

Article

Sound Healing: Mood, Emotional, and Spiritual Well-Being Interrelationships

Tamara L. Goldsby ^{1,2,*}, Michael E. Goldsby ^{1,3}, Mary McWalters ¹ and Paul J. Mills ¹

¹ Department of Family Medicine and Public Health, University of California, San Diego, CA 92093, USA; mgoldsby@health.ucsd.edu (M.E.G.); mary.mcwalters@gmail.com (M.M.); pmills@health.ucsd.edu (P.J.M.)

² Department of Psychology, California Institute for Human Science, Encinitas, CA 92024, USA

³ Department of Public Health, University of Louisville, Louisville, KY 40292, USA

* Correspondence: tgoldsby@health.ucsd.edu

Abstract: Psychosocial stress, tension, and depression are quite common in many parts of the developed world. Integrative medicine techniques which may potentially increase spiritual and emotional well-being may be useful in combating chronic psychosocial stress, as well as challenges with depression and excessive tension. The present observational study examines the effect of singing-bowl sound healing on emotional and spiritual well-being and particularly examines interrelationships between changes in spiritual well-being with changes in tension and depressed mood post-sound healing. Participants experienced a sound healing environment of vibrational musical instruments such as singing bowls (bell-like instruments), gongs, and other vibrational instruments. Sixty-two participants were examined in an observational study using singing-bowl sound healing. Emotional and spiritual well-being were examined by utilizing standardized questionnaires. Results revealed significant correlations between improvements in scores of spiritual well-being and reductions in scores of tension and depression post-sound healing. Moreover, effects varied by age of the study participants. Specifically, the association between spiritual well-being improvement and depression improvement associations were strongest for ages 51–60. Implications for applying sound healing meditations as a potential low-cost, low-technology therapeutic technique are discussed for emotional and spiritual well-being.

Keywords: sound healing; sound meditation; sound therapy; sound bath; stress; tension; anxiety; depression; well-being; spirituality; spiritual well-being



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1. Introduction

Significant chronic psychosocial stress abounds in the present time in history due to various societal factors, including a global pandemic, as well as political and societal dynamics (Goldsby et al. 2021). Moreover, anxiety and depressed mood may also be common in these challenging times (Puccinelli et al. 2021; Tang et al. 2021). Thus, techniques to reduce stress and improve well-being are sorely needed and need to be studied.

Psychosocial stress has been linked to physiological health problems such as cardiovascular disease, cognitive and immunity issues, and diabetes (Hackett and Steptoe 2017; McEwen 2017; Reed and Raison 2016), as well as mental health concerns including anxiety and depression (González-Sanguino et al. 2020; Staufenbiel et al. 2013) and behavioral health issues such as addictions (Sinha and Jastreboff 2013).

In times of severe psychosocial stress, spirituality may take on increased importance in terms of assisting individuals in stress reduction and potentially increasing feelings of well-being. Spirituality has been viewed historically in various manners, but often includes the experience of connection with transcendent experience; the search for transcendence, meaning, and purpose in life; and the feelings associated with this search (Peterman et al.

2002). The desire for a connection to an entity greater than the self is ubiquitous across civilizations and history. A sense of spirituality and/or religiosity has been linked to well-being, level of life satisfaction, and quality of life (Fernando Pietro Peres et al. 2018; Piedmont 2009), as well as correlated with the prosocial behaviors of helping others and volunteerism in the community (Brady and Hapenny 2010; Grayman-Simpson and Mattis 2013). Spirituality and religiosity have been linked to improved well-being in recovery from persistent mental disorders (PMDs) (Saiz et al. 2021) and may be considered a protective factor in mental health challenges at various stages of life, including adolescence (Rasic et al. 2011), older adults (Ronneberg et al. 2016), and across the lifespan (Haney and Rollock 2020). Additionally, the use of religion and/or spirituality (R/S) has also been linked to improved mental health in general (Hodapp and Zwingmann 2019), as well as specific high-stress situations such as during social isolation due to the COVID-19 lockdown (Lucchetti et al. 2020).

