

## Research

# Initial Evaluation of the LifeForce Yoga Program as a Therapeutic Intervention for Depression

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**Abstract:** *There is a growing body of literature citing Yoga as an effective intervention for decreasing symptoms of depression. This naturalistic pilot study investigated the efficacy of the LifeForce Yoga Program in decreasing reported symptoms of depression and other mood symptoms. The sample consisted of 94 individuals who completed self-report questionnaire before participating in a five-day LifeForce Yoga training. 54 of these individuals completed the same questionnaire after two weeks of home practice following the training, and 33 participants completed these questionnaires two months after the initial training. Repeated measures ANOVA tests demonstrated a main effect for time, indicating that mean symptom scores decreased significantly across the assessment time points on nearly all of the outcome measures of interest. Post hoc t-tests showed that the statistically significant change occurred between Time 1 and Time 2, and was then largely maintained from Time 2 to Time 3. These results suggest that participation in a comprehensive Yoga program, designed specifically to address mood, can lead to decreased symptoms of depression and associated physical or mood states.*

**Keywords:** *Yoga, depression, prānāyāma, mood, breathing*

## Background

According to the National Institute of Mental Health, an estimated 17 million individuals in the United States suffer from depression each year.<sup>1</sup> Depression is a functionally impairing condition characterized by low mood, loss of pleasure, fatigue, disrupted sleeping and eating patterns, low self-concept, difficulty concentrating, feelings of hopelessness and guilt, and often thoughts about death or suicide.<sup>2</sup> Depression can lead to impairment in the functioning and stability of one's family, social relationships, occupation, finances, future, and physical health. Fortunately, the symptoms of a depression are often treatable, especially early in the course of depression, before the symptoms become chronic and more severe.

## Treatments for Depression

The most common treatment for depression is antidepressant medications. A large body of research supports the effectiveness of antidepressant medications, including a recent NIMH-funded study that showed significant rates of symptom relief related to the use of antidepressant medications in outpatient treatment settings.<sup>3</sup>

Psychological interventions represent another efficacious and well-studied treatment option for depression. Some therapies, such as cognitive behavioral therapy, result in symptom reduction comparable to that of medication.<sup>4</sup> When used in conjunction with medication, these types of therapies can be an optimal treatment option for depressed patients.<sup>3,5</sup>

Increasing evidence is accumulating for the efficacy of self-regulation strategies, such as relaxation training or

mindfulness-based techniques, for mood and stress disorders in both adults<sup>6</sup> and adolescents<sup>7</sup>. In these studies, progressive muscle relaxation was as effective in treating depression symptoms as cognitive behavioral therapy and drug therapy. More recent approaches to treatment have emphasized developing mindfulness as a strategy for improved psychological well-being. Jon Kabat-Zinn developed a therapeutic mindful meditation practice, incorporating elements of Yoga, which has seen positive results clinically and in research studies.<sup>8</sup> These principles have been incorporated into Mindfulness-Based Cognitive Therapy, which has also shown to be an effective treatment for depression.<sup>9</sup> Dialectical Behavior Therapy, a therapy program which in part utilizes mindfulness principles as a vehicle for improving emotion regulation, has also had significant clinical impact and research support.<sup>10</sup>

Increasing behavioral activation is also a proposed strategy for decreasing symptoms of depression. Physical exercise may be one such activating therapy. The relationship between physical exercise and psychological well-being has been studied and documented for nearly three decades, and has led to the common recommendation that treatment prescriptions for depression include an exercise or other behaviorally activating component when feasible. A number of meta-analytic reviews have demonstrated that exercise interventions result in decreased symptoms of depression when compared to no treatment, with effect sizes that are comparable to those of other treatment conditions, including psychotherapy.<sup>11,12</sup>

### *Yoga as a Treatment for Depression*

Given the effectiveness of mindfulness, exercise, and relaxation techniques in improving the symptoms of depression, it logically follows that Yoga would also be a beneficial intervention for depressed individuals. The practice of Yoga incorporates elements of physical movement and exercise while cultivating mindfulness meditation, encouraging self-acceptance and love, and providing opportunity for relaxation. And indeed, emerging research evidence suggests that the practice of Yoga is an effective antidepressant intervention, including at least five randomized-controlled research studies.<sup>13,14</sup>

It is clear that the U.S. population is turning more and more to complementary approaches such as Yoga. Data from the 2002 National Health Interview Survey (NHIS) conducted by the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS) showed that 62% of 31,044 adults reported using some form of complementary and alternative medicine (CAM)

during the past 12 months, including deep breathing exercises (18.9%), meditation (7.6%), and Yoga (5.1%).<sup>15</sup> These data showed that CAM approaches were most often used for back, neck, or joint problems, head or chest colds, and anxiety or depression. In a study of CAM use among 82 psychiatric inpatients,<sup>16</sup> 61% of whom were diagnosed with a depressive disorder, 63% reported using at least one CAM intervention within the past 12 months, including relaxation, mental imagery, and/or meditation (30%), as well as Yoga (21%).

