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*ORIGINAL ARTICLE*

# Change in Sense of Nondual Awareness and Spiritual Awakening in Response to a Multidimensional Well-Being Program

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## Abstract

***Objective:*** This study examined the effects of a comprehensive mind–body program on sense of nondual awareness and spiritual awakening.

***Design and intervention:*** The study compared the effects of participation in an intensive 6-day Ayurveda-based mind–body program that addressed physical, emotional, and spiritual domains as compared with a control condition.

***Setting:*** Resort setting.

***Subjects:*** Participants were 69 healthy women and men (mean age 53.9 years; range 32–86).

***Outcome measure:*** The primary outcome was the Nondual Embodiment Thematic Inventory (NETI).

***Results:*** A significant group by time interaction ($p = 0.029$) indicated that after the intervention, participants in the mind–body program showed a significant increase in NETI scores ($p < 0.03$), which was sustained 1 month later ($p < 0.01$).

***Conclusion:*** Findings suggest that an intensive program providing holistic instruction and experience in mind–body practices can lead to a significant and sustained shift in perception of self-awareness, one that is likely favorable to well-being.

**Keywords:** mind–body, consciousness, nondual, awareness, spirituality, Ayurveda

## Introduction

Interindividual variation in the perception of self varies greatly, ranging from identification with the egoic structure of the mind–body and its associated social roles to recognition of self as transcending such limitations and identifying with a more nonpersonal awareness.[1,2] Although there exists an incredibly wide range of meditative practices and philosophies in the context of numerous spiritual traditions, the majority emphasize cultivating such a perceptual shift away from a predominate ego self-identification. Insight into this pathway is provided by traditions such as *Advaita Vedanta* as well as more modern psychology disciplines,[3,4] which provide perspectives on the nature of human awareness and subjective conscious experience.[5,6] Humanistic and transpersonal psychology, for example, are subdisciplines of psychology that seek to move beyond seeing consciousness as simply a product of the brain and to integrate the spiritual and transcendent aspects of human experience, so called transpersonal states for optimal well-being.[7] These perspectives are in contrast to more traditional psychology and psychiatry, as well as modern neuroscience itself, which ascribe our consciousness and identity to the mind–body and brain activity alone.[8,9]

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Baerentsen et al.[10] and Josipovic[11] emphasize that regardless of the tradition or meditative techniques, most types of meditation practice share the common ''ultimate aim'' of moving away from ego self-identification to a more unified experience of awareness, often termed ''nondual'' awareness (also called clear light, open presence, pristine or timeless awareness, transcendence, oneness, and mental silence). Nondual awareness has been described as ''an open, awake cognizance that precedes conceptualization and intention, and contextualizes and unifies both extrinsic task-positive and intrinsic self-referential mental processes, without fragmenting the field of experience into opposing dualities.''[11,12] In nondual awareness, the absence of primary identification with the mind–body transcends the subject–object dichotomy identification to where ordinary distinctions of subject and object do not exist. As such, polarities are collapsed and recontextualized; the knower, the known, and the process of knowing are experienced as one field of experience.

Although nondual awareness, itself a nonconceptual consciousness, can be considered a transpersonal state, transpersonal states may not necessarily include nondual awareness. That is, a transpersonal state can include any state where persons have transcended what their current perception of self has been but without encountering nondual awareness. In the nondual state, however, the previously experienced limited identity as a personal state is transcended and recognized to have been merely an impermanent pattern in the space (field) of nondual awareness (fundamental consciousness). The experience of ''spiritual awakening,'' or sometimes referred to simply as ''awakening,'' can be considered a transpersonal experience and too may or may not include nondual awareness. In the literature, spiritual awakening typically refers to experiencing a great sense of love for self and others and freedom of thought and feeling.[13,14]