Various integrative health techniques such as meditation have been linked to improved well-being, including potential improvements in spiritual well-being. Mindfulness-Based Stress Reduction (MBSR) may be effective in reducing stress, particularly when combined with other therapies such as cognitive and behavioral interventions (Chiesa and Serretti 2009; Regehr et al. 2013). Additionally, meditation programs such as MBSR have been associated with increased spirituality (Carmody et al. 2008; Garland et al. 2007).

However, there is generally a learning curve required for integrative health techniques such as meditation and often individuals are not inclined to spend the time and effort involved in learning such therapies. Techniques that lower stress and improve spiritual well-being that do not require participant training may therefore be important to assist individuals in attaining improved feelings of well-being.

One such technique that has shown promise in improving well-being is music therapy. Music therapy has been correlated with a reduction in stress, anxiety, and depression (de la Rubia Ortí et al. 2018; Guétin et al. 2009; Shirani Bidabadi and Mehryar 2015). Moreover, music therapy has been linked to reductions in extreme stress and improved well-being for clinical staff working with COVID-19 patients (Giordano et al. 2020) and has shown promise in pain perception (Luis et al. 2019). Outcomes of music therapy, however, vary considerably depending upon the expertise of the musician and the type and format of the music intervention (Kaplan and Steele 2005). There are numerous types of musical instruments—whether it be stringed instruments, drums, bells, wind instruments, etc.—and almost unlimited potential combinations of musical instruments. Thus, these variations in music therapy may limit the generalized applicability of these therapies.

Sound Healing or “Sound Bath”

Sound healing, also referred to as sound bath, sound therapy, or sound meditation, is a specific integrative medicine therapeutic technique that utilizes vibration. Sound healing or “sound bath” generally utilizes specific bell-like vibrational musical instruments called singing bowls, as well as gongs and other vibrational musical instruments. In fact, it has been termed “sound bath” due to the unique sensation participants have described as the sound and vibration “washing” over the body. Sound healing or sound bath may be considered to be a combination of certain aspects of music therapy and meditation and remains a lesser-known technique of vibrational healing that has nevertheless attained increasing recognition in recent years.

While sound healing appears to be increasing in popularity, research in this field remains sparse. Tibetan (or Himalayan) singing bowls and quartz crystal singing bowls are two of the primary vibrational musical instruments utilized in sound healings. The use of Tibetan (or Himalayan) singing bowls was found to be associated with reduced blood pressure and heart rate, as well as reduced negative affect (Landry 2014). Additionally, quartz crystal singing bowls have been examined for potential use with oncology patients (Bidin et al. 2016; Wepner et al. 2008). Tibetan singing bowls continue to be explored as a potential form of integrative treatment (Goldsby and Goldsby 2020; Stanhope and

Weinstein 2020) and have shown promise in measures of well-being (Goldsby et al. 2017). Other studies have focused on singing bowls' enigmatic sound and with regard to its frequency and acoustic properties (Ann and Bae 2017; Burtner et al. 2002; Inácio et al. 2006; Terwagne and Bush 2011). Anecdotally, renowned oncologist Mitchell Gaynor has reported successfully utilizing singing-bowl sound healing with his oncology patients with promising results for improved patient recovery (Gaynor 1999). While anecdotal evidence has pointed to many possibilities in the realm of sound healing, it remains a domain of research in its infancy with a paucity of studies. Thus, the present researchers sought to address this gap in the literature and examine the effects of sound healing—specifically singing-bowl sound healing—on measures of emotional and spiritual well-being. In particular, the relationships between spiritual well-being and mood variables were examined post-sound healing.

Theories exist that address the apparent effects of sound healing on well-being, including hypotheses regarding the effect of binaural beats, brainwave effects, and biophysics or the biofield of the body (Goldsby and Goldsby 2020). The primary theories proposed regarding the effects of sound healing include the following:

(1) *Brain wave states*—Various human brainwave states represent differing levels of relaxation and occur at various frequencies. Brainwave states may be altered during music therapy or sound healing (Ann and Bae 2017; Hassan et al. 2012; Hohashi et al. 2004). Brainwave states commonly discussed in scholarly literature consist of the following:

- (a) Gamma: over 30 Hz: the fastest brainwave. Processing of information from different brain areas.
- (b) Beta: 12–30 Hz: alert consciousness, concentration, focus, or anxiety.
- (c) Alpha: 8–12 Hz: relaxed, lucid, calm, peaceful.
- (d) Theta: 4–8 Hz: light sleep, meditation, or deep relaxation.
- (e) Delta: Less than 4 Hz: deep, dreamless sleep or deep state of meditation.

