or something.
   - A LOT, more than ONCE A DAY
   - ONCE A DAY
   - About once EVERY OTHER DAY
   - About ONCE A WEEK
   - About ONCE A MONTH (less than once a week)
   - RARELY or NEVER, less than once a month
Appendix J

Center for Epidemiologic Studies Depression Scale (CES-D)

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

<table>
<thead>
<tr>
<th>Week</th>
<th>Rarely or none of the time (less than 1 day)</th>
<th>Some or a little of the time (1-2 days)</th>
<th>Occasionally or a moderate amount of time (3-4 days)</th>
<th>Most or all of the time (5-7 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I was bothered by things that usually don't bother me.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I did not feel like eating; my appetite was poor.</td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td>I felt that I could not shake off the blues even with help from my family or friends.</td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td>I felt I was just as good as other people.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5.</td>
<td>I had trouble keeping my mind on what I was doing.</td>
<td></td>
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</tr>
<tr>
<td>6.</td>
<td>I felt depressed.</td>
<td></td>
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</tr>
<tr>
<td>7.</td>
<td>I felt that everything I did was an effort.</td>
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<tr>
<td>8.</td>
<td>I felt hopeful about the future.</td>
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</tr>
<tr>
<td>9.</td>
<td>I thought my life had been a failure.</td>
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</tr>
<tr>
<td>10.</td>
<td>I felt fearful.</td>
<td></td>
<td></td>
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<tr>
<td>11.</td>
<td>My sleep was restless.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>I was happy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>I talked less than usual.</td>
<td></td>
<td></td>
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<tr>
<td>15.</td>
<td>People were unfriendly.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>16.</td>
<td>I enjoyed life.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>I had crying spells.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>I felt sad.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>I felt that people dislike me.</td>
<td></td>
<td></td>
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<tr>
<td>20.</td>
<td>I could not get &quot;going.&quot;</td>
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</tbody>
</table>
**Appendix K**

Mental Health Continuum short form (MHC-SF)

Please answer the following questions are about how you have been feeling and how you have been functioning during the past month. Place a check mark in the box that best represents how often you have experienced or felt the following:

<table>
<thead>
<tr>
<th>During the past month, how often did you feel ...</th>
<th>NEVER</th>
<th>ONCE OR TWICE</th>
<th>ABOUT ONCE A WEEK</th>
<th>ABOUT 2 OR 3 TIMES A WEEK</th>
<th>ALMOST EVERY DAY</th>
<th>EVERY DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. happy</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. interested in life</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. satisfied</td>
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<td></td>
<td></td>
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<tr>
<td>4. that you had something important to contribute to society</td>
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<tr>
<td>5. that you belonged to a community (like a social group, or your neighborhood)</td>
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</tr>
<tr>
<td>6. that our society is becoming a better place for people like you</td>
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<tr>
<td>7. that people are basically good</td>
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<tr>
<td>8. that the way our society works makes sense to you</td>
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<td>9. that you liked most parts of your personality</td>
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<tr>
<td>10. good at managing the responsibilities of your daily life</td>
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<td></td>
</tr>
<tr>
<td>11. that you had warm and trusting relationships with others</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>12. that you had experiences that challenged you to grow and become a better person</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. confident to think or express your own ideas and opinions</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>14. that your life has a sense of direction or meaning to it</td>
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</tr>
</tbody>
</table>
Appendix L

Outcome Questionnaire-45 (OQ-45)

**Instructions:** Looking back over the last week, including today, help us understand how you have been feeling. Read each item carefully and circle the number under the category which best describes your *current* situation. For this questionnaire, work is defined as employment, school, housework, volunteer work, and so forth.

