

The feasibility and efficacy of a psychospiritual intervention with the insights from Bhagavad Gītā and Yin Yoga on Turkish population: A mixed method approach

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ABSTRACT

This pilot study examines the feasibility of a psychospiritual intervention integrating Bhagavad Gītā and Yin Yoga to reduce anxiety and enhance meaning in life and resilience among 20 Turkish women. Amidst challenges like COVID-19 and earthquakes, this novel approach, using quasi-experimental single-group mixed-methods pre-test/post-test design, aimed to assess the intervention's adaptability and effectiveness within a cultural context unfamiliar with such methods. The online intervention used the Beck Anxiety Inventory, Meaning in Life Questionnaire, and Brief Resilience Scale and semi-structured interviews. SPSS was used for quantitative data analysis, and thematic analysis was applied to qualitative responses. Results showed a significant reduction in anxiety, with participants reporting improved coping strategies and a deeper sense of life's meaning. While resilience scores showed only a slight, non-significant increase, qualitative feedback suggested subtle improvements in handling adversity. Additionally, the presence and search for meaning scores showed nuanced changes, with qualitative responses indicating a refined understanding of meaning in life post-intervention. This study underscores the value of mixed-methods research in psychospirituality, demonstrating the potential of integrating ancient spiritual teachings with modern psychological practices to support mental health and coping strategies in diverse cultural contexts.

KEYWORDS

Psychospiritual intervention;
Bhagavad Gita; Yin Yoga;
Turkish population; efficacy;
mixed method

Introduction

With today's fast-paced society and challenges, individuals are often exposed to a variety of anxiety and psychological distress. Natural catastrophes such as earthquakes, floods, landslides, and human-made disasters including fires, terrorism, and plane accidents, can cause significant physical, economic, and socio-psychological losses. These impacts are universal, affecting communities regardless of their specific location, timing, or the

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nature of the disaster. Türkiye, in particular, has been prone to a wide range of such calamities, from natural calamities like earthquakes to the recent global crisis of the COVID-19 pandemic, highlighting its population's vulnerability (Altun 2018).

The pandemic has marked Türkiye as one of the most affected countries, with 17,004,677 confirmed cases and 101,419 fatalities as of 19th December 2023 (WHO 2023). Beyond the direct health consequences, the ripple effects resulted in mental health issues, such as stress, anxiety, and depression, among the general population. Research further suggests a heightened susceptibility to anxiety symptoms among COVID-19 survivors (Khan et al. 2021; Rehman et al. 2021; Salari et al. 2020; Turna et al. 2021; Yıldırım, Arslan, and Özaslan 2022).

In addition to the pandemic, Türkiye suffered devastating earthquakes on 30 October 2020 in Izmir and 6 February 2023, near the Syrian border, inflicting significant fatalities and economic damage (Demirci, Karaman, and Bhattacharya 2022; Oduoye et al. 2023). The psychological impact of these natural disasters has been extensively studied, revealing a potential for psychiatric disorders, including PTSD, affecting up to 60% of survivors, though findings vary (Goenjian 1993; Sharan et al. 1996). This is supported by research into earthquake risk perception, fear, and preparedness, indicating a wider influence on an individual's mental and emotional state (Çiengi and Yazgan 2022). Demographic factors, including gender, age, and education level, have been found to be subject to the psychological impact of these disasters. For instance, adult women and younger individuals exhibit higher levels of post-earthquake depression, with university graduates showing significantly higher depression scores than those with less education (Cengiz and Peker 2023).

