



The Impact of a Bhagavad Gītā and Yin Yoga-Based Psychospiritual Intervention on Anxiety, Meaning in Life, and Resilience among a Turkish Population: A Mixed-Methods Approach

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Abstract

This study examined the impact of a culturally adapted psychospiritual intervention, integrating teachings from the *Bhagavad Gītā* and yin yoga practices, on anxiety, resilience, and meaning in life among Turkish adults. The intervention was developed in response to the increasing mental health needs in Türkiye, a context shaped by sociopolitical and environmental stressors. The study aimed to explore the intersection of spirituality and psychological well-being within a culturally diverse setting. A mixed-method design with a control group was utilized. Fifty-nine participants were assessed using validated Turkish versions of the Beck Anxiety Inventory, the Meaning in Life Questionnaire, and the Brief Resilience Scale. Qualitative data were collected through structured interviews and analyzed using thematic analysis. The 5-week intervention included five online sessions combining psychospiritual teachings with yin yoga practices. To reinforce session content and promote psychological integration, participants completed behavioral assignments. Compared to the control group, the experimental group showed significant reductions in anxiety, increased resilience, and higher scores on the presence of meaning in life. Several outcomes were maintained at follow-up. Qualitative data supported the quantitative results, highlighting improvements in emotional regulation, self-awareness, interpersonal relationships, and spiritual insight. The findings highlight the value of integrating psychospiritual frameworks into culturally sensitive mental health interventions. Adapting *Bhagavad Gītā* teachings within Türkiye's diverse cultural and religious landscape required a secular and inclusive approach, which facilitated participant engagement. This study contributes to spiritually integrative psychology and offers a foundation for future research on the long-term impact and cross-cultural relevance of such interventions.

Keywords Psychospiritual intervention · Bhagavad Gita · Yin yoga · Turkish population · Mixed method · Resilience

Introduction

Psychological and physical health challenges are currently rising in numerous communities due to the fast-paced lifestyles of the contemporary world. Moreover, natural disasters, including climate change, floods, earthquakes, and anthropogenic disasters such as wildfires, terror attacks, and train and air accidents can lead to economic, sociopsychological, and physical losses. These incidents are not confined by borders as their effects, ranging from anxiety to long-term trauma, impact individuals and communities alike. Türkiye has suffered from such disasters in recent years, with severe consequences that exposed its subjects to risks (Arslan & Yıldırım, 2021; Efendi et al., 2023; Iqbal & Sheikh, 2023; Koçoğlu et al., 2023; Manirambona et al., 2023). Along with these global challenges, Türkiye faces growing struggles such as political and financial crises, which have worsened especially after the COVID-19 pandemic. Economic problems, social conflicts, increased violence against women, and human rights abuses have created a climate of uncertainty, heightening anxiety levels across the population (Alkan & Ünver, 2021; Bhugra & Ventriglio, 2023; Cerit & Yılmaz, 2022; Human Rights Watch, 2023; Karabulut et al., 2024; Mitchell et al., 2022; Türkkan & Odacı, 2023). Consequently, anxiety has become a critical issue in Turkish society and requires acknowledgment as well as support (Aksoy et al., 2023; Alfuhaha, 2023; Bozdağ & Ergün, 2020; Karagöz et al., 2021; Shpakou et al., 2023; Yıldırım & Özarslan, 2021).

Recent research emphasizes resilience and meaning in life as critical factors in mental health, particularly regarding disaster recovery and personal adversities (Tanvir et al., 2022; Weber et al., 2020). Resilience, defined as the ability to overcome obstacles, is associated with lower levels of anxiety and depression (Karagöz et al., 2021; Oducado et al., 2021). The study of Arslan and Yıldırım (2021) suggests that individuals who find meaning in experiences can cope with stress and maintain their mental health. Research indicates a positive correlation between resilience and the pursuit of meaning in life. Individuals who perceive their lives as meaningful are more adept at managing obstacles (Çolak et al., 2021; Doğrusever et al., 2022; Yıldırım et al., 2022). Finding meaning in challenging circumstances can serve as a protective factor against anxiety and depression, nurturing a sense of motivation and hope (Todorova et al., 2021). We find that more individuals are now turning to spirituality for solace during situations beyond human control, such as natural calamities, personal losses, and war (Bülbül & Özbay, 2024; Mahamid & Bdier, 2021; Michaels et al., 2022).

In light of these challenges that the country is facing, a novel psychological intervention may be recommended. There is a growing body of research on psychospiritual interventions, particularly those incorporating yoga and mindfulness within Western contexts (Gaiswinkler & Unterrainer, 2016; Hofmann et al., 2016; Malviya et al., 2023). However, there is a noticeable gap in the research examining the efficacy of such interventions in culturally and religiously diverse settings, particularly in countries like Türkiye, where spiritual traditions differ significantly from those in the West. Türkiye's unique cultural and religious fabric, shaped by a blend of Islamic and Turkic traditions with shamanic influences, presents opportunities and challenges for adapting psychospiritual practices. While studies highlight the growing importance of resilience and meaning in life among Turkish populations (Akdağ et al., 2024; Basım & Çetin, 2011; Çolak et al., 2021), limited research has explored how interventions rooted in ancient Indian spiritual teachings, such as the *Bhagavad Gītā* and yoga, can be culturally tailored to address these needs. This gap underscores the necessity of investigating how such interventions can be effectively integrated into Türkiye's sociocultural context to alleviate anxiety, enhance resilience, and foster the perception of meaning in life.

The *Bhagavad Gītā*, a principal scripture from the Indian epic *Mahābhārata*, provides philosophical and practical guidance for mental, physical, and spiritual well-being (Reddy, 2012; Simha, 2022). The *Gītā*'s pragmatic approaches provide effective conflict resolution and promote resilience through teachings like karma yoga, which emphasizes selfless action (Frazier, 2021; Keshavan, 2020; Navare & Pandey, 2022; Singh et al., 2022; Sinha & Srivastava, 2022; Varghese et al., 2017). These teachings carry the potential to enhance critical thinking and self-awareness, offering coping strategies during crises (Chand, 2017; Das & Behura, 2021; Nigam & Joshi, 2022; Sinha & Srivastava, 2022).