Thus, there is a need for continued research on Yoga as a treatment for depression and related mood disorders. To date, only a handful of randomized-controlled trials have evaluated the efficacy of Yoga for depressive disorders, although these studies cite impressive results.<sup>17-21</sup> For example, Janakiramaiah et al.<sup>18</sup> compared the antidepressant effects of *Sudarshan Kriya* Yoga (SKY), a Yogic breathing practice, to electroconvulsive therapy (ECT) and the antidepressant medication imipramine (IMN), which are two of the more effective interventions for treatment-resistant depression. This study found that all three modalities produced significant reductions in reported depression symptomatology, with SKY performing nearly as well as medication (with 93%, 73%, and 67% remission rates for ECT, IMN, and SKY, respectively). Woolery et al.<sup>21</sup> found that Yoga was a safe and effective means of improving depressed mood in young adults ages 18 to 29, while other research has established that Yoga can be a safe and effective therapy for elder adults and geriatric populations as well.<sup>22</sup> The efficacy of Yoga in treating psychopathology is further supported by studies that have shown improvements in mood with Yoga *āsana* practice,<sup>23-27</sup> while others have demonstrated improvements with Yogic breathing practice.<sup>18,28</sup>

However, there have been relatively few, if any, studies that have assessed the relationship between mood symptoms and a Yoga practice that includes breath, posture, sound, and meditation. The current study examines the overall effects on depression of one such comprehensive Yoga practice, the LifeForce Yoga Program. This study also examines the specific contribution of each component of the Yoga practice.

### *The Life Force Yoga Program*

LifeForce Yoga is a practice that includes Yogic breathing exercises (*prānāyāma* and *kriyā*), visualization (*bhāvanā*), intention (*sankalpa*), hand gestures (*mudrā*), chanting (*mantra*) during postures (*āsanas*), and either a relaxation (*Yoga nidrā*) or a meditation (LifeForce Yoga *Chakra* Clearing Meditation, which includes two rounds of an energizing bellows breath (*bhastrikā*), three rounds of a calming *brahmari*

bee breath practiced on the exhale only, and seven *mantras* and *mudrās* thought to stimulate the seven energy centers of the body, which roughly correspond with the major glands of the body. The guided relaxation of meditation is followed by a short three- to five-minute seated meditation, in which participants are invited to gently anchor the mind in breath awareness or *mantra*. A full description of a typical LifeForce Yoga practice is listed in Appendix 1.

The LifeForce Yoga Program has collected much anecdotal and qualitative evidence for its positive influence on mood;<sup>29</sup> however, these reported effects had never previously been empirically tested. Thus, the goal of this study was to assess the relationship between participation in the LifeForce Yoga protocol and reported mood symptoms over time. We hypothesized that participants would report significantly fewer symptoms of depression following their participation in the LifeForce Yoga Program and that the symptom reduction would be maintained at the two-month follow-up period. Further, we hypothesized that there would be a significant negative correlation between frequency of Yoga practice and severity of depression symptoms (i.e., more frequent practice would be associated with less severe symptomatology).

## Methods

The data for this study were gathered over the course of several LifeForce Yoga trainings and retreats led by LifeForce Yoga creator Amy Weintraub between June 2006 and June 2007. This was a naturalistic pilot study, so no inclusion or exclusion criteria were applied to the participants; they all voluntarily registered for and participated in the program. However, in rare cases, if an individual's depression was functionally impairing to the point that he or she would not likely be able to fully participate in the training or retreat, the individual was referred by the investigator to receive standard treatment for depression. The group size for each training/retreat varied between 15 and 53 participants. This study was not reviewed by an Institutional Review Board; however, informed consent was acquired from all participants.