(2) *Binaural Beats*

Binaural beat phenomena occur when two sounds with slightly different hertz levels are played in both ears. For instance, if a sound of 20 hertz is played in the participant's left ear and a 15 hertz sound is played in the right ear, the brain syncs (or "entrains") to the difference between the two hertz levels. In this case, $20 - 15 = 5$ hertz. This hertz level is equivalent to the Theta brainwave, which is a deep meditative state (Goodin et al. 2012; Lavalley et al. 2011; Norhazman et al. 2014; Wahbeh et al. 2007).

(3) *Biofield*

The human body has been hypothesized to be surrounded by an energetic or electrical field (Beri 2018; Rubik et al. 2015). Thus, if this were the case, it would be possible for sound waves exiting the vibrational instruments to interact with the purported biofield and affect change in the biofield. In fact, paradigms have been proposed that attempt to bridge the concepts of biophysics and spirituality (Dennis 2010), and this emerging worldview or perspective may merge the two concepts in a deeper manner (Miller 2012). Further, it has been proposed that sound therapy may even have an effect on the biofield of the body (Miles and True 2003).

(4) *Vagus Nerve Activation*

Additionally, the vagus nerve may be activated or stimulated during sound healing, which may potentially induce increased feelings of well-being, as was suggested in a recent vibrational music study (Sigurdardóttir et al. 2019).

The above theories may begin to characterize and inform the enigma of sound healing in terms of its potential effects on emotional and spiritual well-being.

Therefore, the present researchers sought to examine the effects of a specific type of therapeutic technique called sound healing that has elements of meditation as well as elements of music or vibrational therapy. The present study sought to explore the following research question: What are the interrelationships between emotional and spiritual well-being for participants experiencing a sound healing environment?

Unlike many meditation techniques, sound healing has no learning curve for participants and effects may be observed in a single session. Thus, the present study examined these effects in an approximately hour-long sound healing session with several cohorts over a two-year period of time. This observational study was designed to assess the initial population for the purpose of developing a larger Randomized Controlled Trial (RCT).

2. Method

2.1. Participants

The study consisted of a convenience sample of 62 participants, with ages ranging from 21 to 77 years; mean age = 49.7 years, SD = 13.0; 53 females and 9 males. The sound healing study was conducted at three locations: California Institute for Human Science (CIHS) in Encinitas, California (6 participants); the Seaside Center for Spiritual Living in Encinitas, California (17 participants); and the Chopra Center for Wellbeing in Carlsbad, California (39 participants).

The study was performed over an approximately two-year period beginning July 2012 and ending April 2014: at the Chopra Center for Wellbeing from July 2012 through January 2013, the Seaside Center for Spiritual Living from September 2013 through October 2013, and the California Institute for Human Science in April 2014. Data collection itself was carried out by Tamara Goldsby, the principal investigator, and Mary McWalters, the research assistant. This was an observational study and therefore this was a convenience sample of participants.

All participants provided written informed consent and the study was approved by the Institutional Review Board (IRB) of the University of California, San Diego (#160174).

2.2. Study Design

Participants completed standardized questionnaires pre- and post-intervention (immediately before and immediately following the sound healing). The short form of the Profile of Mood States (POMS-SF; [Shacham 1983](#)) was administered to participants to examine tension, anger, confusion, and other mood variables. The Hospital Anxiety and Depression Scale (HADS; [Snaith 2003](#)) was administered to assess anxiety and depressed mood and the 10-item Functional Assessment of Chronic Illness Therapy–Spiritual Well-Being Scale (FACIT-SP; [Cella 2000](#)) assessed spiritual well-being (See Appendix A). The FACIT-SP is a standardized and validated questionnaire to assess spiritual well-being, with items, for example, addressing feelings of peace, having a reason for living, having a sense of meaning and purpose in life, and faith (FACIT-SP; [Cella 2000](#)). Participants also completed a brief questionnaire pre- and post-sound healing that inquired whether they were currently experiencing any physical pain and, if so, to rate the pain on a scale of 1 to 5. Additionally, participants completed demographic information questionnaires prior to the sound healing.