Common approaches to gaining insight into nondual awareness and spiritual awakening include self-inquiry, meditation practices, and psychedelics.[12,15–18] Neuroscience research on nondual awareness seeks to understand the effects of nondual awareness on a variety of cognitive and affective processes, including mind wandering and neural networks, which are hypothesized to be related to changes in fragmented subject versus object experience. Studies indicate better mental health in individuals who experience transpersonal states.[19,20]

Despite the central importance of nondual awareness, it has been largely overlooked in Western clinical psychology, in part, because of the typical requisite meditative experience necessary to obtain and maintain such an awareness and due to challenges in measuring this concept. Moreover, although Western clinical psychology has increasingly emphasized meditative techniques as a means of alleviating suffering and promoting enhanced well-being, such efforts tend to promote more secular meditative practices taken out of their traditional context. Finally, Western clinical psychotherapeutic meditative techniques typically focus on training earlier ''phases'' or ''modes of existential awareness'' (MEA)[21] such as nonattachment,[22,23] decentering,[24,25] self-awareness and regulation,[21,23] and compassion[26] to name just a few. As Dorjee notes,[21] ''it is not clear whether secular mindfulness-based approaches could enable a progression beyond initial stages of MEA'' as loss of subject–object duality is rarely emphasized in meditation as taught by Western clinical psychologists.

With these considerations in mind, the objective of this study was to examine the effects of a multidimensional well-being program on cultivating the sense of nondual awareness and spiritual awakening. The authors also took the opportunity to further examine the construct validity of the Nondual Embodiment Thematic Inventory (NETI), by administering other relevant scales, including those for depressed mood, anxiety, and spirituality.

## Study Participants and Design

Findings presented here are part of a larger study, the Self-Directed Biological Transformation Initiative (SBTI), which was a multidimensional well-being program that included biochemical and physiological assessments that are reported elsewhere.[27,28] Study participants were recruited from the University of California (UC) San Diego (La Jolla, CA) and the Chopra Center for Wellbeing (Carlsbad, CA). Eligible participants were healthy English-speaking women and men aged 30–80 years of age with no current major medical or mental illnesses and willing to refrain from drinking more than one alcoholic beverage per day during the intervention. Individuals who had previously participated in a yoga or meditation retreat of any kind within the past 12 months were excluded from participation, as were individuals currently using illicit drugs. The UC San Diego Institutional Review Board (IRB) approved the study (No. 140564) and all study subjects provided written informed consent before participation (ClinicalTrials.Gov No. NCT02241226).

SBTI was a quasi-randomized trial comparing the effects of participation in the Perfect Health (PH) mind–body well-being program that is offered at the Chopra Center for Wellbeing at La Costa Resort (Carlsbad, CA) as compared with a vacation (relaxation control) at the same location. Potential participants were told that the study was being conducted to learn more about the psychosocial and physiological effects of the 6-day PH program as compared with a 6-day relaxation stay at the resort. A total of 261 individuals were screened for eligibility, learned details of study involvement, and were asked to consider their commitment and availability before they were enrolled into the study (Fig. 1). Ninety-eight individuals were randomly assigned (1:2) to either the PH group or the relaxation control group while a group of 23 individuals were assigned directly to the PH program. The intervention groups were not blinded and site investigators and study personnel knew to which group participants were assigned. Upon arrival to the resort, participants were given a 1-h orientation meeting with the study team where they learned about the overall study schedule and procedures and the assessment schedules. The treatment groups had no contact with each other during the study and did not know the details of the daily schedule of the other group.

