Yoga Plus Talk Therapy for Depression: A Case Study of a Six Week Group

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Abstract:

Yoga is increasingly becoming a popular method of addressing mental health symptoms. While there is research to support the use of yoga for depression, there is limited literature examining yoga in combination with talk therapy groups as a treatment for depression. The results of this case study series (n=4) provide support for the clinical efficacy of yoga in combination with talk therapy. Treatment consisted of 6 weeks of group sessions (90-min sessions each week) with weekly home practice. Each group consisted of yoga, meditation, breathwork, and emotional processing. Decreases in depressive symptoms and increases in self-compassion were found. The findings of the case study are relevant because growing numbers of clients are presenting with depression and seeking alternative treatments.

Key Words: *yoga; major depression; alternative mental health; psychotherapy*

Introduction

A growing body of evidence now supports the use of meditation to treat mental health problems (Kinser et al, 2012). While a plethora of literature exists demonstrating the use of yoga and meditation for symptoms of depression and anxiety (Butler et al., 2008; Khumar et al., 1993, Woolery et al., 2004), there is a lack of research looking specifically at the combination of talk therapy, lead by a therapist who is also a yoga teacher, with yoga as a clinical treatment alternative for depression.

Depression is a very common and debilitating mental health condition worldwide and is the leading cause of disability in adults under the age of 45 (Kessler et al, 2003). With a high prevalence rate of depression in the U.S., clinicians and patients alike are searching for alternative treatment options when traditional methods do not resolve symptoms completely. A trend towards increasing use of complementary therapies among people with depression has

been demonstrated in several studies (Kessler et al., 2001; Wang et al., 2001; Shapiro et al., 2007). The current literature suggests that more empirically supported, cost-effective, alternative treatments are needed. Therefore, this study investigates the relationship of yoga in combination with psychotherapy in a group setting, as an alternative treatment of depression.

Yoga

The practice of yoga precedes modern medicine by thousands of years. Originating from India approximately 5,000 years ago, yoga is a collection of spiritual, emotional, and physical techniques aimed at creating balance and wellness (Feuerstein, 1996). Ancient yogic texts propose a system to stop mental suffering, which up until recently, has been largely untested using the modern scientific method. The traditional style of hatha yoga focuses on training the body, by using breathwork (pranayama), physical poses (asanas), and meditation (dhyana) (Coutler, 2001). However, hatha yoga predominantly practiced in the West consists of mostly asanas, the physical exercises. In Sanskrit, the word hatha is translated as *ha,* or "sun," and *tha,* or "moon." (Coutler, 2011). This refers to the balance of masculine aspects (active, hot, sun) and the feminine aspects (receptive, cool, moon) within all of us (Feuerstein, 1996). The practice of hatha yoga, therefore, is a path toward creating balance and uniting opposites within the body and the mind.

Stress and Depression

Stress is a process the body initiates in order to mobilize internal resources to deal with a real or imagined threat (Schneiderman et al., 2005). People who are depressed tend to have persistently higher levels of stress, as evidenced by higher activation of the sympathetic nervous system and subsequent elevations in cortisol (Burke et al, 2005). When the sympathetic nervous system is activated heart rate increases, blood pressure rises, muscle tension occurs, and epinephrine, norepinephrine, and cortisol are released in order to prepare the body to fight or flee the stressful situation (Schneiderman et al., 2005). The parasympathetic nervous system, in contrast, tends to slow the heart and lower the blood pressure, allowing recovery from a stressful event. In contrast to fight or flight, these more restorative functions can be thought of as "rest and digest" and is known as the body's relaxation response (Benson, Greenwood, Klemchuk, 1975).

When stress becomes chronic, and the sympathetic nervous system and hypothalamic-pituitary-adrenal (HPA) axis are continually over activated, both

physical and psychological symptoms emerge (Kinser, et al., 2012). High stress, without recovery from the stress, has been shown to lead to gastrointestinal distress, decreased immunity, endocrine problems and depression and anxiety (Clark, et al., 2007). Early life stressors, such as traumatic childhood experiences, have been shown to increase an individual's risk of developing depression (Maletic et al., 2007). Specifically, early life stress leads to higher activation of HPA, alters serotonin functions, and decreases the size of the hippocampus (Kinser, et al., 2012), all of which have been implicated in the diagnosis of depression.

The practice of yoga is believed to lessen the experience of chronic stress and depression by regulating the stress response. Hatha yoga techniques, such as postures, slow breathing, and meditation increase activation of the parasympathetic nervous system and lead to mental relaxation (Streeter et al., 2007). Yoga has been shown to lower cortisol levels (Kamei, 2000), which may be a major factor in its ability to lift mood. Conversely, there are also activating yoga techniques, such as vigorous sun salutations (a series of twelve yoga postures performed in a flowing movement coordinated with the breath) or breath retention, which activate the sympathetic nervous system. The notion is that when one practices strenuous poses on the mat, one is strengthening their ability to cope with stressors off the mat. One study (Uebelacker et al, 2010) suggests that more active practices followed by relaxing ones lead to deeper relaxation, than relaxing practices alone.