Recent developments in psychological research have emphasized the roles of resilience and meaning in life as critical factors in mental health, particularly in the context of disaster management and personal adversities (Fletcher and Sarkar 2013; Tanvir, Haque, and Kabir 2022; Weber et al. 2020). Resilience, recognized as a multidimensional construct, enables individuals and communities to maintain functional capacity during crises (Collado-Soler et al. 2023; Egan et al. 2024; Pfefferbaum, Horn, and Pfefferbaum 2017; Williams and Shepherd 2016). Resilience models can be broadly categorized into compensatory, protective, and challenge models. Among these, the compensatory and protective models are the most extensively researched in the field of resilience (Fergus and Zimmerman 2005; Garmezy, Masten, and Tellegen 1984; Masten 2007). The compensatory model posits that promotive factors directly counteract risks, as seen in Zimmerman, Steinman, and Rowe's (1998) finding that parental support reduces adolescent violence. The protective model suggests that promotive factors modify the impact of risks, either by lessening their negative effects or by enhancing positive outcomes, as demonstrated in Hurd and Zimmerman's (2010) study of adolescent mothers. Additionally, Rutter's (1987) challenge model proposes that moderate risk exposure can act as an inoculation, equipping youth to better handle future risks.

The model proposed by Rees et al. (2015) illustrates that resilience functions as a mediator between personal attributes such as neuroticism and mindfulness and outcomes like psychological adjustment, highlighting the interplay of self-efficacy and coping strategies in individual well-being. This model underpins our intervention by suggesting that enhancing mindfulness and self-efficacy could significantly bolster resilience among participants.

Viktor Frankl's seminal work on meaning in life laid the foundations for subsequent decades of research in this area. According to Frankl, finding meaning in life is a fundamental human drive, particularly through suffering, love, and work, which can lead to profound resilience and psychological well-being (Frankl 1985). Michael F. Steger's major contribution to the study of meaning in life includes developing the Meaning in Life Questionnaire, which has greatly advanced empirical research on how meaning influences well-being, mental health, and life satisfaction. According to him, meaning in life is the extent to which individuals perceive their lives as having purpose, significance, and coherence (Steger et al. 2006). Meaning in life plays a critical role in psychological and physical health by shaping personal identity, direction, and engagement with social values, with various studies highlighting its protective and mediating effects. Studies illustrate how meaning in life mediates the relationship between psychological distress, depression, hopelessness, suicidal ideation, and negative reminiscence, suggesting that enhancing meaning can significantly reduce negative mental health outcomes (Korte et al. 2012; Sun et al. 2022).

Hooker, Masters, and Park (2018) introduce the concept of meaning as a bridge linking meaning in life to physical health and overall well-being, while Zhang et al. (2023) suggest that life meaning can be enhanced through the influence of psychological resilience on medical coping strategies. Additionally, research by Olstad et al. (2024) applies Schnell's model to examine meaningfulness and crises of meaning in adolescents with developmental trauma. This evidence supports our intervention's goal to enhance participants' sense of meaning, potentially improving their mental health and stress management capabilities.

Our study seeks to explore the efficacy of a novel psychospiritual intervention combining the philosophical insights of the Bhagavad Gītā with the practices of Yin Yoga, tailored to the Turkish cultural context. This approach is supported by studies highlighting the benefits of psychospiritual practices that integrate elements of Eastern philosophies, such as Haṭha Yoga, in enhancing resilience, reducing anxiety, and fostering a deeper sense of life's meaning (Hofmann et al. 2016; Ivtzan and Papantoniou 2014; McSherry, Boughiey, and Attard 2021; More et al. 2021; Rigoli 2021; Simon et al. 2021).

Psychospiritual interventions have been investigated to determine their efficacy in alleviating anxiety. A study by Kwok et al. (2023) revealed that individuals with Parkinson's disease who participated in mindfulness yoga showed more significant enhancements in psychospiritual aspects, such as anxiety, than those who engaged in stretching and resistance training exercises. Zheng, Zhang, and Xiao (2022) found that a life review program integrated into WeChat could effectively mitigate symptoms of depression and anxiety in patients diagnosed with digestive system cancer. Furthermore, the link between meaning in life and broader concepts like spirituality and quality of life has been explored, highlighting the fundamental role of spirituality in holistic nursing theory (Jadidi et al. 2022) and the importance of finding life's meaning as a crucial aspect of spiritual well-being (Desmet et al. 2020). These interventions not only address immediate psychological distress but also promote long-term well-being, illustrating the profound impact of holistic and culturally sensitive therapeutic approaches. By bridging these theoretical frameworks with practical applications, our research aims to contribute to a nuanced understanding of how psychospiritual interventions can be optimized to enhance mental health and resilience in diverse cultural settings.