Participants completed questionnaires for this study (described below) just before participating in a five-day LifeForce Yoga training or retreat. During the training or retreat, participants were in direct contact with the Yoga teacher leading the program for roughly 8-10 hours per day, or 40-50 hours total. Yoga practice sessions lasted approximately 1.5 to 2.5 hours. In general, the time breakdown spent on each component of the program was roughly 35%

*āsana*, 40% *prānāyāma* (including *mantra* chanting), and 25% *Yoga nidrā*. However, *ujjayi prānāyāma* and *kapalabhati kriyā* were also integrated into the *āsana* session, which is not reflected in the percentages stated above.

At the completion of the five-day retreat or training period, home practice was encouraged. The participants completed the same set of questionnaires following two weeks of home practice, and again two months after their completion of the LifeForce Yoga program. Questionnaire measures were administered by the creator and instructor of the LifeForce Yoga Program just before the trainings/retreats, and by mail following the training/retreat for the subsequent two time points.

## Participants

The sample for this study consisted of approximately 94 participants in the LifeForce Yoga trainings and retreats, many of whom were struggling with mood-related difficulties. The sample was predominantly female (91%). Reported ages in the sample ranged from 22 to 67, with the mean, median, and modal age being 62, 51, and 47, respectively. 33 people in the sample were Yoga teachers and 19 were mental health professionals, with the remaining members of the sample reporting occupations outside of the fields of Yoga and mental health. Nearly half of the sample had been practicing Yoga, primarily postures, for less than a year, and 16 individuals were entirely new to Yoga. Only 25 members of the sample reported that they had a regular practice that included breathing, such as *prānāyāma* and *kriyā*, and no one had a regular practice that incorporated chanting during posture practice. About half of the sample (51%) scored at or above the clinical cutoff of 14 on the Beck Depression Inventory before participating in the LifeForce Yoga program, and the other half (49%) scored below this cutoff. The scores on the Beck Depression Inventory ranged from 1 to 42, with group mean, median, and modal scores of 15, 14, and 8, respectively.

## Measures

The following questionnaire measures were used in this study:

- *Profile of Mood States Questionnaire – Short Form (POMS)*.<sup>30</sup> The POMS is a questionnaire that assesses six mood states with good internal consistency. The short form correlates highly with the original version of this measure. The short form of this measure consists of 30 single-word descriptors of behavioral or affective states, such as “shaky,” “energetic,” “gloomy,” and “furious,” which correspond to six subscales (tension/anxiety, de-

pression/dejection, anger, vigor, fatigue, and confusion) and altogether form one Total Mood Disturbance Scale. Responses are rated on a Likert Scale from 0 (not at all) to 4 (extremely).

- *Beck Depression Inventory (BDI)*.<sup>31</sup> The BDI is a well-validated, widely used self-report measure of depressive symptomatology. Responses are rated on a Likert Scale from 0 to 3, with 3 equaling more distress. A score of 14 or above on this measure is associated with a clinical level of depression symptomatology.
- *LifeForce Questionnaire (LFQ)*. The LFQ was created by Amy Weintraub as a measure of individuals' practice of the various aspects of the LifeForce Yoga Program. This measure assessed the frequency and duration of participants' posture, meditation, and breathing practices.

### Statistical Analyses

Repeated measures Analysis of Variance (ANOVA) was used to determine the significance of the change in reported symptoms over the course of three assessment administrations. Post-hoc paired samples *t*-tests were used to look at the specific changes from assessment time 1 to time 2, time 2 to time 3, and time 1 to time 3. Correlation analyses were used to explore the relationship between change in mood symptoms and reported practice indicators on the LFQ. For the ANOVA and *t*-score analyses, a *p* score of less than 0.05 indicates that the change in reported scores was statistically

significant, with 95% confidence that the change was not due to chance. A *p* score less than 0.01 indicates a change that was statistically significant, with 99% confidence that the observed difference in mean scores was not due to chance.

## Results

### Response and Attrition Rates

The attrition rates between each assessment time point were relatively large, with 94 participants completing questionnaires at the first measurement point, 54 participants (57%) completing questionnaires at the second measurement point (following the five-day program and two weeks of home practice), and 33 participants (35%) returning questionnaires at the third measurement point (two months after participation in the program). No significant differences were found in response rates based on occupation (Yoga or mental health professional versus other occupation;  $F = 2.119$ ,  $p = 0.126$ ) or initial report of depression symptoms at time 1 (above or below the clinical cutoff on the BDI;  $F = 0.855$ ,  $p = 0.358$ ). No significant differences were found in initial depression scores between those people who were employed as Yoga teachers and those with some other profession ( $F = 1.963$ ,  $p = 0.146$ ). Thus, it can be inferred that reported intensity of depression symptoms at time 1, as well as occupational status, was not related to whether or not a participant returned their questionnaires at all time points.