Yin yoga is derived from haṭha yoga and involves holding postures passively for a longer time to target the less elastic *yin* tissues, such as ligaments, joints, fascial networks, and bones (Clark, 2019). Gentle stretching and stress contribute positively to fascia health (Clark, 2007). It offers physical and mental health benefits like stress reduction, enhanced mindfulness, and improved mood (Brinsley et al., 2022; Daukantaitė et al., 2018; Jehaman, 2023; Lemay et al., 2021; Tellhed et al., 2019). Building upon preliminary findings, we developed a psychospiritual intervention integrating teachings from the *Gītā* and yin yoga and aimed to evaluate its impact on anxiety, meaning in life, and resilience.

This intervention offers a unique opportunity to bridge Türkiye's diverse spiritual traditions, which reflect a synthesis of Turkic shamanic roots and Islamic practices. Islamic traditions emphasize surrender to the Divine (*tawakkul*) and collective prayer, while Turkic shamanic practices highlight harmony with nature and personal healing rituals. The *Gītā*'s universal teachings on selfless action, mindfulness, and resilience align with these principles, creating a culturally sensitive foundation. Yin yoga's meditative and introspective qualities further resonate with Türkiye's spiritual inclination toward contemplation and prayer, allowing for seamless integration into existing traditions. By contextualizing these practices, the study explores how psychospiritual interventions can address Türkiye's religious and cultural diversity, providing tools that are both effective and relevant to local needs.

Our pilot study with a smaller sample of Turkish people demonstrated significant reductions in anxiety and an enhanced sense of meaning in life (Akartuna et al., 2025). However, it also highlighted gaps, particularly in resilience and long-term effects, prompting the need for a more extensive investigation. The current study builds on these findings, employing a larger, more diverse sample and a control group to robustly examine the intervention's efficacy. By incorporating a follow-up period and refining qualitative measures, this research aims to assess the intervention's impact on anxiety, resilience, and meaning in life.

This research contributes to the growing field of culturally adaptive psychospiritual interventions by demonstrating how ancient Indian teachings and yoga practices can be tailored to diverse spiritual and cultural contexts. By addressing the intersection of ancient wisdom and contemporary psychological challenges, the present study lays the groundwork for future applications across varied populations worldwide.

Methods

Design and sample size calculation

The study employed an experimental design with an intervention group and a control group. Assessments occurred at baseline (pretest), immediately post-intervention, and after a follow-up period to evaluate the sustainability of effects.

A priori power analysis was conducted using G*Power (Faul et al., 2007) to determine the minimum sample size required for detecting a medium effect size ($d = .50$) with an alpha level of 0.05 and a power of 0.80 in a two-tailed t-test. The analysis indicated that a total sample of 64 participants (32 per group) would be adequate. The present study's sample size of 79 participants exceeded this requirement, ensuring sufficient statistical power.

Participants and recruitment

Participants were recruited from Türkiye using convenience and snowball sampling methods, with outreach through Turkish yoga centers and social media. Inclusion criteria were (1) physical fitness to engage in regular yin yoga postures, (2) absence of ongoing psychotherapy or medical conditions, (3) willingness to commit to the 6-week intervention period, and (4) willingness to refrain from other yoga or contemplative practices to ensure isolation of intervention effects. Due to the online nature of the study, reliable internet access was a prerequisite.

Procedure

Before the commencement of the study, ethical permission was obtained from the institutional research ethics committee (IEC AIMS-2022-ASSCS-341). The participants were informed that their involvement in the study was entirely voluntary and that any information provided would remain confidential and would be used exclusively for research purposes.

Seventy-nine consenting participants, aged 25–55, were randomly assigned to either the intervention (39) or control group (40). Twenty participants dropped out during the intervention. The study concluded with 35 participants in the experimental group and 24 in the control group ($N = 59$; Figure 1).

Measures

Demographic data were collected using the Case Study Schedule (see Supplementary Material— Appendix 1). The three standardized measures considered in the current study were the Beck Anxiety Inventory (BAI; Beck et al., 1988), the Meaning in Life Questionnaire (MLQ; Steger et al., 2006), and the Brief Resilience Scale (BRS; Smith et al., 2008). The Turkish versions of the BAI (Ulusoy et al., 1998), MLQ (Demirdağ & Kalafat, 2015), and BRS (Doğan, 2015) were utilized for the current study.

To explore aspects that might not be captured by the quantitative measures of the variables, we conducted structured interviews to examine participants' subjective experiences and reflections. The Turkish translation of the questions was used for pre-, post-, and follow-up assessments (Figure 2).

Psychospiritual intervention

The theoretical framework of the intervention curriculum was shaped from resources including *Universal Message of the Bhagavad Gītā: An Exposition of the Gītā in the*