### *Interventions*

PH program. PH is essentially an immersion program of detoxification and rejuvenation based on core principles from the traditional Ayurvedic system of medicine that emphasizes holistic principles primarily focused on personalized health and well-being.[29,30] As previously described

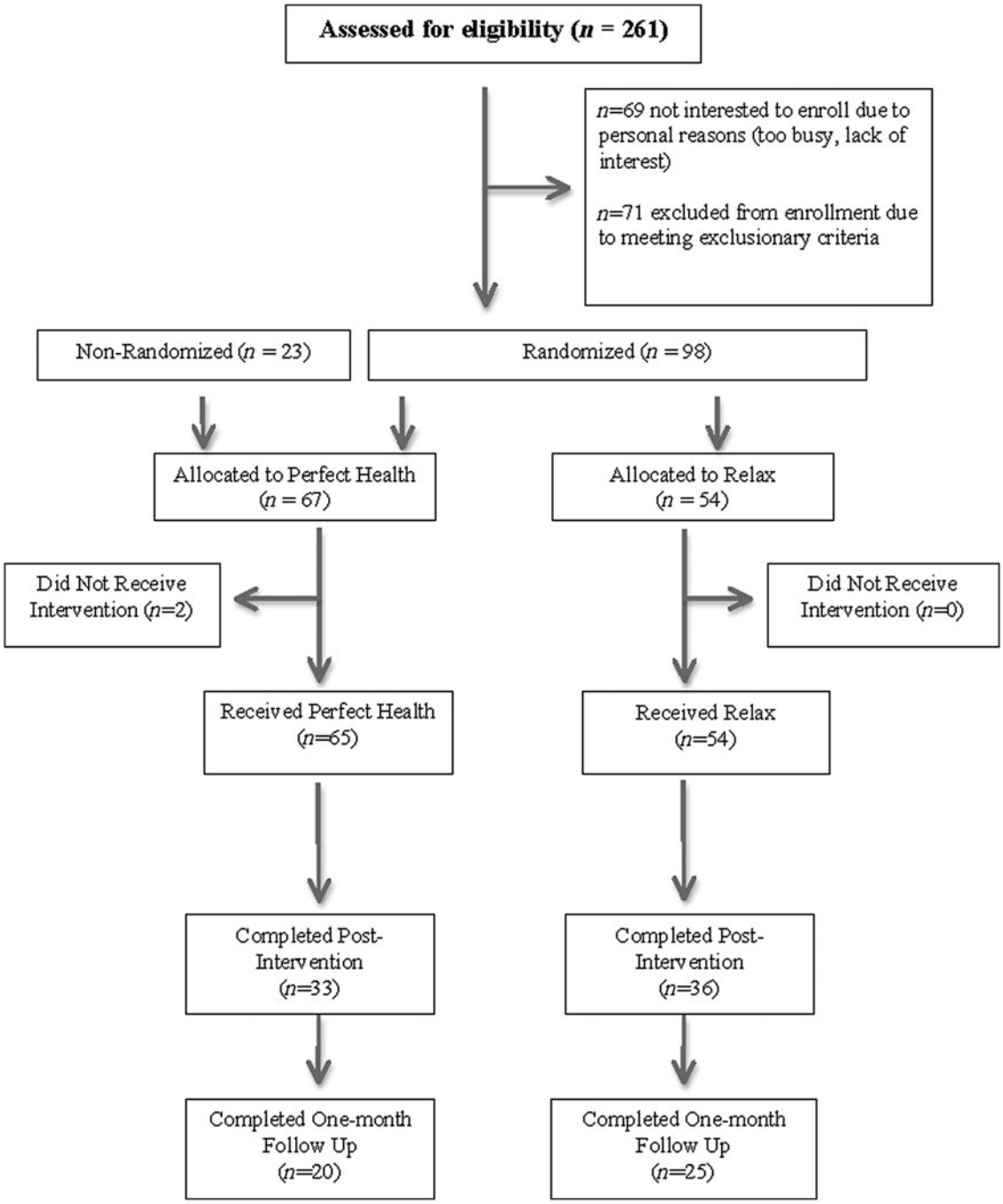


**FIG. 1.** Consolidated Standards of Reporting Trials flow diagram.

in detail, the program addresses well-being through daily practices and lectures, including twice daily group meditation (30 min per session) and daily yoga (60 min per session), breathing exercises (pranayama) (5 min per session), and emotional expression through a process of journaling and emotional support.[27] Lectures did not include material on *Advaita* or nonduality. The teachers of the PH program delivered their standard program to the study participants.