Integrating Bhagavad Gītā and Yin Yoga

In this psychospiritual paradigm, the Bhagavad Gītā provides practical therapeutic insights, promoting conflict resolution to combat depression and inactivity (Reddy 2012). Simultaneously, Yin Yoga has been found to have a notable impact on lowering anxiety levels, suggesting its potential for general anxiety therapy (Winroth, Hassmen, and Stevens 2019).

The Bhagavad Gītā, often referred to simply as the Gītā, is a revered scripture that forms part of the Indian epic Mahābhārata, a significant mythological narrative in Indian philosophy (Reddy 2012), assumed to be dated between the fourth century BCE and the second century CE, that provides insight and benefits across mental, bodily, and spiritual aspects of human life. This sacred text is essentially a dialogue between Lord Kṛṣṇa, considered an incarnation of the divine, and Arjuna, a prince from the Pandava clan, set on the battlefield of Kurukṣetra during a war between the Pandavas and the Kauravas for control of the kingdom of Hastināpura (Reddy 2012). The Gītā is renowned for its profound philosophical teachings and ethical dilemmas presented in the context of duty and righteousness. The teachings can impact people in numerous beneficial ways, considerably enhancing personal and social well-being with their deep insights and practical advice. Gītā offers guidance on effectively managing anxiety and distress and cultivating holistic well-being (Simha 2023). Studies indicate that Gītā's teachings on karma yoga, the practice of selfless action, provide people with a structure to endure challenges, thereby fostering resilience (Arun 2022; Keshavan 2020; Navare and Pandey 2022; Singh, Singh, and Shukla 2022; Sinha and Srivastava 2023; Varghese et al. 2017). Moreover, it enhances philosophical and educational discussions by providing perspectives and approaches that refine reasoning, critical thinking, and debate proficiencies (Chand 2017; Sinha and Srivastava 2023). The central themes of spiritual enlightenment and self-realization in the Gītā are instrumental in fostering personal development and self-awareness (Krishnan 2022). The Gītā offers ways for handling negative feelings and challenging life circumstances in the realm of psychological resilience and coping, particularly in times of crisis like the COVID-19 pandemic (Das and Behura 2021; Nigam and Joshi 2022).

Yin Yoga, derived from Hatha Yoga, a slow-paced form of yoga involving long-held postures and mindful breathing, has been associated with numerous physical and mental health benefits, highlighted by research for enhancing stress coping, reducing anxiety, and improving mindfulness (Lemay, Hoolahan, and Buchanan 2021; Tellhed et al. 2019). Studies show its effectiveness in mood improvement for depression and anxiety (Brinsley et al. 2022), weight management, relaxation (Jehaman 2023), and reducing stress (Daukantaitė et al. 2018). Even in short sessions, its practice has been found superior to inactivity for mental well-being, making it a valuable tool for enhancing physical and mental health.

However, it is important to note that these studies have not specifically addressed the Turkish population. This omission raises questions about the cultural specificity of Yin Yoga's benefits and whether similar improvements in mental health outcomes, including anxiety reduction, meaning in life, resilience, and psychological well-being, would be observed within this demographic. Researchers have not found a study examining the impact of the Gītā and Yin Yoga on anxiety, meaning in life, and resilience across individuals from diverse cultural backgrounds. Culture and religion may influence the

effectiveness of an intervention using the teachings of the Gītā and Yin Yoga, and there is uncertainty about the potential universal impact of these teachings.