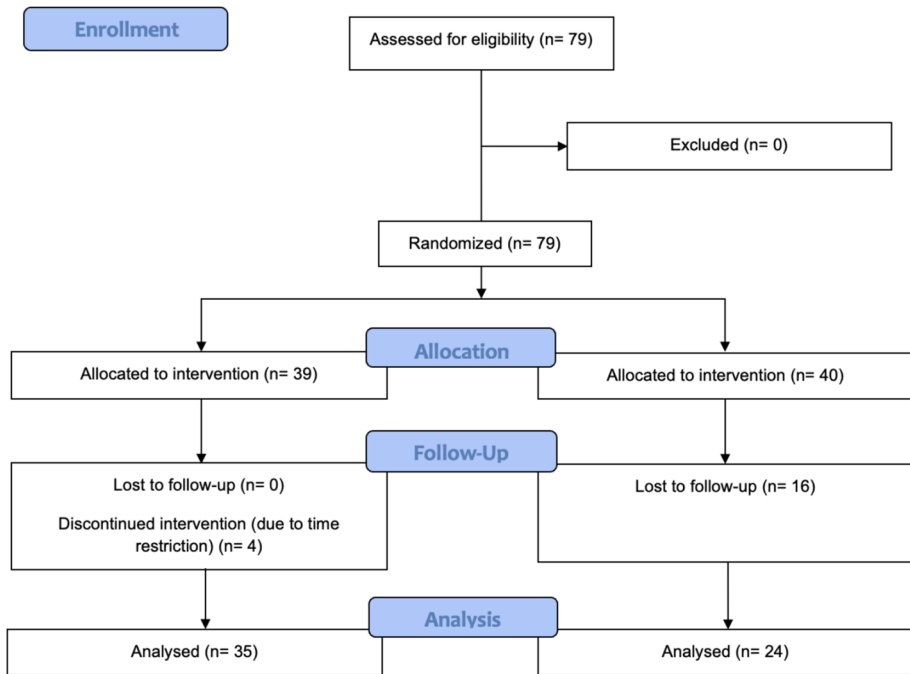


Fig. 1 CONSORT Flow Diagram

Q1_Pre: Do you feel anxious in your daily life?	Q1_Post: Do you feel anxious in your daily life?	Q1_FollowUp: Since our last assessment, how has your experience with anxiety in daily life changed? Are there any new strategies you have used from the program to manage it?
Q2_Pre: If you are anxious, what steps do you take to overcome it?	Q2_Post: If you are anxious, what steps do you take to overcome it?	Q2_FollowUp: Think about the challenges or stressful situations you have encountered recently. Have your methods for coping with these situations changed or improved since our last evaluation?
Q3_Pre: There are certain ways that everyone uses in life situations and/or stressful times. Briefly share with us the methods you use when you face difficulties and stressful moments.	Q3_Post: Share how your strategies for coping with life's challenges have changed or been supported as a result of your participation in this program. Detail if your methods before and after the program have changed.	Q3_FollowUp: Can you describe a recent event that tested your resilience? How did you handle it compared to past events you've shared?
Q4_Pre: Can you share with us an important event in your life where you best demonstrated your resilience and coping skills?	Q4_Post: Can you share an important event where you demonstrated your resilience and coping skills in the best way during the program?	Q4_FollowUp: Can you share a significant event during the program where you demonstrated your resilience and coping skills most effectively?
Q5_Pre: What do you think is the meaning of life?	Q5_Post: According to you, what is the meaning of life?	Q5_FollowUp: Has your perspective on the meaning of life changed since our last evaluation? What new experiences or thoughts have influenced this outlook?
Q6_Pre: Could you share with us what you do to find meaning in life?	Q6_Post: Could you share with us what you do to find meaning in life?	Q6_FollowUp: What have you done recently to seek or create meaning in your life? Are there any new activities or insights that contribute to your sense of meaning?
Q7_Pre: Assess your current self-awareness, including how you approach your thoughts, feelings and behaviour. Share your current view of yourself.	Q7_Post: Evaluate your current level of self-awareness at the end of the program. Share how you approach your thoughts, feelings, and behaviors, and how you see yourself now.	Q7_FollowUp: How would you describe the changes in your self-awareness since our last session? What new awareness have you gained about your thoughts, feelings, and behaviors?
Q8_Pre: Share an experience that has affected you, taking into account your current emotional and spiritual state.	Q8_Post: Specify a specific situation or activity during this program that caused a significant emotional or spiritual change, and share how this experience impacted you.	Q8_FollowUp: Think of a recent experience that significantly impacted your emotional or spiritual well-being. How can this be compared to experiences you have mentioned before?
Q9_Pre: Examine the approaches and attitudes you adopt in managing your relationships. Identify the difficulties you face in communicating or understanding others.	Q9_Post: Detail the changes you observed in your way of managing relationships after the program. Emphasize significant changes in your interactions and understanding of others, and evaluate the program's impact on your approaches and attitudes.	Q9_FollowUp: Describe any new methods or attitudes you have adopted in managing your relationships since our last session. Have you been able to overcome any of the obstacles you mentioned before?
Q10_Pre: Describe your current goals and how you envisage your future both personally and professionally.	Q10_Post: Explain how you foresee your current goals and future both personally and professionally.	Q10_FollowUp: Please inform us about how your current goals and your vision for the future, both personally and professionally, have evolved. What steps have you taken towards these goals?

Fig. 2 Structured Interview Questions for the Three-Phase Assessment

Light of Modern Thought and Modern Needs by Swami Ranganathananda (2000), teachings from Mata Amritanandamayi (n.d.), and a course on the *Bhagavad Gītā* offered by Chinmaya Mission. Commentaries from Swami Chinmayananda (1996) and Swami Ranganathananda (2000) also provided valuable insights. The yin yoga part of the curriculum included selected postures from Paul Grilley's book *Yin Yoga* (2002) and additional suggestions from seasoned yin yoga practitioners.

The psychospiritual intervention involved a 45-minute theoretical segment from the *Bhagavad Gītā*, designed with a secular approach, considering Turkish participants' beliefs and the religious, cultural, and sociopolitical context. This was complemented with a 45-minute yin yoga practice. The yin yoga poses were selected in alignment with the theme of each session, creating a practice that naturally complemented the philosophical teachings. The sessions aimed to integrate the philosophical insights of the *Gītā* and the practice of yin yoga, ensuring a holistic framework for addressing the psychological variables.

The 5-week intervention comprised five online sessions led by the first author, conducted from March 12 to April 4, 2024. Key concepts were introduced at the beginning to familiarize participants with Sanskrit terms. The themes—*jñāna yoga*, *karma yoga*, *dhyāna yoga*, and *bhakti yoga*—were first explored in the theory component and then complemented with yin/yang yoga practice. The yang yoga sequence, Golden Seed yin flow, was incorporated into the karma yoga session due to its emphasis on physical activity. Establishing a connection between the yoga practice and the session's theme allowed participants to reflect on the teachings during the practice. To maintain participant engagement between sessions, quotes from the *Gītā* related to the week's theme were shared regularly via WhatsApp. The pre-survey to follow-up survey schedule, including the five intervention sessions, spanned from March 10 to April 20, 2024. Delivering the *Gītā*'s teachings in a predominantly Muslim cultural context required careful secularization to ensure the intervention was both respectful and accessible. Several practical steps were taken to achieve this cultural adaptation. Foundational concepts such as dharma, karma, reincarnation, and *yajña* (a ritual of offerings) were introduced during the initial orientation sessions, with an emphasis on the universality of these ideas across cultures. Participants were encouraged to interpret these teachings through their own cultural lenses, recognizing that each tradition expresses similar principles in unique ways.