Relaxation control program. Participants randomized to the control group were asked to do what they would normally do on a vacation with the additional following restrictions: they were asked not to engage in more exercise than they would in their normal lifestyle and to refrain from using La Costa Resort spa services. Control participants were also asked not to drink ginger tea or take ginkgo biloba during the 2 days before and during the study week.[27]

### *Assessments*

Nondual Embodiment Thematic Inventory. Although there are a number of standardized questionnaires that assess spiritual and transpersonal constructs,[31–33] few specifically address nondual awareness. For this study, the NETI, a 20-item

questionnaire that was developed by John Astin and David A, was used. Butlein and a team of experts in nonduality attempt to evaluate qualities of the nondual experience and spiritual awakening.[34–37] The NETI yields a single total score that can range from 20 to 100 and attempts to differentiate between individuals with transpersonal ideas from individuals who live the transpersonal at the deepest levels possible.[34] The qualities that the scale assesses include compassion, resilience, propensity to surrender, interest in truth, defensiveness, capacity to tolerate cognitive dissonance and/or emotional discomfort, gratitude, frequency of nondual experience, anxiety level, motivational paradigm, authenticity, level of disidentification from the mind, and humility[34] (Appendix). Participants completed the NETI online at three different times: at home before arriving to the study site, immediately after their respective program, and at home 1 month later. Cronbach's α for this cohort was excellent at 0.913.

In addition to the NETI, the following instruments were also administered at home before arriving to the study site, immediately after the program, and at home 1 month later to further examine the construct validity of the NETI.

Center for Epidemiology Studies-Depression. A 20-item self-report screening tool for depressive symptoms was developed by the National Institute of Mental Health.[38,39] Cronbach's α was 0.841 for this cohort.

Patient-Reported Outcomes Measurement System Anxiety Scale. An eight-item scale that is part of the National Institute of Health research initiative, the Patient-Reported Outcomes Measurement System (PROMIS), and Assessment Center assessed the full range of anxiety symptoms.[40] Cronbach's α was 0.814 for this cohort.

The Delaney Spirituality Scale. A 23-item scale that assesses beliefs, intuitions, lifestyle choices, practices, and rituals was representative of the human spiritual experience.[32,41] Cronbach's α was 0.933 for this cohort.

In addition, blood pressure, height, weight, and number of months practicing meditation and/or yoga were obtained.

### *Data analysis*

Data analyses included Pearson correlations, chi-square, one-way analysis of variance (ANOVA), repeated measures ANOVA, and factor analysis. The data were normally distributed. Given the differences in the number of study participants at the postintervention versus 1 month follow-up, the immediate postintervention effects and the 1 month follow-up effects were separately examined (Fig. 1). The aim of this study was to examine the efficacy of a novel multidimensional well-being program. Although the authors feel these protocol analyses are appropriate at this stage of research, to minimize potential bias associated with such an approach, intent-to-treat analyses using the last observation carried forward method to provide preliminary insight into the effectiveness of the program were also presented. Finally, potential differences between completers and noncompleters using one-way ANOVAs were also tested.

Table 1. Baseline Characteristics

| *Mean ± SD* | *Perfect Health* | *Relaxation* |
|---|---|---|
| Age (years) | 55.8 (11.7) | 52.1 (10.3) |
| Gender (female), % | 85.7 | 81.2 |
| BMI (kg/m$^2$) | 23.5 (3.7) | 24.3 (4.7) |
| Systolic blood pressure (mmHg) | 112.1 (13.2) | 119.3 (16.2) |
| Diastolic blood pressure (mmHg) | 72.4 (10.1) | 76.9 (11.3) |
| Alcohol use, % | 60 | 62 |
| Caffeine use, % | 58 | 70 |
| Number of meditators/yoga practitioners | 29 | 32 |
| Months practicing meditation | 102.5 (146) | 118.4 (147) |
| Months practicing yoga | 96.4 (78) | 105.4 (108) |
| NETI | 65.7 (11.1) | 64.7 (12.6) |
| CES-D | 11.8 (12.8) | 9.8 (6.8) |
| PROMIS Anxiety Scale | 18.5 (7.8) | 15.6 (5.2) |
| The DSS | 121.0 (15.7) | 120.3 (16.6) |

No significant group differences, $p > 0.05$.