Table 1. Post-hoc paired samples *t*-tests from time 1 to time2 and from time 2 to time 3

SCALE	Time 1 Mean (SD)	Time 2 Mean (SD)	T-score ( <i>t</i> )	<i>p</i> -value ( <i>p</i> )	Time 2 Mean (SD)	Time 3 Mean (SD)	T-score ( <i>t</i> )	<i>p</i> -value ( <i>p</i> )
BDI	14.60 (10.11)	6.91 (8.57)	7.12	<.01	6.15 (9.26)	6.12 (9.60)	NS	NS
P TMD	26.09 (20.80)	9.37 (18.66)	6.17	<.01	6.67 (17.62)	9.50 (16.93)	NS	NS
P Anx	7.38 (4.55)	4.01 (3.48)	6.69	<.01	3.50 (3.48)	4.06 (3.78)	NS	NS
P Dep	6.07 (4.81)	2.96 (3.80)	5.45	<.01	2.75 (3.48)	3.59 (3.71)	NS	NS
P Ang	4.44 (4.05)	3.11 (3.49)	1.55	.13	2.84 (3.01)	2.81 (2.22)	NS	NS
P Vig	7.13 (4.43)	9.65 (4.71)	-3.39	<.01	10.03 (4.60)	9.19 (4.72)	NS	NS
P Fatg	8.31 (5.32)	4.30 (4.43)	6.64	<.01	3.53 (4.49)	5.00 (3.95)	-2.39	.023
P Conf	7.01 (3.98)	4.63 (3.60)	4.50	<.01	4.06 (3.18)	4.06 (3.26)	NS	NS

Note: BDI = Beck Depression Inventory; P TMD = POMS Total Mood Disturbance; P Anx = POMS tension/anxiety subscale; P Dep = POMS depression/dejection subscale; P Ang = POMS anger subscale; P Vig = POMS vigor subscale; P Fatg = POMS fatigue subscale; P Conf = POMS confusion subscale; NS = non-significant.

**Table 2.** Correlations between change in clinical BDI scores from Time 1 to Time 2 and reported practice of LifeForce Yoga components on the LFQ at time 2.

	BDI change T1 to T2	POMS Depression change T1 to T2
Breathing Practice Frequency	$r = 0.018$	$r = -0.046$
Breathing Practice Duration	$r = -0.082$	$r = -0.076$
Posture Practice Frequency	$r = 0.377^*$	$r = 0.354$
Posture Practice Duration	$r = 0.177$	$r = 0.100$
Meditation Practice Frequency	$r = 0.472^*$	$r = 0.055$
Meditation Practice Duration	$r = 0.318$	$r = 0.476^*$

Note: \*  $p < 0.05$ .