To enhance cultural resonance, quotes from Rumi (Gölpınarlı, 2003), whose works are deeply embedded in Turkish spirituality, as well as Turkish proverbs, were integrated into the sessions. Additionally, neutral terms like "Supreme Consciousness" were used in place of overtly religious or sectarian terminology, ensuring that the language remained secular and inclusive. Quantitative and qualitative data were collected online via Google Forms before and after the psychospiritual intervention to assess the variables, with a follow-up assessment conducted 2 weeks later to evaluate its long-term impact. Participants engaged in behavioral assignments, such as thought tracking, gratitude journaling, acts of kindness, and guided meditation, to apply the teachings. Their progress was monitored through personalized Google Sheets, providing additional insights into the intervention's practical implementation. Sessions and communication were facilitated via Zoom, Google Docs, and WhatsApp, with attendance, engagement, and session duration tracked through Zoom. Only participants who attended all sessions were included in the final analysis.

Data analysis

Quantitative data were analyzed using IBM SPSS Statistics Version 28.0. Descriptive statistics were computed for demographic variables. Normality of the psychological measures

was assessed using the Shapiro–Wilk test. For between-group comparisons, Mann–Whitney U tests or independent *t*-tests were applied, depending on normality, while within-group changes over time were examined using paired *t*-tests or Wilcoxon signed-rank tests. Effect sizes (*r* or Cohen's *d*) were calculated to estimate the magnitude of differences (Cohen, 1973). Spearman's rho correlations were used to examine associations among anxiety, resilience, and meaning in life scores.

Qualitative data from the semistructured interviews were analyzed thematically following Braun and Clarke's (2006) six-phase framework. Transcripts were coded in the original Turkish and translated into English for reporting, with translation fidelity checked. Following separate analyses, quantitative and qualitative findings were integrated using a side-by-side joint display approach (Creswell & Plano Clark, 2007). This allowed systematic comparison of statistical outcomes with thematic narratives, identifying convergence and divergence across outcomes. The integrated summary is provided in Table 4, which summarizes complementary insights from both strands.

Results

Demographic data

The sample ($N = 59$) was predominantly female (88.1%), with most participants aged 25–35 years (50.8%) and holding a university degree (57.6%). Nearly half were married (47.5%) and 40.7% were single, with a high employment rate (67.8%). Prior yoga experience was common (81.4%), and 55.9% had practiced yin yoga before.

Participants resided in various regions of Türkiye, with the largest groups from İstanbul ($n = 25$), İzmir ($n = 11$), Ankara ($n = 5$), and Antalya ($n = 4$). Other cities included Bursa ($n = 3$), Mardin ($n = 2$), and single participants from Kars, Diyarbakir, Zonguldak, Kastamonu, Denizli, Adana, Muğla, Hatay, and Kocaeli. While formal religious or spiritual affiliation was not recorded, informal discussions suggested a shared openness to integrating spiritual concepts into practice, with individual variations in belief.

Reliability of measures

Reliability of the standardized measures was evaluated using Cronbach's alpha and test–retest correlations. For the BAI, $\alpha = .95$ at pretest and $\alpha = .94$ at posttest, indicating excellent internal consistency. The BRS showed $\alpha = .77$ (pretest, acceptable) and $\alpha = .92$ (posttest, excellent), while the MLQ had $\alpha = .76$ (pretest, moderate) and $\alpha = .58$ (posttest, low). Test–retest correlations were strong and statistically significant for the BAI ($r = .61$, $p < .001$), BRS ($r = .45$, $p = .007$), and MLQ ($r = 1.00$, $p < .001$), indicating good score stability over time. The significance levels were set up at $p < 0.05$, $p < 0.01$, $p < 0.001$. These levels were used to determine whether differences between pre-, post-intervention, and follow-up scores were statistically significant. Statistical tests were chosen based on the distribution of the data: independent sample *t*-tests (indep. *t*-test) for normal distributions and Mann–Whitney U test for non-normal distributions.

Anxiety

As indicated in Table 1, the baseline anxiety levels between the experimental group ($M = 11.63$, $SD = 9.65$) and the control group ($M = 13.95$, $SD = 10.57$) were similar ($p = .431$, small effect). Post-intervention scores declined in the experimental group ($M = 7.83$, $SD = 7.39$) compared to the control group ($M = 13.08$, $SD = 11.15$), reflecting a medium effect ($d = .55$) that approached statistical significance ($p = .098$). At follow-up, the experimental group maintained a lower anxiety level ($M = 7.31$, $SD = 8.18$) compared to the control group ($M = 10.63$, $SD = 10.15$), with a small effect size ($d = .36$) and borderline significance ($p = .084$), suggesting that the anxiety reduction was maintained over time.

Meaning in life

For presence of meaning, baseline scores were similar ($p = .917$). Post-intervention, the experimental group's scores increased ($M = 23.90$, $SD = 3.61$) compared to controls ($M = 22.17$, $SD = 4.11$), but not significantly ($p = .132$, $d = .45$). Follow-up showed a smaller difference ($p = .310$, $d = .30$), suggesting partial maintenance. For search for meaning, the groups were comparable at baseline ($p = .395$). The experimental group's scores declined after the intervention ($M = 22.17$, $SD = 8.75$) and remained lower at follow-up ($M = 21.31$, $SD = 9.35$), indicating reduced existential searching, though differences were not statistically significant.

Resilience

Baseline resilience was similar between groups ($p = .387$). Post-intervention, resilience increased in the experimental group ($M = 4.08$, $SD = 1.14$) compared to controls ($M = 3.04$, $SD = 1.19$), yielding a large effect ($d = .89$, $p = .004$), suggesting a substantial improvement in resilience due to the intervention. At follow-up, the difference was no longer significant ($p = .107$), although experimental group scores ($M = 3.69$, $SD = 0.76$) remained above baseline.

The results suggest that the intervention was effective in reducing anxiety and increasing resilience in the experimental group, with significant changes observed post-intervention. Although some effects were not sustained at follow-up (e.g., resilience), the results indicate that the intervention had a notable impact on psychological well-being, including fostering a greater sense of meaning in life and reducing the need to search for meaning. The control group did not exhibit significant changes in any of the measured variables, which supports the view that the improvements in the experimental group can be attributed to the intervention.