By reducing perceived stress and anxiety, yoga appears to modulate the body's stress response systems. This, in turn, decreases physiological arousal, such as, reducing the heart rate, lowering blood pressure, and easing respiration (Streeter et al., 2007). There is also evidence that yoga practices help increase heart rate variability, an indicator of the body's ability to respond to stress more flexibly (Lin et al., 2015). Additionally, the practice of yoga has been suggested to be a model for self-regulation through parasympathetic training, with the notion that the yoga mat becomes a student's time to practice challenging poses in order to begin to learn how to manage the bodily responses to stress (Gard et al., 2015).

Yoga Research

Current theory suggests yoga's therapeutic benefits come from engaging the autonomic nervous system to reduce the impact of stress on the body (Kinser et al., 2011). Through manipulating the breath and movements of the body, yoga activates the parasympathetic nervous system, which induces the relaxation response in the neuromuscular system, thereby reducing the subjective

experience of stress (Payne & Usatine, 2002). It is speculated that the practice of hatha yoga decreases an individual's stress reactivity, which may regulate the activity of the HPA axis (Sarubin, et al., 2014).

Several small controlled trials supporting the use of hatha yoga for depression have recently been published (Butler et al., 2008; Khumar et al., 1993, Woolery et al., 2004). Additionally, a recent meta-analysis showed that yoga may improve short-term depressive symptoms (Duan-Porter, et al., 2015). One study by Streeter et al. (2007), has shown evidence of change in neurotransmitter function after a hatha yoga practice; the study demonstrated a measurable increase in GABA in yoga practitioners after a yoga session, in comparison to a reading group.

Yoga nidra is a deep relaxation practice that includes setting intentions, body part awareness, breath awareness and visualizations (Saraswati, 1976). Guided by a teacher's voice, the student is instructed to remain awake and identify sensations throughout the body, while remaining in a state of relaxed awareness so that the body begins to release deeply held tensions. The term yoga nidra is derived from two Sanskrit words; yoga meaning union or one-pointed awareness, and nidra, translating to sleep (Saraswati, 1976). Parker et. al. (2013) points to including the physiological underpinnings in the definition of yoga nidra by describing it as a practice of entering into a state of non-REM sleep in which the practitioner's brain generates predominately delta waves. Recent research has shown the practice of yoga nidra to benefit people dealing with anxiety (Eastman-Mueller, et al., 2013), depression (Rani, et al., 2012), and post-traumatic stress disorder (Pence, et al., 2014; Stankovic, 2011).

Meditation Research

Meditation teaches individuals the skills to focus their attention. A state of mindful awareness is characterized by the experience of current reality 'in the moment' rather than identifying with the thinking mind that ruminates, plans, rehearses, and worries (Teasdale, Segal & Williams, 1995). Mindfulness training tends to reduce individuals' tendency to engage in negative and repetitive thought processes, which can be characteristic of depression.

The practice of meditation has been shown to positively impact thought processes and mental functioning. Orzech et al. (2009) demonstrated an increase in participants' ability to decenter, the capacity to objectively perceive one's thoughts and emotions, as well as an increase in acceptance and self-compassion following a mindfulness meditation group. A study by Hölzel et al. (2011) found

that meditation impacts the brain, demonstrating that participants experienced increases in the gray matter of the hippocampus as a result of a meditation. Additionally, increases in dopamine activity have been demonstrated when comparing a meditation only practice with a control group that did not practice meditation (Kjaer et al., 2002).

Yoga as a treatment for depression

Yoga's components of meditation, breathing, and postures impact both the mind and body. Breathing techniques support the process of relaxation in the body. When the body is relaxed, the mind's defenses are less resistant. When we teach our students techniques like *pranayama* and meditation, we help them learn to "get their minds out of the way." Without the interference of their usual anxious or angry thoughts, the stress response system relaxes and the body can do a better job of healing itself. Numerous studies (Kamei et al., 2000; Pilkington et al., 2005; and Streeter et al., 2007) have shown that when you quiet the mind with these techniques, a variety beneficial physiological responses are activated, including reduced heart rate, breathing rate, blood pressure, and levels of stress hormones.