### Change in Scores on the Mental Health Questionnaire

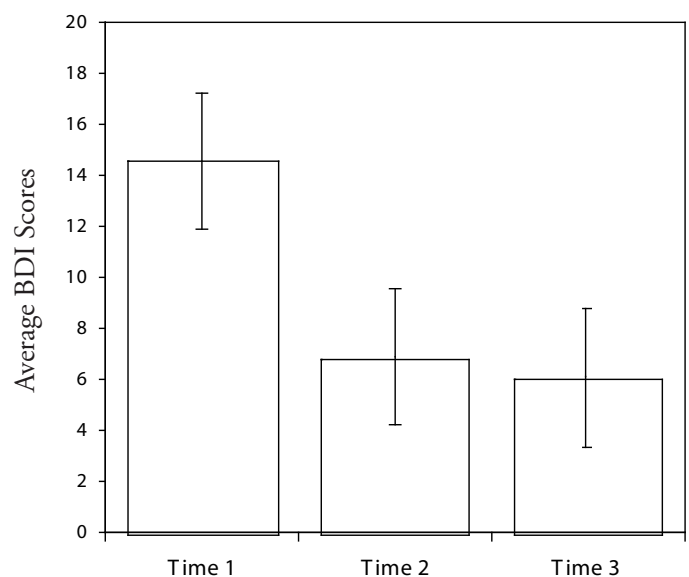
As mentioned above, 51% of the sample scored above the clinical cutoff on the BDI at time 1. However, fewer individuals scored above this cutoff at time 2 (11%) and time 3 (12%), a change that was statistically significant both from time 1 to time 2 ( $t = 5.584, p < 0.01$ ) and from time 1 to time 3 ( $t = 4.427, p < 0.01$ ). The mean scores on the primary outcome measures (BDI, POMS, POMS subscales) for the full sample (N = 94 at time 1, 54 at time 2, and 33 at time 3) are illustrated graphically in Figures 1, 2, and 3, respectively. Looking specifically at the 33 people who completed questionnaires at all three time points, repeated measures ANOVA tests demonstrated a main effect for time, indicating that mean scores decreased significantly across the assessment time points on nearly all of the outcome measures of interest, including the total BDI score ( $F(64, 2) = 19.16, p < 0.001$ ), POMS Total Mood Disturbance ( $F(62, 2) = 20.19, p < 0.001$ ), POMS Tension/Anxiety subscale ( $F(62, 2) = 16.31, p < 0.001$ ), POMS Depression/Dejection subscale ( $F(62, 2) = 11.63, p < 0.001$ ), POMS Fatigue subscale ( $F(62, 2) = 17.44, p < 0.001$ ), POMS Confusion subscale ( $F(62, 2) = 9.04, p < 0.001$ ) and increased significantly on the POMS Vigor subscale ( $F(62, 2) = 7.27, p = 0.001$ ). The change in scores on the POMS Anger subscale was not significant overall as analyzed by the repeated measure ANOVA ( $F(62, 2) = 0.327, p = 0.722$ ), which may be related to the fact that initial scores on this subscale were relatively low (mean = 4).

Post hoc paired-samples  $t$ -tests revealed that for nearly all outcome variables the change in mean score was significant from time 1 to time 2, but not significant from time 2 to time 3 (see Table 1). The changes in reported symptomatology found from time 1 to time 2 were largely maintained

from time 2 to time 3. However, the mean scores increased slightly on some scales from time 2 to time 3 (and decreased slightly on the vigor subscale). For the most part, these changes were not statistically significant. The exception was the mean score on the fatigue subscale, which increased from time 2 to time 3, and the paired samples  $t$ -test found this to be a significant increase ( $t = -2.39, p = 0.023$ ).

Correlation analyses were utilized to better understand how reported practice of the LifeForce Program components

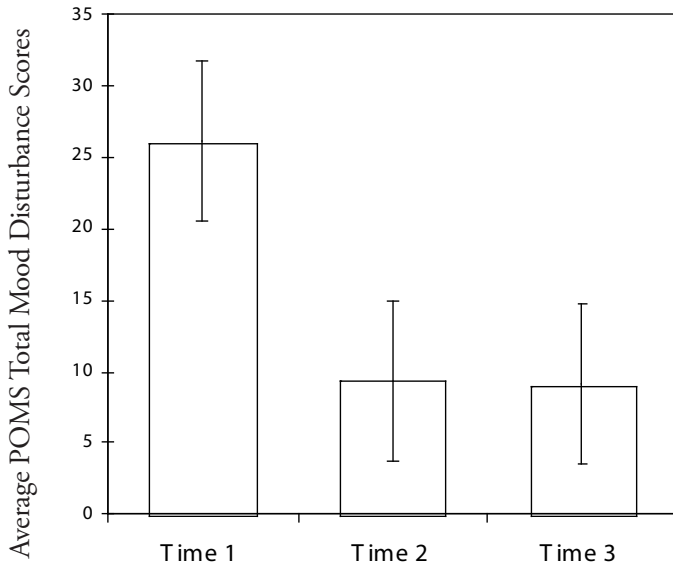
**Figure 1.** Change in BDI scores over time.



This figure illustrates the average value for the Beck Depression Inventory Total Score for all of the data acquired at each of the 3 time points: T1 (baseline), T2 (2 weeks after the Yoga program), and T3 (long-term follow-up). Error bars represent standard errors of the mean. The score difference from Time 1 to Time 2 is statistically significant ( $t = 7.124, p < 0.01$ ). The N for the full sample is 94 at Time 1, 54 at Time 2, and 33 at Time 3, due to attrition rates for returning questionnaires.



Figure 2. Change in POMS scores over time.