Table 2 presents the results of inferential statistical tests used to assess the sustained effects of the psychospiritual intervention across different time points for both experimental and control groups. Paired sample *t*-tests and Wilcoxon signed-rank tests were applied to compare changes in anxiety, presence of meaning, search for meaning, and resilience scores before, after, and at follow-up. Significant differences in scores were observed in some comparisons, with effect sizes indicating small to medium changes in specific variables such as anxiety in the experimental group and resilience in the control group. Overall, the table provides insights into the intervention's impact on participants over time and the sustained changes post-intervention.

Table 1 Baseline, Post-Intervention, and Follow-Up Descriptive Statistics for Experimental and Control Groups ($N = 59$)

Variable	Time	Experimental Group (Mean $\pm$ SD)	Control Group (Mean $\pm$ SD)	Statistical Tests	<i>p</i> -value	Effect Size	Effect Size Category
Anxiety	Pre	11.63 $\pm$ 9.65	13.95 $\pm$ 10.57	Mann-Whitney U	.431	0.23	Small
	Post	7.83 $\pm$ 7.39	13.08 $\pm$ 11.15	Mann-Whitney U	.098	0.55	Medium
	Follow-Up	7.31 $\pm$ 8.18	10.63 $\pm$ 10.15	Indep. <i>t</i> -test	.084	0.36	Small
Presence of Meaning	Pre	22.74 $\pm$ 3.59	22.25 $\pm$ 3.87	Mann-Whitney U	.917	0.13	Small
	Post	23.9 $\pm$ 3.61	22.17 $\pm$ 4.11	Mann-Whitney U	.132	0.45	Small
	Follow-Up	23.34 $\pm$ 4.09	22.13 $\pm$ 3.88	Mann-Whitney U	.310	0.30	Small
Search for Meaning	Pre	25.4 $\pm$ 7.79	24.04 $\pm$ 6.72	Mann-Whitney U	.395	0.19	Small
	Post	22.17 $\pm$ 8.75	25.25 $\pm$ 6.83	Mann-Whitney U	.146	0.39	Small
	Follow-Up	21.31 $\pm$ 9.35	23.63 $\pm$ 6.91	Mann-Whitney U	.342	0.28	Small
Resilience	Pre	3.43 $\pm$ 0.7	3.16 $\pm$ 0.82	Indep. <i>t</i> -test	.387	0.35	Small
	Post	4.08 $\pm$ 1.14	3.04 $\pm$ 1.19	Indep. <i>t</i> -test	.004	0.89	Large
	Follow-Up	3.69 $\pm$ 0.76	4.04 $\pm$ 1.2	Indep. <i>t</i> -test	0.107	0.35	Small

Table 2 Repeated Measures Analysis of Intervention Effects

	Comparison between pretest (1), posttest (2), and follow-up (3)	Test	<i>p</i> -value	Effect Size	Effect Cat.
BAI Experiment	1 vs 2	<i>t</i> -test	.047*	0.35	Small
	1 vs 3	<i>t</i> -test	.035*	0.37	Small
	2 vs 3	<i>t</i> -test	0.57	-	-
BAI Control	1 vs 2	Wilcoxon	0.70	-	-
	1 vs 3	Wilcoxon	0.06	-	-
	2 vs 3	Wilcoxon	0.09	-	-
MLQ Presence Experiment	1 vs 2	<i>t</i> -test	0.13	-	-
	1 vs 3	<i>t</i> -test	0.46	-	-
	2 vs 3	<i>t</i> -test	0.42	-	-
MLQ Presence Control	1 vs 2	<i>t</i> -test	0.09	-	-
	1 vs 3	<i>t</i> -test	0.92	-	-
	2 vs 3	<i>t</i> -test	0.10	-	-
MLQ Search Experiment	1 vs 2	Wilcoxon	0.14	-	-
	1 vs 3	Wilcoxon	.041*	0.66	Medium
	2 vs 3	<i>t</i> -test	0.29	-	-
MLQ Search Control	1 vs 2	Wilcoxon	0.50	-	-
	1 vs 3	Wilcoxon	0.85	-	-
	2 vs 3	Wilcoxon	0.20	-	-
BRS Experiment	1 vs 2	Wilcoxon	.033*	0.38	Small
	1 vs 3	Wilcoxon	0.16	-	-
	2 vs 3	Wilcoxon	0.06	-	-
BRS Control	1 vs 2	Wilcoxon	.007*	0.65	Medium
	1 vs 3	Wilcoxon	.020*	0.60	Medium
	2 vs 3	Wilcoxon	0.94	-	-

**p* < .05. Effect sizes: Cohen's *d* for *t*-tests, *r* for Wilcoxon tests.

Correlation

Post-intervention and follow-up data showed consistent patterns (Table 3): lower anxiety was associated with higher resilience and greater presence of meaning, while higher resilience was related to greater meaning and reduced search for meaning. These relationships were statistically significant at both time points, suggesting that improvements in resilience and meaning were closely tied to reductions in anxiety.

Qualitative assessment

Participants' responses to the semistructured interview questions, originally in Turkish, were translated into English using DeepL translation software (DeepL, n.d.). The qualitative data were then analyzed through thematic analysis (Braun & Clarke, 2006), following a systematic process. This included familiarization with the data, identifying and refining themes, and naming these themes, culminating in the production of a detailed report. This

Table 3 Correlations of Pre-, Post-, and Follow-Up Results for Anxiety, Resilience, and Meaning in Life (N:35)

	Anxiety Pre	Anxiety Post	Anxiety Follow-Up	Meaning Pre	Meaning Post	Meaning Follow-Up	Resilience Pre	Resilience Post	Resilience Follow-up
Anxiety Pre	1.00	.206	.155	-.159	-.169	-.109	-.083	-.053	-.171
Anxiety Post	.206	1.00	.773	-.294	-.550	-.500	-.262	.145	.187
Anxiety Follow-Up	.155	.773	1.00	-.105	-.287	-.537	-.074	.431	.475
Meaning Pre	-.083	-.262	-.074	1.00	-.052	-.047	-.423*	-.063	.016
Meaning Post	-.053	.145	.431	-.052	1.00	.865	-.192	-.438	-.332
Meaning Follow-Up	-.171	.187	.475	-.047	.865	1.00	.022	-.421*	-.509
Resilience Pre	-.159	-.294	-.105	-.423*	-.192	.022	1.00	.158	.229
Resilience Post	-.169	-.550	-.287	-.063	-.438	-.421*	.158	1.00	.298
Resilience Follow-Up	-.109	-.500	-.537	.016	-.332	-.509	.229	.298	1.00

Note. * $p < .05$, $p < .01$. Correlations are between pre-, post-, and follow-up measures for each variable.