BMI, body–mass index; CES-D, Center for Epidemiology Studies-Depression; DSS, Delaney Spirituality Scale; NETI, Nondual Embodiment Thematic Inventory; PROMIS, Patient-Reported Outcomes Measurement System; SD, standard deviation.

## Results

### *Pre-intervention*

There were no preintervention differences among the nonrandomized PH, the randomized PH, or control groups in age ($F = 1.23$, $p = 0.308$), body–mass index ($F = 0.359$, $p = 0.69$), caffeine use (chi-square = 5.56, $p = 0.31$), alcohol use (chi-square = 4.45, $p = 0.151$), gender (chi-square = 0.23, $p = 0.890$), months meditating ($F = 2.21$, $p = 0.143$), or months practicing yoga ($F = 0.52$, $p = 0.60$).

Similarly, there were no preintervention differences among the nonrandomized PH, the randomized PH, or control groups for the NETI ($F = 0.830$, $p = 0.44$) or for mood, anxiety, or spirituality ($F$s < 2.41; $p > 0.08$). The nonrandomized and randomized PH participants were, therefore, combined into a single PH intervention group (Table 1).

### *Nondual Embodiment Thematic Inventory*

The NETI was significantly positively correlated with the Delaney Spirituality Scale (DSS) ($p < 0.001$), demonstrating convergent validity with a validated measure of spirituality, and negatively correlated with the Center for Epidemiology Studies-Depression (CES-D) mood ($p < 0.001$) and PROMIS anxiety ($p < 0.001$) scales, demonstrating discriminant validity (Table 2). Because nonduality can be fostered, in part,

Table 2. Preintervention Pearson Correlation Matrix Among Entire Sample

| | *NETI* | *CES-D* | *PROMIS Anxiety Scale* |
|---|---|---|---|
| CES-D | –0.631* | | |
| PROMIS Anxiety Scale | –0.573* | 0.627* | |
| The DSS | 0.656* | –0.467* | –0.399* |

*$p < 0.001$.

through meditation practice, the potential relationship between duration of meditation practice and the NETI score was also examined, and concurrent validity in this sample by showing that months of meditation practice (any form of meditation) was positively correlated with NETI scores could be demonstrated ($r=0.346$, $p=0.004$).

A Cronbach's $\alpha$ for the NETI was run and a robust 0.913, indicating high internal consistency, was observed. An exploratory factor analysis was also run and a factor component with an eigenvalue of 8.56 was observed, which is consistent with the NETI using a single total score and that accounted for 35.7% of the total variance. Given the limited number of study participants, however, this factor analysis is viewed as more exploratory.

### *Intervention effects*

There was a significant main effect of time for the NETI at postintervention ($F=38.4$; $p<0.001$; partial $\eta^2=0.363$). In addition, there was a significant group by time interaction ($F=4.96$; $p=0.029$; partial $\eta^2=0.069$) (Fig. 2). Planned comparison tests examining the immediate postintervention effects versus the 1 month follow-up effects indicated that the PH group as compared with the relaxation group reported a greater treatment effect from preintervention to postintervention ($p<0.03$). A subsequent analysis including the 1 month follow-up showed a significant main effect of time ($F=20.9$; $p<0.001$; partial $\eta^2=0.500$) and a significant group by time interaction ($F=4.67$; $p=0.011$; partial $\eta^2=0.098$). Planned comparison tests showed that the PH group as compared with the relaxation group maintained significantly NETI greater values at the 1 month follow-up ($p=0.005$) (Fig. 2).