2.3. Sound Healing Protocol

In this observational study, participants were instructed to lie down on yoga mats and were allowed to use a pillow and/or blanket if desired. Participants were placed in an oblong-shaped configuration or half-circle, depending upon the size of the room and number of participants, with their heads pointed toward the musical instruments. Tibetan singing bowls were placed on the floor near their heads, with a singing bowl on both sides of their heads. Tibetan singing bowls were also placed in the center of the room.

The sound healing consisted primarily of singing bowls (Tibetan, as well as quartz crystal singing bowls), gongs, dorges (bells), tingshas (small cymbal-like instruments), didgeridoos, and other small bells. Tibetan singing bowls are bell-like instruments resembling a metal salad bowl. Tibetan bowls are generally made with a bronze alloy consisting of the following metals: copper, tin, zinc, iron, silver, gold, and nickel. Singing bowls were originally utilized by Tibetan monks for spiritual and religious ceremonies and have become more popular in Western society in recent years. Sounds and vibrations from the bowls are produced when they are either struck with a cloth-covered wooden mallet or

the mallet is rubbed around the bowl's rim. Tapping or rubbing the bowl with a mallet produces a distinctive vibrational sound that is allowed to trail off. Approximately 90% of the Tibetan bowls used for this study were large-sized Jambati bowls, ranging in size from 9 to 12 inches and ranging in weight from 3 to 5 lbs. Approximately 5% of the Tibetan bowls used were very large Jambati bowls, ranging from 12 to 14 inches and weighing 6 to 8 lbs. The remaining 5% of the singing bowls were very small Thadobati bowls, approximately 4.5 inches and with weights of 0.5 lbs.

Singing bowls were the primary instruments used in the sound healing sessions and were played for approximately 95% of the session, with the remaining instruments played for roughly 5% of the meditation. The primary method of playing the singing bowls was by striking the bowls with a wooden, cloth-covered mallet, which was performed for approximately 95% of the time the bowls were played. The remaining 5% of the time the bowls were played by rubbing the rim of the bowls with a cloth-covered wooden mallet. The number of instruments played depended upon the size of the venue and the number of participants in the sound healing session. The number of Tibetan bowls played ranged between 30 to 80, crystal bowls ranged between 2 and 3, and between 2 and 6 gongs were utilized, depending upon the number of study participants.

The sound healing protocol occurred in the following sequence: tingshas, Tibetan singing bowls, bells, crystal bowls, gongs, and more Tibetan bowls, then the sequence was repeated. The duration of the sound healing was approximately 60 min. Immediately after the sound healing concluded, the lead musician instructed the participants to gently become aware of their surroundings and readjust to a waking state.

2.4. Data Analysis

The primary outcome variable of interest in this analysis was the magnitude that spirituality was affected by the other measures. Given the strong results of improvement in tension, depression, and other mood variables in the prior sound healing study (Goldsby et al. 2017), these measures were used to compare their relationship to the outcome variable. As the prior study suggested the beneficial effects of sound therapy (Goldsby et al. 2017; Shiffriss et al. 2020), for the present examination, study participants were grouped according to the following age groups to examine age differences in the effects: 20–30 years ($n = 8$), 31–40 years ($n = 8$), 41–50 years ($n = 10$), 51–60 years ($n = 24$), and 61+ years ($n = 12$).

The data were prepared for analysis by quantifying the pre-post improvement across all composite measures in the study (for the FACIT, HADS, and POMS measures). Improvement in spirituality (on the FACIT) was calculated by subtracting the pre-measurement from the post-measurement, thus revealing a positive number, indicating improved spirituality. In the case of independent variables such as tension (POMS) and depression (HADS), the post-measurement was subtracted from the pre-measurement, indicating a decline in the respective variable (thus, improvement). In all variables, a positive number indicates the magnitude of change in mood state.