Theme	Sub-theme	Description	Representative Quotes	Additional Quotes Related to the Intervention
Anxiety and Coping Mechanisms	Financial Anxiety	Participants frequently mentioned anxiety stemming from financial concerns, particularly related to work stability and future planning.	"For financial reasons, yes, often. It's been a consistent worry about how to support my family." (P1) "I'm always thinking about how to make ends meet. It's been hard to find financial stability." (P5)	
	Health and Family-Related Anxiety	Anxiety was also linked to personal health issues or the health of family members, which participants felt significantly impacted their daily lives.	"The calmness and slowness of Yin Yoga helped me manage my anxiety when I was overwhelmed by my family's health issues." (P2) "My mother's health problems often keep me up at night. It's hard to focus on other things." (P6)	"I haven't been able to let go of what I am holding on to. There is a frozen pain inside me that I haven't been able to heal. I think I will overcome this with the calmness and slowness of Yin Yoga." (P34) "Despite going through a really tough period with my family and financial situation, instead of blaming others, feeling sorry for myself, or becoming depressed, I always remembered the quote from Gita 'don't be deceived, don't get distracted, and find yourself'." (P1)
	Self-Regulation Strategies	Participants used various strategies like breathing exercises, mindfulness practices, and acceptance to manage their anxiety.	"Breathing deeply and focusing on the present moment helps me calm down during anxious times." (P3) "I try to focus on breathing and staying in the moment. This helps reduce my anxious thoughts." (P7)	"The quote from the Gita: 'Don't worry. There is nothing to worry about.' I think the realization of this sentence came to me. So that had a big impact. I guess even one sentence can be enough sometimes." (P23)
Relationship Management and Communication	Challenges in Communication	Difficulties in expressing emotions and managing expectations in relationships were common themes. Participants often felt misunderstood or struggled with assertiveness.	"I assume that everyone is like me, and I approach people with the same expectations. This often leads to misunderstandings." (P4) "I struggle to communicate my feelings clearly, and this often leads to conflicts." (P8)	
	Adopting New Approaches	Post-intervention, many participants adopted more compassionate, accepting, and less judgmental	"I have become more objective and calmer. I've learned not to take things personally and to accept others' behaviors as they are." (P9)	"As I read the Bhagavad Gita, some developments were slowly loading into my life. I was aware that I was starting to put some things into practice. I realized I could

Fig. 3 Partial Table of the Thematic Analysis. The Full Table Is Available in the Supplementary Appendix 1

method allowed for an in-depth examination of participants' experiences and perceptions regarding the psychological variables under study, as well as their reflections on the intervention itself (Figure 3).

The thematic analysis revealed six main themes along with their sub-themes: anxiety and coping, relationship management and communication, self-awareness and personal growth, emotional and spiritual transformation, future goals and visions, and impact of the intervention. Most of the participants mentioned their anxieties in areas of finances, health, and relationships, but through mindfulness, breathing, and teachings of acceptance, they were able to cope with these stressors better. Increased self-awareness helped participants identify their emotional barriers and, therefore, develop as individuals and embrace themselves. Moreover, the analysis suggests a shift in affect and cognition, including emotional and spiritual transformation, with the practice of yin yoga and teachings from the *Gītā*. Participants' views on goal orientations were similarly affected by this shift, as they moved from explicit goal orientation to a more flexible, values-based approach.

The integration of quantitative and qualitative findings (Table 4) provided a multidimensional understanding of the intervention's impact. By triangulating statistical outcomes with participant narratives, this section identifies areas where the two strands of data converged, as well as domains where divergence emerged, offering deeper insight into how the psychospiritual intervention was experienced and perceived.

Table 4 Integrated Summary of Quantitative and Qualitative Findings Across Key Outcomes

Outcome	Quantitative Results	Qualitative Insights	Interpretation
Anxiety	Significant reduction post-intervention ($p = .098$, $d = 0.55$); sustained at follow-up ($p = .084$, $d = 0.36$)	Participants described improved emotional regulation, reduced overthinking, and better coping mechanisms; mindfulness, breathwork, and <i>Gita</i> teachings were cited.	Strong convergence: Both strands suggest reduced anxiety and enhanced emotional regulation.
Resilience	Significant increase post-intervention ($p = .004$, $d = 0.89$); not sustained at follow-up ($p = .107$)	Participants reported greater emotional strength and ability to manage stress; yin yoga and spiritual practices were noted as key contributors.	Partial convergence: Qualitative data suggest lasting resilience not fully captured quantitatively.
Presence of Meaning	No significant change ($p = .132$ post; $p = .310$ follow-up)	Many participants reported increased clarity, alignment with values, and a deepened sense of purpose.	Divergence: Standardized scale may not reflect the subjective depth of meaning described in narratives.
Search for Meaning	Decrease post-intervention ($p = .146$) and follow-up ($p = .342$); small effect sizes	Participants described a shift from searching externally to internal contentment and trust, influenced by the <i>Gita</i> .	Convergence: Both strands reflect reduced existential searching and greater inner alignment.

Note. This table summarizes areas of convergence and divergence between quantitative results and participants' qualitative experiences across outcome domains.

Discussions

The current study builds upon a previously conducted pilot study by further exploring the impact of a psychospiritual intervention combining teachings from the *Bhagavad Gītā* and practices of yin yoga on participants from Türkiye using a repeated measures mixed-method design with a control group. The results confirm the initial findings, demonstrating that the intervention significantly reduced anxiety, enhanced resilience, and positively influenced the participants' sense of meaning in life. The mixed data enabled the evaluation of the intervention's efficacy and sustainability.

The employment of a mixed-method design provided a more comprehensive understanding of the transformation process. While validated quantitative scales captured measurable symptomatic shifts, qualitative interviews revealed nuanced forms of resilience and meaning in life that were not reflected in the former. This integration of data strands underscores the epistemological pluralism necessary in psychospiritual research, where subjective transformations may elude standardized instruments. Table 4 illustrates how the integration of quantitative and qualitative data reveals both convergence and divergence across outcomes, thereby highlighting the complementary strengths of each method.