As noted in the Data analysis section, a last observation carried forward analysis was also conducted and a significant main effect of time ($F=31.5$; $p<0.001$; partial $\eta^2=0.247$) and a significant group by time interaction were observed ($F=3.19$; $p=0.043$; partial $\eta^2=0.032$), with the PH group showing significantly higher scores.

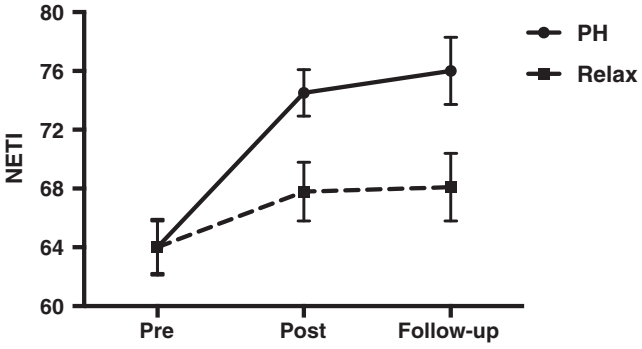


**FIG. 2.** Mean NETI ± SEM values for PH and controls, respectively, before (63.8 [3.4]; 62.8 [3.5]) and immediately after the intervention (74.4 [3.0]; 67.8 [3.9]), and 1 month follow-up (76.3 [4.0]; 68.1 [4.1]). Compared with the relaxation control group, the PH intervention group showed significant treatment ($p<0.03$) and maintenance ($p<0.01$) effects. It was previously reported that PH participants experienced sustained improvements in sense of spirituality, self-compassion, and gratitude, effects not seen in the control group of individuals who focused solely on relaxation. Both groups showed similar decreases in depressed mood and anxiety.[27] NETI, Nondual Embodiment Thematic Inventory; PH, Perfect Health; SEM, standard error of the mean.

Findings for the DSS, CES-D, and PROMIS scales were previously reported.[27] In brief, the PH group showed a significant increase in spirituality scores but not the control group. Both groups showed similar decreases for depressed mood and anxiety.

### *Dropouts*

As is indicated in Figure 1, some study participants did not complete the postintervention and/or the 1 month follow-up questionnaires. Potential preintervention differences in age and gender and NETI scores were tested, as well as months of meditation and yoga practice and depressed mood and anxiety scores, among these participants and found no differences between those participants who did versus those who did not complete the questionnaires.

## Discussion

The findings indicate that participants in a holistic mind–body intervention experienced an increased sense of the nondual experience of awareness and spiritual awakening. The authors are not at all concluding that this set of observations represents a more permanent residing in nondual awareness, but more a shift in context so that the study participants no longer exclusively located their identity within a more limited sense of personal self-awareness. That is, participants reported experiencing a broader nonindividual unified sense of awareness and one that persisted at least 1 month postintervention. Although there is limited research on the cognitive and affective processes associated with spiritual awakening and experience of nondual awareness as measured by the NETI,[11] studies do note that the movement toward such transpersonal experiences is associated with mental and physical health benefits and greater overall well-being.[19,20] The current findings are consistent with prior studies indicating that practices such as yoga and meditation can support the development of more transpersonal experiences.[17,42,43] Participants' adherence to their meditation and yoga practices after the intervention was not assessed, so whether the noted 1 month effects were carryover of the program itself or the result of continued regular practice could not be ascertained.