In order to determine the relationship between the outcome variable and other measures, a Pearson correlation was performed across all measures to determine the strength of a given relationship and to identify cases of collinearity. However, to better quantify the nature of the relationship, simple linear regression was performed to examine the magnitude of change in spirituality given a related independent variable such as improvement in tension or depression.

The data analysis was performed using the R (Version 4.0) (R Core Team 2020) statistical software package. Data were normally distributed.

3. Results

Significant differences were observed between pre- and post-sound healing for the following subscale variables: Tension, Anxiety, Depression, Spirituality, and Faith. Effect sizes were shown to be large for Tension, Anxiety, Depression, and Spirituality via Eta squared; Faith demonstrated a moderate to large effect size. (See Table 1).

Table 1. Results of subscale scores pre- and post-treatment.

| Measures | N | Baseline | | Post-Sound Healing | | p-Value | η ² |
|----------------------|----|----------|------|--------------------|------|---------|----------------|
| | | Mean | SD | Mean | SD | | |
| Tension (POMS) | 62 | 1.26 | 1.03 | 0.14 | 0.57 | 0.000 | 0.51 |
| Anxiety (HADS) | 58 | 1.11 | 0.66 | 0.44 | 0.49 | 0.000 | 0.49 |
| Depression (HADS) | 57 | 0.62 | 0.51 | 0.42 | 0.36 | 0.002 | 0.16 |
| Faith (FACIT) | 62 | 3.18 | 1.10 | 3.46 | 0.96 | 0.005 | 0.12 |
| Spirituality (FACIT) | 57 | 2.85 | 0.94 | 3.64 | 0.46 | 0.000 | 0.49 |

Note: POMS (Profile of Mood States) subscale: Tension. HADS (Hospital Anxiety and Depression) subscales: Anxiety, Depression. FACIT-SP (Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale) subscales: Faith and Spirituality, which showed a positive direction rather than a negative direction post-treatment. Effect size (η²): 0.01 = small, 0.06 = moderate, 0.14 = large effect.

Correlation analysis was conducted with subscales for spiritual well-being and mood variables (See Table 2). The analysis revealed a significant relationship between improvement in spirituality and several mood variables, such that there was an inverse relationship between spirituality and undesirable mood variables post-sound healing.

Table 2. Subscale Pearson correlations post-sound healing.

| | Fatigue Imp | Anger Imp | Confuse Imp | Vigor Imp | Faith Imp | Spiritual Imp | Tension Imp | Anxiety Imp |
|----------------|-------------|-----------|-------------|-----------|-----------|---------------|-------------|-------------|
| Fatigue Imp | 1.00 | | | | | | | |
| Anger Imp | 0.54 **** | 1.00 | | | | | | |
| Confuse Imp | 0.67 **** | 0.64 **** | 1.00 | | | | | |
| Vigor Imp | −0.32 * | −0.15 | −0.11 | 1.00 | | | | |
| Faith Imp | 0.30 * | 0.48 **** | 0.32 * | −0.22 | 1.00 | | | |
| Spiritual Imp | 0.56 **** | 0.57 **** | 0.56 **** | −0.40 ** | 0.48 **** | 1.00 | | |
| Tension Imp | 0.66 **** | 0.64 **** | 0.69 **** | −0.06 | 0.39 ** | 0.50 **** | 1.00 | |
| Anxiety Imp | 0.57 **** | 0.60 **** | 0.49 **** | −0.12 | 0.44 ** | 0.63 **** | 0.73 **** | 1.00 |
| Depression Imp | 0.66 **** | 0.44 ** | 0.42 ** | −0.45 ** | 0.33 ** | 0.67 **** | 0.43 ** | 0.48 **** |

Note: **** indicates $p < 0.0001$; *** indicates $p < 0.001$; ** indicates $p < 0.01$; * indicates $p < 0.05$. Imp = Improvement in score post-sound healing. Spiritual = Spirituality. POMS (Profile of Mood States) subscales: Anger, Confusion, Vigor, Tension. HADS (Hospital Anxiety and Depression) subscales: Anxiety, Depression. FACIT-SP (Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale) subscales: Spirituality and Faith, which demonstrated a positive direction rather than a negative direction post-treatment.