While a plethora of literature exists demonstrating the use of yoga and meditation for symptoms of depression and anxiety (Butler et al., 2008; Khumar et al., 1993, Woolery et al., 2004), there is a lack of research looking specifically at the combination of talk therapy, lead by a therapist who is also a yoga teacher, with yoga as a clinical treatment alternative for depression. Therefore, this article presents the results of a "group" case study of four women, currently experiencing mild to moderate depressive symptoms, enrolled as a group, in a 6-week group series combining yoga with psychotherapy. In an effort to control for the confounding effects of a gender variable in the study, the group was homogenous in gender. We hypothesized that by activating the relaxation response within the body, through the use of breath work and postures, individuals would be able to engage in psychotherapy more effectively and therefore experience better outcomes in depressive symptoms, than those treated by yoga or therapy alone.

Methods of Study

The Austin Multi-institutional Review Board approved this study for research with human subjects. Participants were recruited through local yoga studios, other therapist referrals, and flyers in the community. Each participant was screened by phone by the group leader, who is trained and experienced in diagnosis, prior to the start of the group. The screening consisted of administering the following psychological measures: Structured Clinical Interview for DSM disorders (SCID)

(First, et al., 2002), the Center for Epidemiologic Studies Depression Scale (CESD) (Radloff, 1977), gathering of personal history, and reviewing the inclusion and exclusion criteria. Mild to moderate depressive symptoms were classified as having a positive SCID score, as evidenced by confirming the diagnosis with the A and B/C and D modules only on the SCID clinical interview, and a CES-D score of 16 or greater.

The inclusion criteria consisted of females between the ages of 18 – 65 and currently experiencing mild to moderate depressive symptoms. The exclusion criteria included symptoms that could prevent participation or interfere with learning, such as psychosis, current alcohol or substance dependence, or substantial cognitive impairment such as dementia or intellectual disability, pregnancy, currently experiencing suicidal ideation or attempted suicide within the last year, currently in group psychotherapy, or physical disabilities that would prevent participation in group exercise classes. In all, a total of seven women were screened for inclusion. Three women did not meet criteria for the following reasons: active alcohol abuse, currently in group therapy, and recent suicide attempt. A total of four women were included in this study.

The clinician obtained informed consent from each participant prior to the first meeting. The following measures were administered to each participant at the end of the first session and the last session: Patient Health Questionnaire-9 (PHQ-9) (Kroenke, et al., 2001), Self-compassion Scale (Neff, 2000), Mindfulness Attention Awareness Scale (MAAS) (Brown & Ryan, 2003), Generalized Anxiety Disorder 7 item scale (GAD-7) (Spitzer et al., 2006). The data was collected via de-identified data collection sheets. Each participant was given a randomly generated study participant number at the beginning of the series.

Sessions were conducted by a trained yoga and mental health practitioner with ten years of clinical experience in the mental health field, who provided both the therapy and yoga instruction for this study. She identifies herself as a psychodynamic oriented therapist who draws from an attachment informed perspective, with additional training in cognitive behavioral therapy (CBT), several years experience providing group psychotherapy services, and training at the 200-hour level in Hatha Yoga.

Clinician

The author, Kelli Foulkrod, who is dually trained as a yoga teacher and psychotherapist, conducted sessions. She identified herself as a psychodynamic oriented therapist who draws from an attachment informed perspective. Kelli has been trained in cognitive behavioral therapy (CBT) and has several years experience providing group psychotherapy services. She was trained at the 200-hour level in Hatha Yoga and has been teaching yoga with an emphasis on mental health to classes, groups, and individuals for five years.

Participants

All names have been changed and replaced with pseudonyms to protect confidentiality. A total of four women completed the group series. The median age of participants was 39. Three of the women are Caucasian and one is Hispanic. Education level of participants ranged from high school diplomas to graduate degrees. Half of the women are married and half are divorced. All of the women had some yoga experience and had been practicing yoga for at least a year prior to the group. Three women of the group reported a family history of depression.

Pam is a 41-year-old divorced Caucasian woman who has been experiencing depressive symptoms off and on since the age of 15. While she has tried anti-depressants in the past, she currently does not take any psychotropic medications. She estimated experiencing a total of 5 depressive episodes in her lifetime. Pam reported a history of several suicide attempts and one previous hospitalization for depressive symptoms at the age of 16.

Upon intake, she met the criteria for a current depressive episode and denied suicidal ideation. She reported moderate levels of pain and tension in her shoulders and pelvic region.

Jane is a 40-year-old married Caucasian woman who began experiencing depressive symptoms at age 12. She estimated having a total of five depressive episodes in her lifetime. She reported one suicide attempt during adolescence. She has participated in several years of traditional talk therapy and has tried psychotropic medications in the past, but currently does not take any medicines. Upon intake, she met the criteria for a current depressive episode and denied suicidal ideation. She reported moderate levels of pain and tension in her shoulders and pelvic region.