Anxiety and coping mechanisms

The statistical significance of the reduction in anxiety scores from baseline ($M = 11.63$, $SD = 9.65$) to post-intervention ($M = 7.83$, $SD = 7.39$) in the experimental group, while the control group showed no significant change ($M = 13.08$, $SD = 11.15$), was promising. The maintenance of this reduction at follow-up ($M = 7.31$, $SD = 8.18$) suggests that the intervention's effect on anxiety was sustained over time. Although the effect size at follow-up ($d = 0.36$) was smaller compared to post-intervention ($d = 0.55$), the continued lower levels of anxiety in the experimental group suggest that participants were able to apply the coping mechanisms learned during the intervention to manage their anxiety beyond the intervention period. Participants in the study shared how they adopted new strategies for managing anxiety, drawing from the insights of the *Gītā*, regular meditation, mindful breathing, and positive affirmations. One participant mentioned, "Breathing deeply and focusing on the present moment helps me calm down during anxious times" (P3). Another described how applying the teachings from the *Gītā* helped them navigate difficult times:

Despite going through a really tough period with my family and financial situation, instead of blaming others or feeling sorry for myself, I always remembered the quote: 'Don't be deceived, don't get distracted, and find yourself.' (P1)

These findings are in line with previous research on mindfulness-based stress reduction and cognitive-behavioral therapy, which have also shown that practices like deep breathing, meditation, and yoga can effectively reduce anxiety and support emotional balance (Bazzano et al., 2018; Hofmann et al., 2016; Khoury et al., 2013; Yang et al., 2023). The consistent decrease in anxiety levels observed during follow-up suggests that these new coping strategies had a lasting impact. Correlation analysis further emphasized the relationship between anxiety and other variables. Anxiety scores were negatively correlated with resilience ($r_s = -.45$, $p < .01$) and the presence of meaning in life ($r_s = -.38$, $p < .05$), suggesting that participants with lower anxiety tended to have higher resilience and a greater sense of meaning. This finding aligns with Boreham and Schutte's (2023) meta-analysis, which found that a greater sense of purpose was linked to reduced anxiety ($r = -.36$, $p < .001$). These correlations suggest that interventions aimed at enhancing coping mechanisms and emotional regulation may concurrently reduce anxiety while bolstering resilience and perceived meaning in life.

Resilience

The intervention had a noticeable impact on resilience levels in the experimental group. After the intervention, resilience scores increased from a baseline of $M = 3.43$ ($SD = 0.70$) to $M = 4.08$ ($SD = 1.14$), showing a meaningful boost ($d = 0.89$). However, at follow-up, scores had declined slightly to $M = 3.69$ ($SD = 0.76$), though they remained above baseline levels. These findings suggest that while the intervention helped improve resilience, participants may benefit from ongoing support to maintain these gains.

According to Jacobson (2022), resilience involves adapting to challenges, while sustainability focuses on maintaining improvements over time. For interventions to be truly effective, they must address immediate needs while also building long-term resilience to navigate future adversities. The slight drop in resilience during follow-up suggests that resilience can fluctuate depending on life circumstances and internal experiences.

This transformation was reflected in participants' personal insights. One participant shared how a simple yet profound teaching from the *Gītā* helped shift their perspective:

The quote from the *Gītā*: 'Don't worry. There is nothing to worry about.' I think the realization of these words came to me. So that had a big impact. I guess even one sentence can be enough sometimes." (P23)

Such realizations highlight how even brief spiritual teachings can deeply influence resilience, reinforcing the idea that inner strength is often a matter of perception and mindset. To help sustain these improvements, Lee and colleagues (2017) recommend community support mechanisms, such as follow-up sessions or peer groups, to reinforce the skills learned during interventions.

The correlation analysis showed that resilience and the presence of meaning in life were positively associated ($r_s = .34$, $p < .05$), suggesting that building resilience alongside fostering meaning may be essential for long-term well-being.

Meaning in life

The experimental group's assessment revealed that participants were less motivated to search for meaning ($M = 22.17$, $SD = 8.75$). This shift, which was maintained over time ($M = 21.31$, $SD = 9.35$), suggests a lasting effect of the intervention on their sense of meaning and contentment. Parallel results were observed in the qualitative data. Many participants described gaining a clearer sense of life's meaning and developing a deeper understanding of what meaning personally signified for them. One participant noted,

"I realized that true meaning in life doesn't come from constantly searching but from fulfilling the duties I set for myself with sincerity and dedication" (P15).

This shift aligns with Chen's (2023) study, which showed that a strong sense of purpose can help lower anxiety levels, while an ongoing search for meaning may sometimes increase anxiety, particularly during stressful periods. When individuals feel that their lives have meaning, they often experience less anxiety, possibly because having clear goals fosters motivation. The decline in search for meaning scores suggests that participants transitioned from actively seeking meaning to living with a deeper sense of it, which may also help explain the reduction in their anxiety levels.

Relationship management and communication

The intervention also led to improvements in participants' ability to manage personal relationships and communicate more effectively. Before the intervention, participants reported difficulties in expressing emotions and managing expectations, often resulting in misunderstandings and conflicts. However, post-intervention qualitative results indicated that many participants adopted a more compassionate and accepting approach in their interactions.

One participant shared,

"I've learned to pause and listen more. It has made a huge difference in how I interact with people" (P10).

Another participant described adopting a more patient and nonjudgmental mindset:

I realized that the world wouldn't end if I took three seconds instead of one to respond with my opinion. While managing moments of stress, anxiety, and joy, if I allowed myself a short pause, I could relax my body and mind, and my way of handling those moments could change. (P15)

Impact of the psychospiritual intervention

Integrating quantitative and qualitative findings provides a comprehensive understanding of the intervention's impact. While the follow-up quantitative measures did not show a statistically significant increase in resilience, qualitative feedback highlighted improvements in coping mechanisms, emotional regulation, and spiritual engagement. Goal setting became more flexible and value-driven as participants shifted their focus toward personal growth and embracing life's uncertainties. Reports of increased self-awareness and personal acceptance further supported the intervention's positive influence on psychological and spiritual well-being.