The analysis demonstrated a strong relationship between improvement in scores for spiritual well-being (measured by the FACIT-SP) with improvement in tension score (measured by the POMS), such that spirituality score changes (in a positive direction) were associated with tension score changes in an inverse direction post-sound healing. Additionally, spirituality score changes in a positive direction were also associated with depression score changes (measured by HADS) in an inverse direction post-sound healing (see Tables 2 and 3).

Mood improvement (for tension and depression) for specific age groups demonstrated very strong associations with spiritual well-being improvement post-sound healing. The correlation between improvement in spiritual well-being and improvement in depression post-treatment was demonstrated for most age groups, and especially ages 20–30: $r(6) = 0.80, p < 0.05$; ages 31–40: $r(6) = 0.87, p < 0.01$; and ages 51–60 $r(22) = 0.77, p < 0.0001$. Additionally, there was a strong correlation between improvement in spiritual well-being and improvement in tension for ages 51–60: $r(22) = 0.80, p < 0.0001$.

Table 3. Spiritual well-being Pearson correlations by age group post-sound healing.

| Age Group | Tension Improvement Correlation | Depression Improvement Correlation |
|-----------|---------------------------------|------------------------------------|
| 20–30 | −0.06 | 0.80 * |
| 31–40 | 0.28 | 0.87 ** |
| 41–50 | 0.35 | 0.62 |
| 51–60 | 0.80 **** | 0.77 **** |
| 61-Plus | 0.36 | 0.46 |

Note: **** indicates $p < 0.0001$; ** indicates $p < 0.01$; * indicates $p < 0.05$. Spiritual well-being = FACIT-SP Spirituality subscale. Tension = POMS Tension. Depression = HADS Depression.

Simple linear regression was performed to examine the relationship of the improvement in spiritual well-being score with the improvement in tension and depression. Tension (on the POMS) was examined in the overall population and in the age group that displayed the strongest results. The results of the overall population are the following:

$F(1, 60) = 19.82, p < 0.0001, R^2 = 0.248, R^2 \text{ adjusted} = 0.235$. The regression coefficient ($B = 0.353, 95\% \text{ CI } (0.195, 0.512)$) indicates that a pre-post improvement in one tension scale, on average, increases the spirituality scale by 0.353 points. (See Figure 1).