Jill is a 37-year-old divorced Latina woman who began experiencing depressive symptoms at the age of 15. She estimated having a total of four depressive episodes in her lifetime. She reported being hospitalized for postpartum depression and suicidal thinking after the birth of her only child. She has completed two years of psychotherapy, and currently does not take any medications. She reported mild to moderate levels of pain and stiffness in her neck, shoulders, wrists, and elbows. Upon intake, she met the criteria for a current depressive episode and denied suicidal ideation.

Tammy is a 40-year-old married Caucasian woman who began experiencing depressive symptoms at the age of 15. She estimated having a total of seven depressive episodes in her lifetime and denied any suicide attempts. She has tried psychotropic medications in the past, but currently takes no medication. She has also completed several years of traditional talk therapy and has never been hospitalized for depression. Upon intake,

she met the criteria for a current depressive episode and reported passive suicidal ideation, and chronic tension in her neck and shoulders.

Treatment Intervention

The group met once a week for six consecutive sessions, each lasting 90 minutes. Each session consisted of one hour of yoga and meditation, followed by 30 minutes of processing thoughts and emotions that came up during the asana practice. Psycho-educational interventions and cognitive behavioral therapy techniques were assigned to work on in between sessions. Each class had a theme surrounding the emotions and thoughts commonly experienced in depression. At the end of the yoga portion, participants practiced pranayama, followed by twenty minutes of yoga nidra. The process, or talk therapy portion of the group, consisted of the women sitting in a circle in the middle of the room while being asked to verbally share their experiences based on the theme and yoga focus for the class. Participants were asked to practice yoga at least two times at home or in a studio in between each session.

For the first session of the first week, the PHQ-9, self-compassion scale, MAAS, and GAD-7 were administered and consents were signed. Group rules were explained to the group members. The session began with a brief centering meditation and breath awareness exercise. Participants were asked to introduce themselves describe how they were feeling in the moment. The focus and theme of this class was the concept of embodiment, with the goal to increase one's body and breath awareness. Group members were invited to become aware of and pay attention to the body during each pose and to become mindful of the sensations and tensions in the body. The instructions given were "as you move from pose to pose, focus your attention on your feet. *What do you notice? What is going on there?* Move your focus to your legs, then to your hips, torso, your arms and hands. Be curious about them. *What sensations do you feel in these body parts?"* Instructions were also given to "begin observing how your mind reacts when things get slightly uncomfortable or challenging in the pose or in the body." Group members were educated on body armor and the defensive postures an individual may take when in a state of sadness. The teacher demonstrated the defensive posture of "guarding the heart," slumped over with neck and shoulders curved forward and head looking down. The teacher also provided psycho-education regarding the common tendency to avoid the discomfort of negative emotions and the process in the body that leads to chronic muscular tension when emotions are avoided or repressed.

Following this, an introduction and overview of sun salutations was provided with explanations of the symbolism and physiological effects of the sequence of postures. Thirty-five minutes was spent in warm up and active poses and a total of three sun salutations were completed. Three minutes of guided breath awareness instructions were then given while members were sitting in easy pose, with blankets supporting the hips. Participants were then given instructions for a yoga nidra script (Chapter 1, Saraswati, 1976) read by the teacher for 20 minutes.

During yoga nidra, each participant was reclined in savasana (lying down supine with legs and arms straight and palms of hands facing up) with an eye pillow and a bolster underneath the legs. Instructions were included to "scan the entire body and become aware of any muscular tension; then soften the muscles".

During the final thirty minutes of the class, group members processed verbally with the group what they experienced during the practice. For example, one participant shared that during the meditation portion, she had a memory from childhood emerge in her mind. Additionally, instructions were given as to labeling emotional states based on sensations in the body on the worksheets provided for mood charting and connecting activities with mood changes.

The theme for the second session was self-compassion, which is defined as extending compassion to one's self in instances of perceived inadequacy, failure, or general suffering (Neff, 2003). The concept of Ahimsa, which is defined as non-harming or non-violence in thoughts, words, and deeds towards self and others (Satchidananda, 1978) was woven throughout the pose instructions. The yoga portion of the class began with standing in mountain pose and exploring how the body tends to stand in postures typical of feelings of guilt and shame. For example, facial expressions of shame are typically downward gaze and biting of lower lip; the body language of guilt is seen as head turned down and shoulders hunched towards ears. This yoga sequence focused on shoulder opening and heart opening poses with cues "to create more space in the center of the body for breath." The movement portion lasted thirty minutes and ended with a gentle supported backbend, supported by a bolster lengthwise along the spine.