This gap presents an opportunity to examine the effectiveness of a psychospiritual intervention that combines the insights of the Gītā, mostly associated with India and not well known in Türkiye with the physical and mental benefits of Yin Yoga, offering a promising opportunity to investigate the possible intercultural impacts of such an intervention. Hence, the present study aims to explore the feasibility of using a psychospiritual intervention based on the Bhagavad Gītā and Yin Yoga in addressing anxiety, meaning in life, and resilience among the Turkish population.

Methods

Ethics committee approval was obtained to conduct the study (IEC AIMS-2022-ASSCS-341). Written informed consent was obtained from all study participants, with their privacy rights fully respected. Access to the electronically secured data is restricted exclusively to the research team.

This study recruited 20 participants from Turkish Yoga Centres aged 25–55 using convenience and snowball sampling methods. The individuals included in this study were invited via social media platforms and direct liaisons with the yoga centers.

The inclusion criteria were precisely defined to assure sample homogeneity and appropriateness to the psychospiritual intervention. Inclusion criteria were as follows: individuals voluntarily agreeing to participate, aged between 25 and 55 years, physically fit to perform regular Yin Yoga postures, without medical conditions, not undergoing any psychotherapy, proficient in Turkish, physically capable of performing regular yoga postures, and committing to a 2-week intervention period. Participants were required not to engage in other yoga or contemplative practices during the study to ensure the effects could be attributed solely to the intervention. Additionally, participants needed reliable internet access for online session participation. This study was a preliminary investigation to check the feasibility of the evolved psychospiritual intervention. Of the 45 individuals who responded to the researcher's invitation, 27 were eligible based on the inclusion and exclusion criteria. However, seven participants dropped out after the pre-assessment and did not attend the intervention, resulting in 20 participants for analysis (Figure 1). While the research was not exclusively designed for female participants, it ultimately involved only women. Although men constituted 10% of the initial enrollees, none were able to participate in the program due to time limitations and other personal engagements.

The sessions in the intervention were meticulously crafted to align closely with the participants' existing practices and beliefs, taking into account the complex religious, cultural, and socio-political landscape of Türkiye. The decision not to include a control group for the present study was based on operational constraints, such as obtaining participants in the aftermath of the earthquake and the ongoing presence of various strains of COVID-19, as well as limited finances for compensation.

Design

The study employed a quasi-experimental design, including a before-and-after treatment assessment without a control group. Online tools were used for both the assessment of outcomes and the delivery of the intervention.

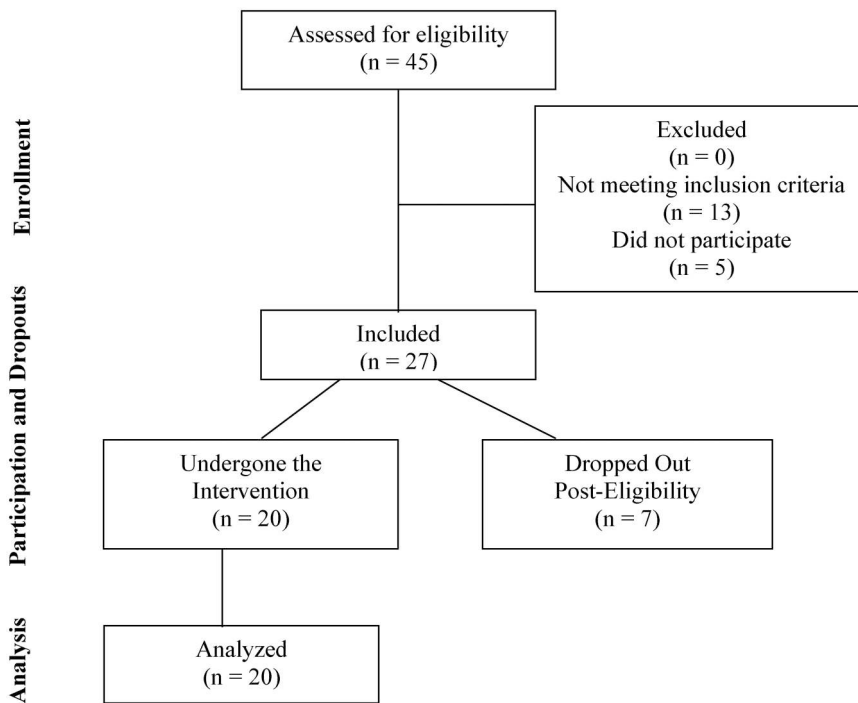


Figure 1. Consort flow diagram.