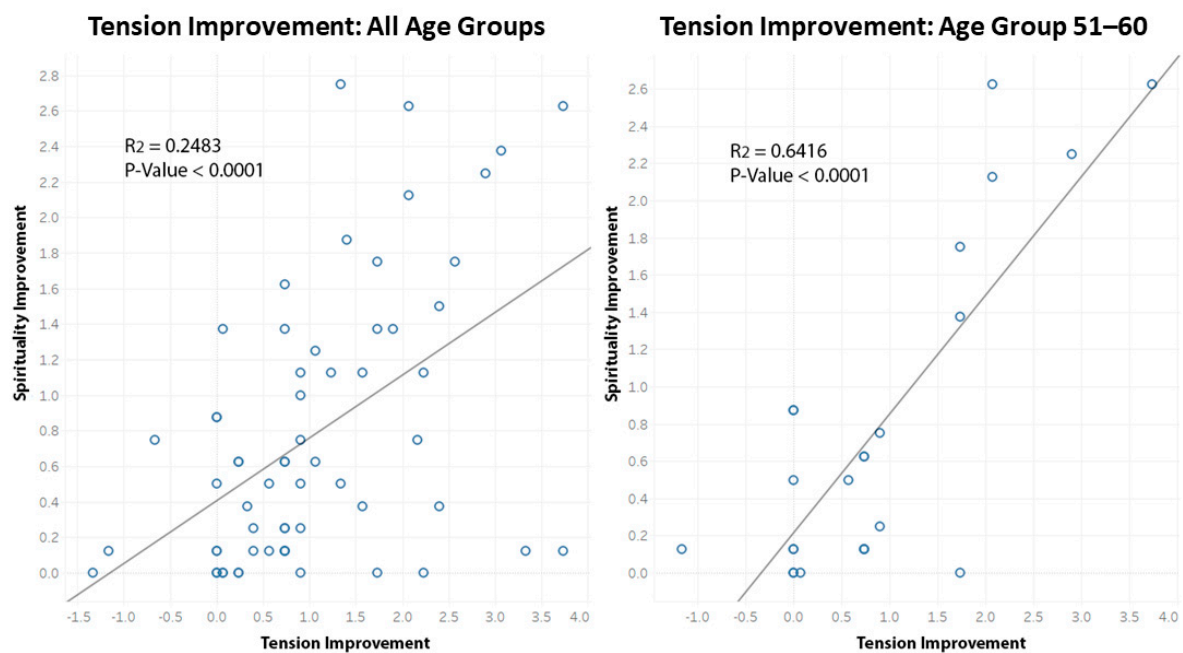


Figure 1. Linear regression: spirituality improvement and tension improvement by age group post-sound healing.

The age group for tension demonstrating the strongest relationship with spirituality was age 51–60 ($n = 22$), as follows:

$F(1, 22) = 39.38, p < 0.0001, R^2 = 0.642, R^2 \text{ adjusted} = 0.625$. The regression coefficient ($B = 0.638, 95\% \text{ CI } (0.427, 0.849)$) indicates that a pre-post improvement in one tension scale, on average, increases the spirituality scale by 0.638 points.

Additionally, linear regression was performed regarding improvement in the spiritual well-being score and improvement in (HADS) depression in all age groups and specifically in the age group that demonstrated the strongest result. The first analysis model examined all age groups as follows (See Figure 2):

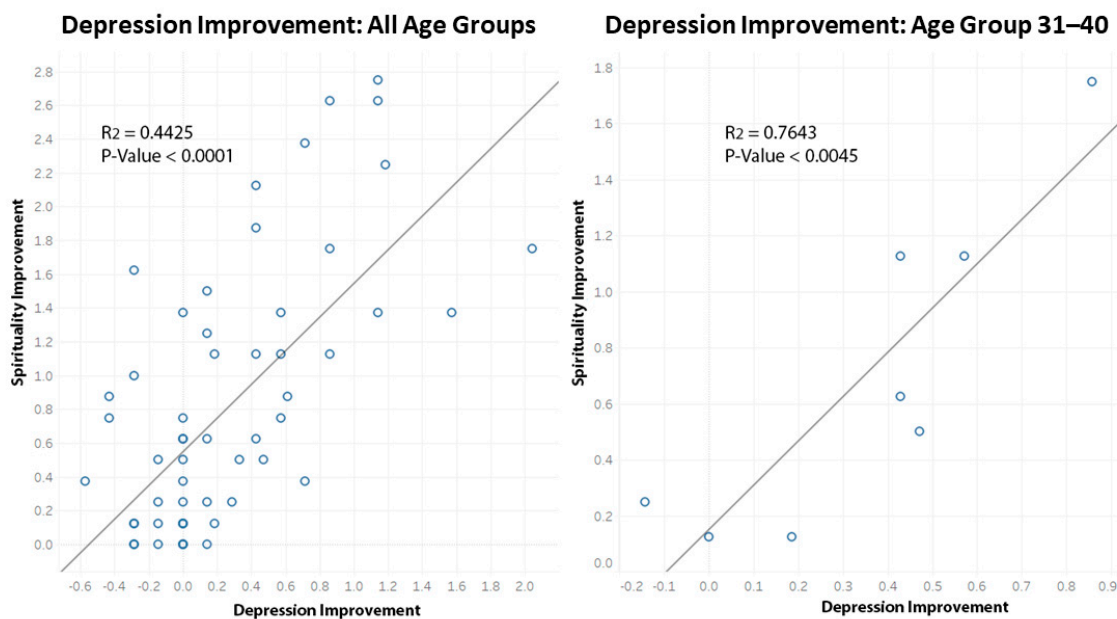


Figure 2. Linear regression: spirituality improvement and depression improvement by age group post-sound healing.