The qualitative data offered valuable insights into the components participants found most beneficial, such as the emphasis on mindfulness, the concept of dharma, and the integration of yoga with spiritual practices. Participants expressed that these elements not only helped them manage anxiety and stress more effectively but also fostered a stronger sense of meaning and connection to themselves and others. One participant shared how the *Gītā* provided a transformative framework for understanding life's meaning:

In my search for the meaning of life, I found the *Bhagavad Gītā* to be a profound guide. It helped me grasp the essence of teachings I had encountered from various sources before but never fully understood. The instructor's deep belief in and sincere transmission of these teachings allowed me to accept and internalize knowledge that I previously struggled to comprehend or trust. (P24)

This reflection affirms the spiritual depth of the intervention, showing that beyond its psychological benefits, it served as a means of integrating and internalizing existing knowledge in a more coherent and meaningful way. It also underscores the importance of facilitator authenticity. The participant's trust and openness to the material were enhanced by the instructor's personal belief in and sincere transmission of the teachings. This relational dimension aligns with evidence that therapist congruence or genuineness is positively associated with therapeutic outcomes (Kolden et al., 2018; Rogers, 1961) and is recognized as a common factor contributing to change across therapeutic modalities (Norcross

& Lambert, 2018). From a theoretical perspective, the intervention demonstrates that Eastern philosophical frameworks, specifically the *Gītā*, can be meaningfully adapted for secular-Muslim and culturally diverse contexts. By integrating cognitive meaning making (through *jñāna* yoga) with somatic regulation (via *yin* yoga), the program provides a dual-path model for combining philosophical reflection with embodied practice. This approach aligns with developments in contemplative neuroscience and trauma-informed care, offering a rare example of spiritually integrated therapy beyond Buddhist-derived or purely secular models.

For practitioners, the intervention offers a culturally sensitive alternative for addressing anxiety and existential distress, especially for clients who do not resonate with biomedical or traditional religious approaches. The group-based, low-cost format makes it scalable in community and clinical settings. Practitioners can adapt the content by reframing the *Gītā*'s universal concepts (ethical action, discernment, equanimity, purpose, impermanence) in secular language for accessibility and by integrating it with established therapeutic approaches such as CBT, ACT, or mindfulness-based interventions.

From a methodological standpoint, the study highlights the value of mixed-method design in psychospiritual research. The divergence between quantitative and qualitative outcomes underscores the need for culturally and spiritually validated measurement tools that can more effectively capture existential and meaning-related change. Future research could examine the model's adaptability to other cultural and clinical contexts, investigate specific mechanisms of change, and explore trauma-informed adaptations to enhance safety and engagement.

Limitations and future research directions

While this intervention demonstrated a positive impact on psychospiritual well-being, several limitations warrant consideration, offering avenues for future research. A key challenge was introducing Indian spiritual concepts to a society with a predominantly Muslim background. Karma and reincarnation required secular framing, supported by research from Stevenson (1980) and Tucker (2005). Future studies could explore culturally tailored delivery approaches, integrating broader philosophical parallels to enhance accessibility. Maintaining participant adherence throughout the intervention and follow-up posed another challenge. Life responsibilities contributed to dropouts and incomplete data, potentially affecting the intervention's long-term impact measurement. Future studies may consider adaptive engagement strategies, such as personalized scheduling, shorter interventions, or technology-enhanced follow-ups, to increase retention.

Self-reported measures introduce potential biases, including social desirability effects and response inaccuracies. These biases may have influenced participants' reported meaning in life and resilience scores. Additionally, the personal nature of the assignments (e.g., thought tracking, acts of kindness) may have affected honesty in self-disclosure. Future research could triangulate self-reported data with behavioral indicators or qualitative validation to improve data authenticity. The sample size and use of convenience sampling limit generalizability; future studies should aim for more demographically diverse and randomized samples to improve external validity. While findings provide valuable insights, the homogeneity of the participants may have created a floor effect. Longitudinal studies with broader, more diverse samples would enhance external validity.

The online intervention format, while accessible and flexible, lacked the energetic and communal aspects of in-person sessions, which are central to traditional yoga teachings. This may have influenced engagement levels and experiential depth. Future research could explore hybrid models to balance convenience with interpersonal connection. Moreover, the divergence between qualitative narratives and scale-based results underscores the need for culturally and spiritually validated instruments capable of capturing existential and meaning-related shifts.

Future research should also investigate the adaptability of this model in varied cultural and clinical contexts, with attention to trauma-informed adaptations. Screening for trauma histories, integrating grounding protocols, and training facilitators in trauma-sensitive delivery would enhance safety. Extended follow-up periods and mechanism-focused mediation analyses could further clarify how and for whom the intervention works.

By addressing these methodological, cultural, and ecological complexities, future studies can refine this framework into a scalable, inclusive model for integrating universal spiritual teachings into contemporary mental health care.

Conclusion

The present study establishes a foundation for future research and provides key insights into the application of psychospiritual interventions in culturally and religiously diverse settings.

Integrating *Bhagavad Gītā* teachings with yin yoga led to a significant reduction in anxiety while enhancing resilience and meaning in life. Although resilience declined slightly over time, the sustained reduction in anxiety and the continued pursuit of meaning suggest that the intervention offers long-term psychological benefits.

The combination of the *Gītā*'s philosophical teachings and yin yoga practice provided participants with immediate coping mechanisms while also serving as a framework for navigating future stressors. Many participants reported that self-reflection, mindfulness, and spiritual growth helped them regulate emotions more effectively and facilitated personal growth.

This study also highlights the complexity of psychospiritual development and the challenges of sustaining its benefits over time. Future research should explore strategies for maintaining resilience gains, investigate longer intervention periods, and assess the role of follow-up support in reinforcing long-term outcomes. Additionally, cultural adaptation remains crucial—tailoring interventions to different cultural contexts may enhance their effectiveness and accessibility.

The integration of qualitative narratives with psychometric data in this study emphasizes the value of mixed-method design for psychospiritual research. Such an approach captures nuanced and experientially rich dimensions, such as meaning making, spirituality, and existential change, that are often overlooked in purely quantitative designs, providing a more holistic understanding of participant transformation.

Overall, this research highlights the value of psychospiritual interventions and the importance of culturally sensitive approaches in mental health. The findings suggest that integrating universal spiritual teachings into mental health interventions may provide globally adaptable solutions, offering a holistic framework for addressing psychological well-being across diverse populations.

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