For all study participants, the mean preintervention NETI score was $\sim$63. In the literature, a mean score of 52 has been reported in psychology graduate students, a mean score of $\sim$71 reported in psychotherapists, and a mean score of 81.6 reported in a very small group of psychotherapists purportedly established in nondual awareness.[34] The PH group had a mean score of 74.4 at the immediate postintervention assessment and a mean score of 76.3 at the 1 month follow-up, putting their scores in the range of the literature reporting on the NETI.[34,35]

It was previously reported that the SBTI PH participants experienced sustained improvements in sense of spirituality, self-compassion, and gratitude, effects not seen in the control group of individuals who focused solely on relaxation.[27] Participants in both groups reported improvements in ratings of anxiety and depressed mood,[27] which the authors assume reflected being away from the stressors and demands of their normal day-to-day living.[44] Spirituality as assessed by the DSS

includes beliefs, intuitions, practices, and rituals representative of the human spiritual experience, whereas the NETI is assessing the understanding of spiritual realization and sense of identity. Lectures and other course materials in the PH program did not include *Advaita* or nonduality but rather emphasized individual and group meditation and yoga experience. The authors found that the NETI scores on nondual awareness correlated positively with spirituality and negatively with depressed mood and anxiety. These findings are consistent with prior studies suggesting better mental health in individuals who experience the transpersonal.[19,20]

There are several limitations to this study. There were a number of participants who did not complete the post-intervention and/or 1 month follow-up questionnaires. The authors are not clear why some study participants did not complete their questionnaires, although it was not for a lack of effort by the study staff. Had they completed the questionnaires, it is an unknown how their data would have influenced the outcomes of the study. In an effort to address this limitation, potential preintervention differences in completers and noncompleters were examined and no significant differences were found, suggesting that the dropouts did not adversely bias the study outcomes. Another study limitation is that study personnel were not blinded to the participant's intervention group; however, participants completed the questionnaires independently online. Finally, the control group was not designed as an expectation control but simply a control to account for the restorative effects of being away from the normal daily routine and demands of life. The relaxation control group's reductions in anxiety and mood were testimony to such an effect.[27]

In summary, findings suggest that an intensive holistic mind–body program can support a shift in perception, one that is ultimately likely favorable to well-being, as nondual awareness is a common goal of various types of meditation practices and philosophies. As little scientific data exist on the nondual experience, further research in this area is warranted.

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# Appendix

# Nondual Embodiment Thematic Inventory*

Instructions: Please indicate how often the following occur for you.

1. An inner contentment that is not contingent or dependent upon circumstances, objects, or the actions of other people.

Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

2. Accepting (not struggling with) whatever experience I may be having.

Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

3. An interest in clearly seeing the reality or truth about myself, the world, and others, rather than in feeling a particular way.

Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

4. A sense that I am protecting or defending a self-image or concept I hold about myself.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

5. Deep love and appreciation for everyone and everything I encounter in life.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

6. Understanding that there is ultimately no separation between what I call my ''self'' and the whole of existence.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

7. Feeling deeply at ease, wherever I am or whatever situation or circumstance I may find myself in.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

8. A sense that my actions in life are motivated by fear or mistrust.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

9. Conscious awareness of my nonseparation from (essential oneness with) a transcendent reality, source, higher power, spirit, god, etc.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

10. Not being personally invested in or attached to my own ideas and concepts.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

11. An unwavering awareness of a stillness/quietness, even in the midst of movement and noise.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

12. Acting without assuming a role or identity based on my own or others' expectations.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

13. A sense of immense freedom and possibility in my moment-to-moment experience.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

14. A desire to be understood by others.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

15. Concern or discomfort about either the past or future.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

16. A sense of fear or anxiety that inhibits my actions.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

17. A feeling of profound aliveness and vitality.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

18. Acting without a desire to change anybody or anything.
Please choose only one of the following:
1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

19. Feelings of gratitude and/or open curiosity about all experiences.

Please choose only one of the following:

1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

20. A sense of the flawlessness and beauty of everything and everyone, just as they are.

Please choose only one of the following:

1. Never
2. Rarely
3. Sometimes
4. Most of the time
5. All of the time

*Developed by John Astin and David A. Butlein. From Butlein.[35]

| | Score key |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | R |
| 5 | |
| 6 | |
| 7 | |
| 8 | R |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | R |
| 15 | |
| 16 | R |
| 17 | |
| 18 | |
| 19 | |
| 20 | |