Instruments

A Case Study Schedule was used to gather essential demographic information. For quantitative assessment, the Turkish versions of the Beck Anxiety Inventory (Beck et al. 1988; Ulusoy, Sahin, and Erkmén 1998), Meaning in Life Questionnaire (Demirdag and Kalafat 2015; Steger et al. 2006), and Brief Resilience Scale (Doğan 2015; Smith et al. 2008) was employed.

Semi-structured interview questions

For further in-depth investigation of the quantitative data, a qualitative examination was conducted to explore the subjective experiences and reflective processes of the participants, employing a semi-structured interview approach. The semi-structured interview questions were developed by the investigators based on the review of the existing literature. The questions were formulated to ensure that any areas of the psychological variables addressed in the study, that were not encompassed by the quantitative test, could be explored through interview questions, thus yielding qualitative data on those aspects.

The Turkish translation of the semi-structured interview questions was used for pre- and post-assessment. Following is the English version of the same:

- Please describe any situation where you experience anxiety in your daily life and discuss the steps you typically take to address and overcome these feelings.
- Things can go wrong in life. Kindly share with me how you are adapting to challenging life circumstances.

- Kindly share an important event in your life where you best demonstrated your resilience and coping skills.
- Kindly share with me the meaning of life according to your perspective.
- Kindly share with me the importance of the meaning of life, according to you.
- Kindly share with me the activities in which you engage to find meaning in life.

Psychospiritual intervention

In the development of the Bhagavad Gītā curriculum as part of the psychospiritual intervention, researchers incorporated resources such as ‘Universal Message of the Bhagavad Gītā: An Exposition of the Gītā in the Light of Modern Thought and Modern Needs’ (Ranganathananda 2000), the teachings of Mata Amritanandamayi (n.d.), the Bhagavad Gītā course provided by Chinmaya Mission, Bhagavad Gītā classes conducted by experts, and the Bhagavad Gītā interpretations of Swami Chinmayananda (1996) and Swami Ranganathananda (2000).

For the Yin Yoga aspect of the psychospiritual intervention, a selection was made from the most common postures and poses found in the renowned Yin Yoga by Grilley and Grilley (2002) and those recommended by prominent Yin Yoga practitioners, aiming to benefit the participants.

The 2-week online intervention, structured into five sessions, was conducted by the first author Duygu Akartuna in October 2023, seven months post-earthquake, within the same time zone. The initial session introduced participants to the course framework, providing an overview of content related to the Bhagavad Gītā, and key concepts such as *dharma*, *karma*, *yajña*, and Yin Yoga. Each session concluded with a yoga practice themed around the day’s discussion. As part of the inclusion criteria, the participants were not involved in their routine yoga practice outside the study.

Participant attendance was meticulously monitored via the digital platform Zoom which recorded login and logout times to ensure accurate engagement metrics. This attendance data was crucial for correlating participation levels with outcome measures. Participants were required to attend 100% of the sessions to be considered for the final analysis to maintain the integrity of the intervention’s impact assessment. Surveys and semi-structured interviews were administered through Google Forms, capturing quantitative data on anxiety, meaning in life and resilience, and adherence to introduced practices like gratitude journaling and meditation. Semi-structured interviews provided qualitative insights into participants’ experiences and the applicability of the skills and concepts learned during the intervention.