<table>
<thead>
<tr>
<th>Item</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Frequently</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get along well with others...........................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I tire quickly..................................................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel no interest in things.............................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel stressed at work/school...........................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I blame myself for things................................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel irritated...........................................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel unhappy in my marriage/significant relationship...............</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have thoughts of ending my life.....................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel weak......................................................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>I feel fearful...................................................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>After heavy drinking, I need a drink the next morning to get going (If you do not drink, mark &quot;never&quot;)</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>I find my work/school satisfying......................................</td>
<td>0</td>
<td>1</td>
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<tr>
<td>I am a happy person........................................................</td>
<td>0</td>
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<tr>
<td>I work/study too much....................................................</td>
<td>0</td>
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<tr>
<td>I feel worthless.................................................................</td>
<td>0</td>
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<tr>
<td>I am concerned about family troubles..................................</td>
<td>0</td>
<td>1</td>
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<tr>
<td>I have an unfulfilling sex life........................................</td>
<td>0</td>
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<tr>
<td>I feel lonely....................................................................</td>
<td>0</td>
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<tr>
<td>I have frequent arguments...............................................</td>
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<tr>
<td>I feel loved and wanted..................................................</td>
<td>0</td>
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<tr>
<td>I enjoy my spare time.....................................................</td>
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<tr>
<td>Statement</td>
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<td>I have difficulty concentrating</td>
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<td>I feel hopeless about the future</td>
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<td>I like myself</td>
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<tr>
<td>Disturbing thoughts come into my mind that I cannot get rid of.</td>
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<tr>
<td>I feel annoyed by people who criticize my drinking (or drug use) (if not applicable, mark &quot;never&quot;)</td>
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<td>I have an upset stomach</td>
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<td>I am not working/studying as well as I used to</td>
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<td>My heart pounds too much</td>
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<td>I have trouble getting along with friends and close acquaintances</td>
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<tr>
<td>I am satisfied with my life</td>
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<td>I have trouble at work/school because of drinking or drug use (If not applicable, mark &quot;never&quot;)</td>
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<td>I feel that something bad is going to happen</td>
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<td>I have sore muscles</td>
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<td>I feel afraid of open spaces, of driving, or being on buses, subways, and so forth</td>
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<td>I feel nervous</td>
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<td>I feel my love relationships are full and complete</td>
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<td>I feel that I am not doing well at work/school</td>
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<td>I have too many disagreements at work/school</td>
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<td>I feel something is wrong with my mind</td>
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<td>I have trouble falling asleep or staying asleep</td>
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<td>I feel blue</td>
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<tr>
<td>I am satisfied with my relationships with others</td>
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<td>I feel angry enough at work/school to do something I might regret</td>
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<td>I have headaches</td>
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Appendix M

Satisfaction with Life Questionnaire (SWLQ)

DIRECTIONS: Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number in the line preceding that item. Please be open and honest in your responding.

1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree or Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree

1. In most ways my life is close to my ideal.

2. The conditions of my life are excellent.

3. I am satisfied with life.

4. So far I have gotten the important things I want in life.

5. If I could live my life over, I would change almost nothing.
Appendix N

Participant Consent Form

Florida State University Consent Form
The Effects of Yoga Practice on Psychological Well-being: A Randomized Controlled Trial

You are invited to be in a research study that is examining the effects of yoga practice on psychological well-being. You were selected as a possible participant because you are a student at Florida State University and have indicated that you would be interested in participating. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Kadie A. Bourgoin, Department of Educational Psychology and Learning Systems at Florida State University.

Background Information:
Yoga is “the practice of yoking together or unifying body and mind”. Although traditionally an eastern practice, it has gained much popularity in western cultures as a lifestyle, form of recreation, and as a method to alleviate mental & physical ailments. As a complementary and alternative mental health treatment, research has shown that yoga may alleviate anxiety and depressive symptoms, and improve quality of life and psychological well-being. There are many different styles of yoga that are taught and practiced today, each with their own emphasis. Some styles may be more effective in promoting mental health than others. The purpose of this study is to investigate the effects of two different types of yoga practice on psychological health and well-being.

Procedures:
If you agree to be in this study, we ask you to do the following things:

1. Fill out a series of questionnaires related to positive and negative aspects of life, mood, and day-to-day functioning (estimated time of completion is 30 - 45 min).

2. Actively participate in one 45 minute yoga class once-a-week for 4 weeks,  
   OR  
   Abstain from yoga practice for 6 weeks.

3. Fill out a second identical series of questionnaires in the week following the 4 week intervention period (estimated time of completion is 30 - 45 min).

4. Fill out a third identical series of identical questionnaires one month following the previous set of questionnaires (estimated time of completion is 30 - 45 min).

5. Refrain from yoga practice outside the context of the study.
The total amount of time expected for full completion of this study is approximately 6 hours total, spread out over the course of 6 weeks. However, if you are participating to acquire course credit to meet the requirements for your COE course, you will receive your credit immediately following 2 hours of participation.

The Yoga:

There will be approximately 25 students in each class. Each yoga class will be led by two certified yoga instructors in which one of them will be providing verbal instructions and the other will be modeling each yoga pose. The content of the class will only involve very basic, beginner level yoga postures. The exercises will involve some muscle stretching and holding the gentle poses with little cardiovascular activity.

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Participants will be guided through the same yoga sequence in the first two classes. A different sequence will be introduced in the 3rd class, and then repeated in the 4th class. The first sequence begins and ends with participants on their backs in what is called the corpse pose, also called savasana, and involves a series of prone (lying on the belly) and supine (lying on the back) positions that are all carried out on the floor. The sequence promotes health in the central core area of the body by fostering strength, flexibility, and a range of motion. The second sequence begins standing in the ‘mountain’ pose, also called tadasana, and ends back on the floor in corpse pose. This series further utilizes the abdominal muscles, but with most of the poses in standing, upright.