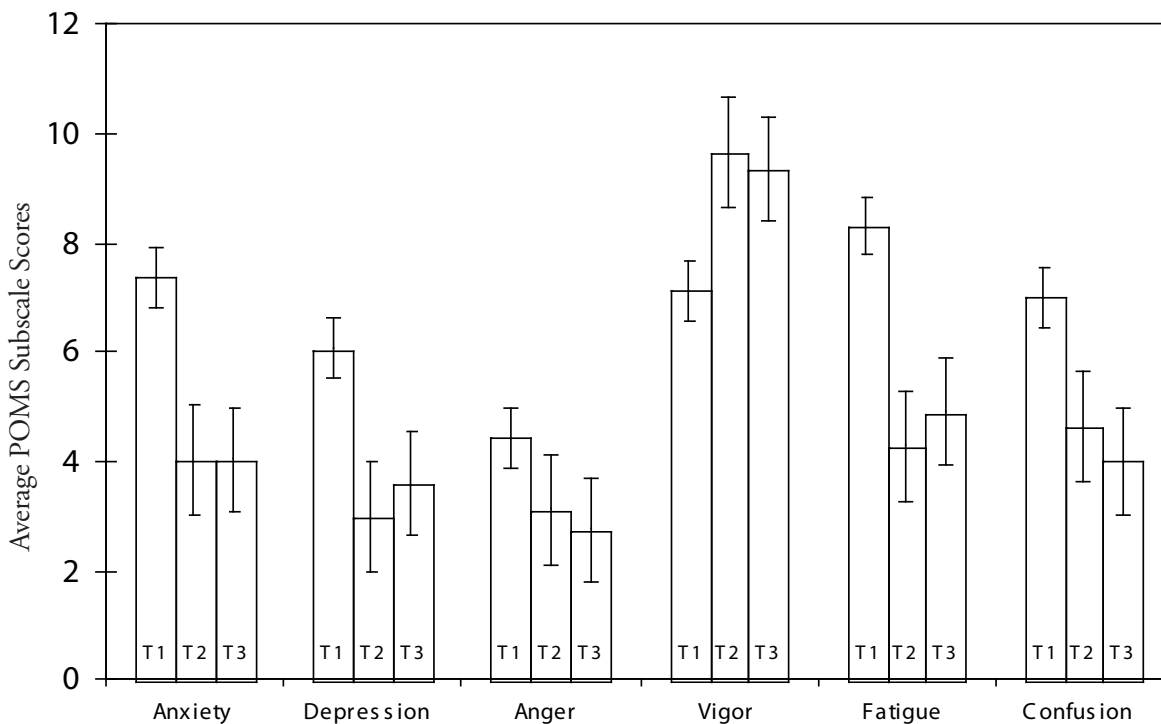
This figure illustrates the average value for the POMS Total Mood Disturbance Score for all of the data acquired at each of the 3 time points: T1 (baseline), T2 (2 weeks after the Yoga program), and T3 (long-term Follow-up). Error bars represent standard errors of the mean. The change in POMS Total Mood Disturbance Scores from Time 1 to Time 2 is statistically significant ( $t = 6.167, p < 0.01$ ). The N for the full sample is 94 at Time 1, 54 at Time 2, and 33 at Time 3, due to attrition rates for returning questionnaires.

was associated with reported changes in symptomatology for those individuals who scored above the clinical cutoff on the BDI at time 1. The most significant change in reported symptoms came between time 1 and time 2, so change scores were computed for time 1 to time 2 and correlated with participants' reported practice on the LifeForce Questionnaire at time 2 (see table 2). Participants reported similar rates of practice for postures, meditation, and breathing exercises (median rate was 4 times per week, 3 times per week, and 4 times per week, respectively). For those individuals who scored above the clinical cutoff for depression on the BDI, higher reports of *āsana* and meditation practice were associated with greater change in reported depression symptoms. No such association was found for breathing practice alone. However, because *ujjayi prānāyāma* and *kapalabhati kriyā* were practiced in conjunction with *āsana* practice, it is unknown what contribution breathing made to the decrease in depression symptoms associated with *āsana* practice.

## Discussion

This study demonstrates a significant decrease in reported mental health symptomatology, particularly depression, from before participation in the LifeForce Yoga

Figure 3. Change in POMS subscale scores over time.