Furthermore, participants completed behavioral assignments after each session to immediately apply the discussed themes. These tasks included thought tracking, gratitude journaling, acts of kindness, and guided meditation, which were intended to reinforce the session’s learning objectives and enhance overall engagement with the intervention (Figure 2). The completion of these tasks was tracked using individual Google Sheets for each participant, providing additional data points for evaluating the practical application of the intervention’s teachings.

Figure 2 outlines the psychospiritual intervention program, including the session topics, content, behavioral assignments, and yoga practices. The program is divided into two weeks, five sessions, each focusing on different aspects of psychospiritual

Week	Session (90 min.)	Topic	Content (45 minutes)	Behavioral Assignments (Accumulative)	Yoga Practice (45 minutes)
1	¹ (25.10.2023)	Orientation	Introduction of the course, Explanation of the content and main concepts such as dharma, karma, yajña, yin yoga	Thought Tracking for the next 6 weeks	Yoga Nidra
	² (26.10.2023)	Jñāna Yoga	Psycho-spiritual education on Jñāna Yoga: Knowledge, Nature of Self, Meaning in Life, Self-Esteem, Anxiety, Resilience	Skills identification and possible usage	45 min Yin Yoga
	³ (27.10.2023)	Karma Yoga	Psycho-spiritual education on Karma Yoga: Action, Process orientation, motivation, fate vs freewill, benefits of karma yoga integrated into anxiety, meaning in life and resilience	Each day an Act of Kindness	45 min Yin-Yang Yoga
2	⁴ (01.11.2023)	Dhyāna Yoga	Psycho-spiritual education on Dhyāna Yoga: Meditation, mind control, preparations, benefits of meditation integrated into anxiety, meaning in life and resilience	Each day Meditation for 10 minutes	45 min Yin Yoga
	⁵ 03.11.2023	Bhakti Yoga	Psycho-spiritual education on Bhakti Yoga: Devotion, Higher good, Supreme consciousness concept, 4 types of devotees, Qualities of a bhakta, self surrender integrated into anxiety, meaning in life and resilience	Each Day Gratitude Journal	45 min Yin Yoga

Figure 2. Psychospiritual intervention structure.

education based on Jñāna Yoga, Karma Yoga, Dhyāna Yoga, and Bhakti Yoga. Participants engage in both theoretical learning and practical exercises designed to integrate these teachings into their daily lives. The intervention combines educational content with cumulative behavioral assignments and tailored yoga practices, aimed at addressing anxiety, resilience, and meaning in life.

Communication platforms

The applications Zoom, Google Docs and WhatsApp were used to communicate with the participants.

Data collection

Quantitative and qualitative data were collected online via Google Forms before and after the psychospiritual intervention to evaluate the levels of anxiety, meaning in life, resilience, and phenomenological experiences of the participants.

Quantitative data analysis

The Statistical Package for the Social Sciences (SPSS) Windows Version 21.0 was used to analyze the data. Descriptive statistics, including mean, standard deviation (SD), frequency, and percentage, were calculated for demographic variables. Given the small sample size ($N = 20$), the Shapiro–Wilk test was applied to assess the normality of the quantitative data distribution.

Qualitative data analysis

The responses of the participants for semi-structured interview questions in Turkish were translated into English using DeepL translation software. The qualitative data

thus obtained were analyzed using thematic analysis. This involved a rigorous process of data familiarization, searching for themes, defining, and naming themes, and finally producing the report. This method facilitated an in-depth exploration of participants' experiences and perceptions about the psychological variables addressed and also regarding the intervention.

Results

Quantitative assessment

Table 1 presents the sociodemographic characteristics of the participants. All 20 participants were female with a mean age of 39.8.

Table 3 presents the pre-and post-intervention scores for anxiety, resilience, and meaning in life (presence and search). The intervention resulted in a significant reduction in anxiety scores ($p = .001$). No significant change was observed in resilience scores ($p = .452$). The slight reduction in presence of meaning was not statistically significant ($p = .251$). A significant reduction was observed in search for meaning scores ($p = .043$).