While members were reclined, the teacher provided psycho-education on common ways emotional avoidance can occur in interpersonal relationships due to a felt sense of worthlessness. Five minutes of pranayama was also included while in this reclined position, with breathing in a 4:4 ratio. Instructions included: 1) Place your hands on your chest and stomach 2) To maximize oxygen intake, it's important to learn to breathe from your abdomen ("belly breathing") rather than your chest. Focus on your breath until you feel your stomach rise and fall more dramatically than your chest with each inhalation and exhalation. 3) Breathe in through your nose, hold the breath for a few seconds and then exhale through your mouth. The time it takes to exhale should be equal to what it is to inhale. Inhale and silently count to four; pause for one second; exhale silently and count to four. 4) Practice 4-8 breath cycles like this 1-3 times every day. After pranayama, members practiced a yoga nidra script (Chapter 2, Saraswati, 1976) read by the teacher for 25 minutes. During yoga nidra, each participant was reclined in savasana with an eye pillow and a bolster underneath the legs.

Following savasana, a group discussion commenced on forgiveness and how empathy can be used to move stuck emotions in the body. Students shared personal stories of feelings of worthlessness and how they felt doing the postures. For example, one lady said that she remembered how her mother repeatedly used

to criticize her during the supported heart opener. The teacher also provided psycho-education on avoidance behaviors common in depression and the group then brainstormed a list of alternative behaviors (such as breath practices, mindful walking, listening to a guided meditation) to practice when noticing avoidance behaviors coming up in their lives during the week. Worksheets were provided for tracking avoidance behaviors and what occurred when alternative behaviors were implemented.

The theme for the third session was identifying personal triggers for anger and irritability. The class began with students sitting in easy pose, with a folded blanket supporting the hips, and learning the following instructions for Ujayi breathing: 1) Inhale and exhale deeply through your mouth. Feel the air of your inhalations passing through your windpipe. 2) On your exhalations, slightly contract the back of your throat, as you do when you whisper. Softly whisper the sound, "ahhh," as you exhale. Imagine your breath fogging up a mirror. 3) As you become comfortable with your exhalations, maintain the slight constriction of the throat on your inhalations, as well. You will notice your breath making an "ocean" sound, softly moving in and out, like ocean waves. 4) Concentrate on the sound of your breath. It should be audible to you, and your neighbor. 5) Let inhalations fill your lungs to their fullest expansion. Completely release the air during exhalations. Students were then lead through four sun salutations and a series of twisting postures and core strengthening poses with an emphasis on ringing out anger and irritability from their bodies.

Throughout the yoga poses, the instructor provided education on yoga's perspective of the third chakra, the seat of our personal power and will, and how the center of the body represents our locus of control. A sense of loss of control in this area can often show up as anger. This was followed by 25 minutes of yoga nidra with rapid visualization techniques (Saraswati, 1976). The technique of rapid visualization in yoga nidra is an important practice used to unlock stored up contents of the unconscious mind which normally only manifest during dreams (Saraswati, 1976). Guided imagery during yoga nidra is a method of using symbols or images during deep relaxation that helps bridge the gap of awareness between our waking state and the unconscious. Each symbol has a definite form or figure, such as a mountain, sunset, the sea, a funeral scene, a meeting of friends, an angry crowd, a cave, a color, or even a sound. The play of symbols and images should be viewed in a detached way, as though one were merely watching a movie. One should remain aware of the images. As a result, the energy formerly used for repressing these elements of the unconscious can then be usefully directed to other activities. One gains greater understanding of his own nature, and the conflict between the conscious and unconscious mind becomes reduced. The instructions given by Saraswati (1976) are to imagine each symbol in the mind's eye as quickly as possible, without analyzing or telling a story. The symbols are introduced after the student has gone through each part of the body awareness in yoga nidra.

The process portion of this group consisted of the women sharing their personal experiences with anger, rage, and loss of control. One example was a participant sharing a recent argument with her boyfriend and how she noticed the physical sensations in her body of her rage. The group brainstormed a list of alternate behaviors to employ when one begins to notice the physical sensations of anger in the body. The list included using Ujjayi breath, journaling, and listening to a yoga nidra MP3. Homework consisted of filling in worksheets to help further identify and track the physical manifestations of anger and irritability in the body.

The theme for the fourth session was working with fear and anxiety in the body. Participants began with a supported child's pose held for five minutes, while the teacher briefly described the physiological mechanisms of the fight/flight/freeze mechanism in the body. Information on the hormones and neurotransmitters related to anxiety was also offered. The focus of the yoga portion for this class was holding poses for longer periods in a more restorative fashion, with an emphasis on self-regulation and calming the nervous system. For example, instructions were given to "consciously feel your heart slowing down after the sun salutation movements, by placing your hand on your heart and slowing the breath."