Compensation:

For participant pool individuals: By participating in this study, you will receive credits for College of Education classes that require a research component.

For ALL participants: Because we value your full participation in our study, each individual who attends all 4 yoga classes and completes both questionnaire administrations will be entered into a drawing to receive a package of 5 free yoga classes of their choice at Journeys in Yoga, a local yoga studio in town.

Risks and Benefits of being in the Study:

Psychological risk
There is very minimal risk associated with the study. However, in the unlikely event that you experience some anxiety while filling out the questionnaires or completing the homework assignments, you will be allowed to discontinue the activity or end your participation in the study, if you so choose. We will provide referrals to credentialed counselors to those who decide to do so. Please know that in most circumstances, a mild amount of anxiety is normal, and may be necessary to enhance positive outcomes.

Physical risk
While yoga postures are generally safe when performed correctly, improper performance of these movements can result in injury. The small percentage of yoga students that have acquired injuries have been largely due to the poor teaching of yoga skills, and engagement in yoga routines that are too advanced for a given practitioner's current level of training and/or skill. Although our instructors are highly qualified and the yoga postures are basic, there is a risk that an injury could result from poor body alignment during exercise. Common locations for these injuries include the back, wrists, shoulders, neck and knees, among other bodily injuries. By signing consent to participate, you are acknowledging the potential risks listed and agree that you are solely responsible for the costs associated with the injury.
Minimizing risks
Several steps have been taken to minimize these risks. For instance, the yoga series that is going to be used for the project is intended to be minimally physically challenging since it was originally developed for individuals with a wide range of physical capabilities who are suffering from chronic pain. It was designed as a means to cultivate strength, balance, and flexibility through the performance of slow and gentle stretching and strengthening movements. The specific yoga series has been field-tested as a physical and mental health intervention—previously practiced by thousands of medical patients.

In addition, the yoga teachers for each series in the study will be registered yoga teachers (RYT®s) with the Yoga Alliance®, a national education and support organization for yoga in the United States. The instructors’ experience with the physical yoga postures and how they relate to the human anatomy and physiology (both healthy and unhealthy movement patterns) will provide the participants with a safe environment for beginning the practice in yoga.

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Benefits
The study has several possible benefits, which include both improvement in physical and mental health. Performing the yoga has the potential to cultivate strength, balance, and flexibility. Your participation may also improve your general mood, stress levels, and overall well-being.

Confidentiality:
The records of this study will be kept private and confidential to the extent permitted by law. In any sort of report we might publish, all data will be reported at the group level. Research records will be stored securely and only researchers will have access to the records. All paper forms will be kept in a locked office, accessible only to the principal investigator and supervising professor. Personal data will be kept in a password-protected electronic document. Any and all connections between your name, contact information, and the personal data collected will be destroyed following the completion of data collection. All other data will be destroyed 5 years later. Please know that the indication of intent to harm yourself or others will void the confidentiality agreement.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. You will not be docked any class credits/points if you choose not to participate in our study. If you decide to participate, you are free to not answer any question or withdraw at any time. It is suggested that you contact your course professor for information regarding alternative assignments.
Contacts and Questions:
Please feel free to share any concern you have. The researchers conducting this study are Kadie Bourgoin, BS, and Georgios Lampropoulos, PhD. You may ask any questions you have now. If you have any questions later, you are encouraged to contact them:

Kadie Bourgoin  
205.253.5108  
kbourgoin@fsu.edu

Dr. Georgios Lampropoulos  
3206B Stone Building  
850-645-1293  
glampropoulos@fsu.edu

If you have any questions or concerns regarding this study and would like to talk to someone other than the researchers, you are encouraged to contact the FSU IRB at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or 850-644-8633, or by email at humansubjects@magnet.fsu.edu.
You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

_________________________________________  __________________________________
Signature                                      Date

_________________________________________
Signature of Investigator

FSU Human Subjects Committee approved on 10/20/2011 Void after 10/10/2012  HSC # 2011.7104
Appendix O
IRB Approval Letter

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM (for change in research protocol)

Date: 12/1/2011

To: Kadie Bourgoin

Address: 3188 Huntington Woods Blvd. Tallahassee, FL 32303
Dept.: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research (Approval for Change in Protocol)
Project entitled: The Effects of Yoga Practice on Psychological Well-being: A Randomized Controlled Trial

The form that you submitted to this office in regard to the requested change/amendment to your research protocol for the above-referenced project has been reviewed and approved.

If the project has not been completed by 10/10/2012, you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00000168/IRB number IRB00000446.

Cc: Georgios Lampropoulos, Advisor
HSC No. 2011.7475