This figure illustrates average values for each POMS subscale for all of the data acquired at each of the 3 time points T1 (baseline), T2 (2 weeks after the Yoga program), and T3 (long-term follow-up). Error bars represent standard errors of the mean. The change in scores from Time 1 to Time 2 is statistically significant for all subscales, except for Anger, and the  $t$ -score statistics are reported in Table 1. The N for the full sample is 94 at Time 1, 54 at Time 2, and 33 at Time 3, due to attrition rates for returning questionnaires.

Program to after the program and two weeks of home practice. These changes were generally maintained for the participants who responded on questionnaire measures two months following their participation in the training. After time 2 (two weeks following the initial training), there is no further significant reduction in reported symptomatology; however, the changes reported from time 1 to time 2 were maintained up to 2 months following their initial participation in the program. Thus, it is reasonable to infer that techniques learned during the LifeForce Yoga Program, and then practiced following the initial training, were contributing to the reported reduction in mental health symptoms and the maintenance of these gains. Correlation analyses highlight that posture practice frequency and meditation practice frequency and duration appear to be significantly related to symptom change.

### *Implications*

The implications of these initial results for Yoga teachers, Yoga therapists, and other healthcare providers include that a Yoga practice with attention to breath, sound, visualization, and meditation during *āsana* practice may lead to a decrease in reported depressive symptomatology. The individual components, such as breathing or meditation, may be efficacious on their own; however, additional research is necessary in order to test this assumption. Generally, clinicians may find these strategies helpful to their clients in order to manage mood, relax, focus, and cultivate a general sense of well-being.

### *Limitations*

A significant limitation in this study is the decreasing sample size at time 2 and time 3, due to participants failing to return questionnaire measures at these time points. Thus, we have no information on the psychological functioning of those individuals lost to follow-up evaluations. Participant attrition is a problem in many research studies, and the drop-out rates for this study are similar to those reported for the NIMH STAR-D trial described earlier in this manuscript (21% withdrew after trying one treatment, 30% withdrew after two, and 42% withdrew after trying three different types of treatment). Furthermore, due to the small sample of participants providing questionnaire data at all three time points (N=33), the sophistication of the statistical analyses is limited by the lack of statistical power.

Because this was a naturalistic pilot study with few criteria for including or excluding participants, the sample consisted of professionals from the fields of Yoga and mental health, as well as other occupations, and participants

reported a wide range of depression symptom severity. It might have been predicted that participants reporting more depression symptoms at time 1 would be less likely to continue practicing the learned Yoga techniques and return questionnaire data at follow-up time points; however, this was not the case. Participants who scored above the clinical cutoff on the BDI continued to practice and report on their symptoms at the same rate as those individuals who did not initially score in the depressed range on the BDI. Similarly, whether a person was a Yoga or mental health professional had no relationship to whether they continued to provide data on their mental health symptoms and reported practice. It is promising that these variables (occupation and initial depression symptoms severity) did not appear to skew the dataset, despite the decreasing response rate from time 1 to time 2 to time 3.

Another significant limitation is the potential for responder bias on questionnaires, related to the fact that questionnaires were administered by the LifeForce Yoga Program instructor. Finally, there was no control group for this study, so we cannot accurately assess how much of the reported symptom reduction could be attributed to a placebo effect, the natural waxing and waning of symptoms over time, or a general regression to the mean.

## **Conclusions**

Even taking into account the study limitations mentioned above, the individuals in this study who participated in the assessment two weeks after the LifeForce Yoga Program reportedly enjoyed a positive change in their psychological functioning, and those who participated in the assessment two months after the program indicated that these positive changes were maintained. These findings warrant continued systematic evaluation of this program. It appears that the higher reports of symptom change from time 1 to time 2 were associated with higher reports of posture and meditation practice at time 2; however, more research is necessary to better understand the relationship between the components of a Yoga practice and symptom change over time.

### *Future Research Directions*

Continued data collection with increased efforts on maximizing participation in follow-up assessments will be important to evaluate the effects of this program. A randomized controlled trial comparing the LifeForce Yoga Program to no treatment or treatment-as-usual for depressed individuals (therapy and medication) is an important eventual step in determining the value of this program as an inter-

vention for depression. A study evaluating the augmenting effects of the LifeForce Yoga Program when added to a standard treatment protocol (medication), above and beyond the effects of medication only, would also be beneficial for the field.