Bees Breath, as described below, was then practiced for three minutes, in easy pose with a blanket supporting the hips. The following instructions were given: 1) Sit up straight with your eyes closed. 2) Place your index fingers on your ears. There is a cartilage between your cheek and ear. Place your index fingers on the cartilage. 3) Take a deep breath in and as you breathe out, gently press the cartilage. You can keep the cartilage pressed or press it in and out with your fingers, while making a loud humming sound like a bee. 4) Try making the sound "mmmmmmm" and then begin to observe what the sound of your voice sounds like as you are withdrawing your senses.

This was followed by thirty minutes of yoga nidra and guided imagery scripts (Saraswati, 1976). The guided imagery was introduced after the body part awareness of the yoga nidra practice. After the guided imagery exercise, the group process focused on the women sharing their biggest fears and neurotic cognitive loops that get stuck in their minds and are related to worry. Some examples included getting stuck thinking they were not "good enough" or feeling worthless and guilty for existing. The women reported being surprised to see how common their anxieties were with the other women in the group and how healing it was to share in their own vulnerabilities. Homework consisted of completing worksheets to track and generate more awareness around the triggers to their fears and how to notice unrealistic negative thinking when it starts.

The fifth week was designed to teach students how to work with sadness and grief. Students began the session practicing Breath of Fire, described below, for two minutes, with the following instructions: 1) Sit comfortably easy pose with a folded blanket supporting the hips 2) Actively pull the navel point, found about one and a half inches below the belly button. This motion will compress the

diaphragm and cause air to be exhaled from the lungs. 3) relax the navel point, allowing the diaphragm to descend and the lungs to passively inhale. Education was also provided on how the breath can be used to stimulate the nervous system in times of lethargy. The subsequent asana sequence was designed to be heating and stimulating through longer held postures, and decrease lethargy in the body associated with sadness. In a supine supported heart opening asana (using a bolster and a blanket) with legs extended, instructions were given "to notice sensations around the heart center".

While in this pose, a five minute Mettha Bhavana meditation was practiced with the following instructions:

1) Begin to focus on your chest area, your "heart center." Breathe in and out from that area, as if you are breathing from the heart center and as if all experience is happening from there.

2) Begin by generating a kind feeling toward yourself, a compassion for yourself. Feel any areas of mental blockage or numbness, self-judgment, self-hatred. Then drop beneath that to the place where we care for ourselves, where we want strength and health and safety for ourselves.

3) Get a mental image of yourself in your minds eye, and then silently repeat: *May I be happy. May I be well. May I be safe. May I be free from suffering.*

4) Next, move to a dear person or animal that you care for deeply. It might be a parent, grandparent, teacher, someone toward whom it takes no effort to feel respect and reverence, someone who immediately elicits the feeling of care. Silently repeat the phrases for this person: May they be happy. May they be well. May they be safe. May they be free from suffering.

5) Now move to someone you have difficulty with and experience hostile feelings, resentments. Repeat the phrases for this person. If you have difficulty doing this, you can say before the phrases, "To the best of my ability I wish that you be happy, well, safe, free of suffering." If you begin to feel ill will toward this person, return to the dear person and let the loving kindness arise again. Then return to the person with whom you have difficulty. Let the phrases spread through your whole body, mind, and heart.

   After the difficult person, radiate loving kindness out to all beings. Stay in touch with the ember of warm, tender loving-kindness at the center of your being. The meditation was then followed by 20 minutes of yoga nidra, practiced in savasana.

After savasana, a brief overview of the physiological mechanisms involved with sadness and grief in the body were provided, with a focus on the heart and the hips. During the group discussion, participants shared some of the triggers they have identified for sadness. One example was a woman shared that seeing happy mothers with children elicited tremendous sadness, as she did not feel that as a child. The bulk of the sharing consisted of processing emotions. All members of the group were tearful and vulnerable this session. For example, one participant shared about the dissolution of her marriage and how she hadn't allowed herself to feel the grief over the loss, but instead had been stuck in anger. Another woman shared about a traumatic experience she witnessed in her childhood that she had not told anyone before. All women were observed offering empathy and support towards the other group members. Homework consisted of worksheets to track avoidance behaviors and participants were instructed to keep a gratitude journal for the next week.

At the beginning of Session Six, each participant completed the PHQ9, self-compassion scale, MAAS, and GAD-7. The theme of this final session was balance and integration of the yoga skills and tools presented in the group series, along with deep restoration and relaxation.