$F(1, 60) = 47.64, p < 0.0001, R^2 = 0.443, R^2 \text{ adjusted} = 0.433$. The regression coefficient ($B = 0.998, 95\% \text{ CI } (0.708, 1.287)$) indicates that a pre-post improvement in one depression scale, on average, increases the spirituality scale by 0.998 points.

Regression revealed that improvement in spirituality was strongly related to reduced (improved) scores in depression (HADS) for ages 31–40.

$F(1, 6) = 19.46, p = 0.0045, R^2 = 0.764, R^2 \text{ adjusted} = 0.725$. The regression coefficient ($B = 1.581, 95\% \text{ CI } (0.704, 2.458)$) indicates that a pre-post improvement in one depression scale, on average, increases the spirituality scale by 1.581 points.

4. Discussion

The present study examined the interrelationships of spiritual well-being variables with various mood variables post-sound healing. Specifically, spiritual well-being improvement was highly correlated with improvement in tension and depression post-treatment, particularly for certain age groups. Not only may spirituality potentially assist in improved mental health for those with persistent mental disorders (Saiz et al. 2021), but also for individuals seeing a mental health provider (Oxhandler et al. 2021) and those in the general population (Brown et al. 2013). Thus, this combination of improved spiritual well-being and improved mood may be important for overall well-being.

Improvement in spiritual well-being for age group 20–40 (and particularly ages 31–40) was associated with lowered depression scores post-sound healing. This age group is one in which many are building their careers, possibly raising a family, and experiencing the resultant stress, depression, and anxiety (Melchior et al. 2007; Wang and Patten 2001). Thus, this may be an especially important period in the lifespan to utilize a simple treatment technique that may assist in improving spiritual well-being while lowering depression with a technique that does not necessitate a lengthy learning curve.

Moreover, spiritual well-being score improvement for age group 51–60 revealed strong associations with improvement in both tension and depression post-sound healing. Given that older and middle-aged individuals may be at increased risk for stress-related diseases due to the possibility of increased cortisol levels (Feller et al. 2014), there exists significant potential for treatments such as sound healing to assist in spiritual well-being and improved mood for this age group in particular.

4.1. Limitations

The present study's limitations included that it utilized a convenience sample of individuals participating in a sound healing meditation, with no control group being included. The researchers recommend that future studies utilize a randomized control trial (RCT) format to examine the effects of sound healing using physiological measures including stress biomarkers and blood pressure.

4.2. Conclusions and Further Investigations

This technique has demonstrated considerable promise in significantly reducing undesirable mood variables as well as substantially increasing the potentially desirable variable of spiritual well-being, which is associated with increased feelings of inner peace (Delgado 2005; Saiz et al. 2021). Additionally, the relationship discovered in the present study between improvement in spiritual well-being and improvement in mood variables post-treatment shows potentiality for well-being benefits that may be beneficial on a number of levels. Moreover, singing-bowl sound healing is a low-technology and relatively low-cost treatment which requires essentially no learning curve by participants. Additionally, unlike certain techniques such as acupuncture, it does not require years of educational training by the individual administering the sound healing and playing the vibrational instruments. Thus, there is considerable potential for utilizing this technique in numerous clinical, hospital, and community settings as a low-cost, low-technology therapeutic tool to potentially promote emotional and spiritual well-being.

Further investigation into this therapeutic tool might include a larger randomized controlled trial (RCT) which examines sound healing utilizing physiological measurement to further explore effects on the human body.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Researchers may contact the first author regarding data generated from the study.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

The 10-item FACIT (Cella 2000) utilized in the study:

1. I feel peaceful.
2. I have a reason for living.
3. My life has been productive.
4. I have trouble feeling peace of mind.
5. I feel a sense of purpose in my life.
6. I am able to reach down deep into myself for comfort.
7. I feel a sense of harmony within myself.
8. My life lacks meaning and purpose.
9. I find comfort in my faith or spiritual beliefs.
10. I find strength in my faith or spiritual beliefs.

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