Future research efforts could also explore whether specific components of the LifeForce Yoga Program (*ásanas*, breathing, meditation, etc.) contribute independent or different effects on reported mental health symptomatology. Additionally, exploring if there are distinct “active ingredients” in the program that are the most therapeutic or if the program must be taken as a whole, will be helpful in determining what practitioners trained in this program should focus on with their clients. Finally, future research efforts measuring the effects of the LifeForce Yoga program for other categories of mental health impairments, such as anxiety disorders, eating disorders, and/or somatic complaints, may be indicated, given the significant comorbidity rates for those individuals with depression.

In general, continued research is crucial to establish an evidence base to support what so many Yoga practitioners have experienced on their Yoga mats for centuries: the therapeutic effects of Yoga on mental health and psychological well-being. Understanding the connection between Yoga practices and mental health with research support is becoming increasingly important in this age of managed care and evidence-based medicine. This study sought to add more support to the notion that Yoga, meditation, and breathing practices, taken together, can have beneficial effects for individuals suffering from symptoms of depression. The growing research literature on the value of Yoga practices for the treatment of depression and other psychological ailments calls for other Yoga teachers, mentors, and therapists to do the same.

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## Appendix 1.

### Components of the LifeForce Yoga Program

#### Seated Opening Practices

- Bellows breath (*bhastrika*)
- Three-part diaphragmatic breath (*dirga prānāyāma*)
- Ocean-sounding breath (*ujjayi prānāyāma*)
- Awareness of breath and body sensation
- Setting an intention or resolve (*sankalpa*)
- Intention to practice with compassion, self-awareness, and self-acceptance, with *bija mantra* 3x (*yam*) and eagle (*garuda*) *mudra* at heart
- Chanting the sound of *Om*
- Skull-shining breath (*kapalabhati*)
- Alternate nostril breathing (*nadi shodhana*)

#### Āsanās

Warm up practice beginning on hands and knees in table position

- Cat-cow
- Table side-stretch
- Thread-the-needle
- Flying cow with *mantra* (*namaha*)
- Sphinx or cobra with *bija mantra* (*vam*)
- Downward-facing dog

#### Standing

- Breath of joy

- Victory Goddess with *mantra* and *bija mudra* (*yam*; lotus (*padma*) *mudra* at heart)
- Pulling *prana*
- Sun breaths
- Chair pose (*utkatāsana*) with Skull-shining breath (*ka-pabhati*) or, if contraindicated, victory breath (*ujjayi*)
- Standing Yoga Mudra with *bija mantra* (*Ng*, lips closed, coming forward)

#### Integrative practices

- Mountain pose (*tadāsana*) with victory breath (*ujjayi*) and resolve (*sankalpa*), and with *mantra* (*so ham*)
  - Sun salutation with *mantra* (*mahara*) *bhavana* (visualization), and embracing resolve (*sankalpa*)
  - Warrior pose (*virabhadrāsana*) variation with *mantra* (*mahara-mahaya*)
  - Intense chest stretch (*parsvottanāsana*) with calming *mantras* for the energy centers (*chakras*) (Ö Ü Ah Ā Ē MMM), moving into external breath retention (*kumbhaka*)
  - Bow pose (*danurāsana*) with *bija mantra* (*ram*)
  - Seated forward bend (*Yoga mudra*) with *bija mantra* (*NG*, lips closed) or headstand (*sirsāsana*)
  - Seated posterior stretch (*paschimottanāsana*) with calming *mantras* for the energy centers (*chakras*) (Ö Ü Ah Ā Ē MMM), followed by external breath retention (*kumbhaka*)
  - Dynamic Forward Bend/Plough (*paschimottanāsana/ halāsana*)
  - Dynamic Bridge (*setu bandhāsana*) with *vyaahriti mantras* (*Om bhu-bu*, *Om bhu-va-ha*, *Om su-va-ha*, *Om ma-ha-ha*, *Om ja-na-ha*, *Om ta-pa-ha*, *Om sat-yam*)
  - Spinal twist (*ardha matsyendrāsana*) with *bija mantra* (*ham*)
  - Reverse plank pose with skull-shining breath (*kapalabhati*)
  - Double wind-relieving pose (*pavanamuktasan*) with skull-shining breath (*kapalabhati*) on release
  - Yoga *nidrā*
- OR
- LifeForce *Chakra*-clearing Meditation

All practices can be modified, with assistance, for constitution and mood; contraindications for *kapalabhati* and *kumbhaka* given.

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