We began the class sitting in a circle, with five minutes of laughter yoga exercises. Students were then led through five sun salutations and a series of warrior postures. ith each pose, there was an emphasis on "grounding and rooting down through the soles of the feet to bring awareness to the sensations of the body, instead of focusing on the thoughts in the mind." Following this sequence, students were given the following instructions for nadi shodhana: 1) Start in easy pose sitting on a folded Mexican Blanket to elevate the hips. Sit up straight and soften your jaw. 2) With your right hand, bend your index and middle fingers, keeping your ring finger, pinkie finger, and thumb extended. 3) Close your right nostril with your right thumb. 4) Inhale deeply through your left nostril. 5) At the top of your inhalation, close your left nostril with the ring finger of your right hand as you release the right nostril. 6) Exhale through your right nostril. 7) Keeping the left nostril closed, inhale deeply through your right nostril. 8) Seal your right nostril again with your thumb, then release your left nostril. 9) Exhale out of your left nostril. You should now be in the original position, with your thumb sealing your right nostril. This is one cycle. 10) Repeat for 8 full breath cycles, gradually increasing the number of repetitions as you gain experience. Five minutes was also spent educating about the effects of sound in the body. Following this, students were then instructed on chanting the sound of OM and OM Shanti. Twenty-five minutes was then spent doing yoga nidra in savasana with an eye pillow and a bolster underneath the knees to support the body.

The process portion of the group consisted of participants sharing insights they discovered during the series. One woman said that she is now able to practice vulnerability in her interpersonal relationships without feeling shameful. Another woman shared that she had a deeper awareness of her bodily sensations during

negative emotional states and that this new awareness allowed her to move through the emotion more rapidly without dwelling. The instructor led a brief goodbye ceremony, during which she highlighted each group member's strengths and ways she had observed them growing. The teacher also verbally summarized all the tools that had been presented in the group home for home practice and future reference, and provided the group members with a handout summarizing the tools and included online links to guided meditations and free yoga nidra practices.

Outcome Measures

Due to the small sample size, simple analyses of standardized outcome measures were used. Using a paired samples t-test, each group member's measures were compared before (PRE) and after (POST) the treatment intervention.

Depressive symptoms were significantly lower after the intervention (PRE = 16) than before treatment (POST = 6) as indicated by a significant t-test, $t(4) = 3.35$, $p < .05$. This finding indicates that there was a decline in symptoms of depression reported on the PHQ-9. No significant difference was found in anxiety symptoms before (PRE = 11) or after (POST = 6) the intervention, $t(4) = 2.45$, $p = .369$. No significant difference was found in mindfulness awareness scores before (PRE = 92) or after (POST = 100) the intervention, $t(4) = 2.45$, $p = .146$. Self-compassion scores were significantly higher after the intervention (PRE = 27) than before treatment (POST = 37) as indicated by a significant t-test, $t(4) = 5.22$, $p < .05$. This finding indicates that there was an increase in self-compassions skills as reported on the SCS-SF.

Table 1
Outcome Measure Results

	PRE	**POST**	**p value**
	M (SD)	M (SD)	
PHQ-9	16 (5.9)	6 (2.0)	0.017
GAD-7	11.3 (6.7)	5.6 (2.5)	0.369
MAAS	92 (11.7)	100.5 (11.9)	0.146
SCS-SF	26.5 (4.8)	36.5 (2.9)	0.033

Conclusive statements about the outcome data, as a whole, are not feasible due to the small sample size. Individually, all the women reported decreases in depressive symptoms, decreases in symptoms of anxiety, increases in mindfulness, and increases in self-compassion.

Subjective Data – Participant Reports

Approximately three weeks after the group was completed, the therapist contacted each group member for a follow-up phone call, and asked the following questions:

1) What were the strengths of the group?
2) What could have been different about the group?
3) How was this group different from previous mental health treatments you have had in the past?
4) How are you feeling since the end of the group?

A transcript of each participant's responses follows:

Pam –

1) The teacher/therapist had a wealth of knowledge about depression and presented it in a way I had never heard before. I also enjoyed doing yoga before talking in a group; I felt that it got me more prepared to share my story and I felt more relaxed to do so.
2) I wish the group had been longer and more sessions. I missed the support of the group when it ended.
3) Well, this was my first experience with a group for depression and I was very nervous at first. It felt much more comfortable than I had anticipated. The information was radically different that what I had been through with previous therapists.
4) I'm feeling better since the group ended. When I feel sad or anxious, I am able to use the tools I learned from the group.

Jane –

1) I think that everyone who participated was open to change and ready for healing. Each of the women had things in common and it felt very safe. It was a good experience.
2) I don't think there was any aspect that I would have changed - except that it all went by too fast. I had wished the group would have lasted longer.
3) Knowing that there are other people out there who feel like I do and who want to get help in new ways was exciting. Not being judged or seen as weak or flawed by participating. It was a very nurturing experience and I felt safe to open up.
4) I still struggle with low mood, but I don't have so much shame about it. I am better able to identify my triggers and more likely to use my breathing to help me calm down.

Jill –

1) The fact that it was a small group made it very safe and intimate. I loved the combination of yoga, meditation and talk together. I loved all of the

handouts and information; it gave us practical tools that we could apply to our lives right away.

2) I would've liked each session to be a little longer to have room for both a little bit more yoga and more talking, but particularly more yoga. Maybe two hours instead of 1.5. And maybe an 8 or 12 week session instead of 6? Clearly I wanted more!
3) Definitely the addition of physical activity, and yoga in particular, is what drew me to the group. It was a very different approach to therapy that I have done in the past, and I enjoyed it much more than traditional talk therapy.
4) Overall, I am feeling better since the group. I still have bad days, but I am able to observe my experience more and I feel like I have a better understanding of how my body impacts my moods. The group inspired me to be more consistent with yoga practice.

Tammy -

1) I really liked the yoga and meditation in the context of talk therapy at the end. That combination was very helpful and useful.
2) I wished the group would be ongoing, and that it was twice a week. I'd like more in knowledge in chakras.
3) I had never experienced yoga nidra before this group, and it really made a difference in my ability to relax. I have never been able to reach that level of calm by talking with a therapist.
4) I am feeling more hopeful. I can see my depression in a more symbolic way and I have a better awareness of how my body and mind work together.

Teacher Observations

Change was observed in each participant during the series through noticeable shifts in tone of voice from depressed and hopeless, to optimistic and hopeful. When comparing the first group to the last group, all made notable gains in terms of their ability to share personal stories and engage in interpersonal vulnerability during the group process at the end of each session. Additionally, by the final group, there was more conversation and socializing between group members than was observed at the start of the group. The teacher observed two group members exchanging phone numbers.

Discussion

A shift towards integrating the mind and body into the talk therapy process is rapidly emerging in the field of psychotherapy. For too long, clinicians have been addressing only the mental aspects of psychopathology, without a focus on how the rest of the body contributes to the function of the psyche. It is proposed that using yoga alleviates the arousal of the sympathetic nervous system and the

dysregulation of the hypothalamic-pituitary-adrenal axis that occurs during a depressive episode (Streeter et al., 2012). Yoga in combination with verbal therapy may potentially activate the parasympathetic branch of the nervous system, replacing the flight-or-fight response with the relaxation response, and balancing the nervous system. Yoga in the context of verbal group therapy may also increases positive coping skills and interpersonal relationships, not typically found in a group yoga class.

From a nervous system perspective, it seems that yoga works by activating the parasympathetic nervous system and initiating the relaxation response within the body. The vagus nerve is the largest parasympathetic nerve and it connects the brain to the heart and enteric nerve system. Streeter et. al (2007) have highlighted the importance of the vagus nerve in yoga. It is thought that yoga helps regulate the nervous system by increasing vagal tone, or the body's ability to fluidly cope with stress (Gard et al., 2014). Improvements in vagal tone have been shown to correlate with reductions in the amount of stress accumulated over time and carried in the body. Therefore, it is hypothesized yoga, in conjunction with group therapy, helps increase self-regulation and feelings of well-being because of its positive impact on vagal tone and subsequent impact on social engagement. The findings of this study corroborate these ideas, by demonstrating the clinical efficacy of yoga in combination with group therapy in the treatment of depression in a group of adult females.

Limitations

This study provided a rich description of how yoga and meditation in conjunction with group talk therapy operated in a 6-week series. However, these findings cannot be generalized without a larger sample size. Further replication with similar and different clients, and with larger groups, is necessary before we can draw firm conclusions about the combination of yoga and psychotherapy.

An additional study limitation was that the entire sample was female. Given how popular yoga is among females, and that a predominate proportion of yoga practitioners in the U.S. are females, an attempt to include males in the sample would have added a costly expense to market the study. It would be interesting to see if similar research results are obtained in a group that includes males.

Implications for Practice and Research

The results from this study suggest that the combination of yoga during the talk therapy process may lead to reductions in depressive symptoms and increases in self-compassion. Since no reductions were seen in anxiety symptoms in this study, it would be interesting to plan another study designed to target anxiety symptoms unrelated to depression. Additionally, another future study option would be to include a control group, where one group with yoga, other with a talk therapy only group.

In terms of future research, more research studies are needed in order to determine which characteristics of a yoga practice lead to the greatest improvements in mental health functioning. It would also be helpful to assess the qualities of yoga teachers who are also trained mental health professionals, in order to determine what type of person is best suited to engage in this type of emotional healing. Finally, an assessment of physiological measures such as blood pressure, cortisol, and/or hormone levels in study participants engaged in a combination of yoga and talk therapy for depression, would be helpful in highlighting physical changes associated with the combined practice of these two modalities.

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