Anxiety scores

The Shapiro–Wilk test of normality revealed that the distribution of paired differences for anxiety was not normal ($W = 0.632$, $p < .001$) (Table 2). Consequently, a Wilcoxon signed-rank test was conducted, showing that participants who underwent the intervention experienced a significant reduction in anxiety scores from baseline to post-intervention ($z = -3.046$, one-tailed $p = .001$). The mean anxiety scores decreased substantially

Table 1. Demographic data of the participants ($N = 20$).

Factor	Variable	Number ($N = 20$)	Percentage (%)
Marital status	Single	7	35
	Married	9	45
	Divorced	4	20
Age	25–35	7	35
	36–45	8	40
	46–55	4	20
	55–60	1	5
Education level	High school	1	5
	University	17	85
	Higher studies	2	10
Employment status	Working	15	75
	Not working	2	10
	Retired	3	15
Yoga experience	Yes	16	80
	No	4	20
Yin Yoga experience	Yes	12	60
	No	8	40
Heard about	Heard	13	65
Bhagavad Gītā	Not Heard	7	35
Grasp of	Yes	3	23.08
Bhagavad Gītā	Some	6	46.15
Insights	No	2	15.38
	Trying	2	15.38

Table 2. Shapiro–Wilk test for normality ($N = 20$).

Variable	Mean (SD)	W statistic	p -Value
Anxiety	10.850 (10.3988)	0.632	<.001
Resilience	19.600 (3.2991)	0.909	.061
Presence of meaning	25.850 (7.2568)	0.939	.231
Search for meaning	24.600 (7.5343)	0.871	.012

Note: p -Values <.05 indicate a significant deviation from normality.

from 10.850 at baseline to 6.350 post-intervention, indicating that the intervention effectively reduced participants' anxiety levels (Table 3).

Resilience scores

The Shapiro–Wilk test indicated that resilience scores were normally distributed ($W = 0.909$, $p = .061$). As a result, a paired-sample t -test was performed, which revealed no significant change in resilience scores from baseline to post-intervention ($t = -0.121$, one-tailed $p = .452$). However, there was a slight increase in mean resilience scores, from 19.60 at baseline to 19.650 post-intervention. Although this increase was not statistically significant, it suggests a modest improvement in resilience levels among participants.

Meaning in life scores

The Shapiro–Wilk test indicated that the Presence of Meaning scores were normally distributed ($W = 0.939$, $p = .231$). Consequently, a paired-sample t -test was conducted, which revealed that the reduction was not statistically significant, $t(19) = 1.185$, $p = .251$, indicating that the intervention did not lead to a significant change in the presence of meaning. The mean score for the presence of meaning decreased slightly from 25.85 ($SD = 7.2568$) pre-intervention to 23.90 ($SD = 1.2395$) post-intervention.

For the Search of Meaning scores, the Shapiro–Wilk test indicated a non-normal distribution ($W = 0.871$, $p = .012$). Consequently, a Wilcoxon signed-rank test was conducted, which revealed a statistically significant reduction, $z = -2.021$, $p = .043$, suggesting that participants experienced a meaningful decrease in their active search for life meaning after the intervention. The search for meaning scores decreased from 24.60 ($SD = 7.5343$) pre-intervention to 23.15 ($SD = 7.2568$) post-intervention. This significant decrease suggests that the intervention had an impact on how participants search for meaning in their lives. Specifically, it might indicate that after the intervention,

Table 3. Anxiety, meaning in life, and resilience scores of the participants before and after the intervention ($N = 20$).

Variable	Pre-intervention M (SD)	Post-Intervention M (SD)	Statistical test (t/z)	p -Value
Anxiety	10.850 (10.3988)	6.350 (4.0429)	$z = -3.046$ (Wilcoxon)	.001**
Resilience	19.600 (3.2991)	19.650 (2.7961)	$t = -0.121$ (paired t -test)	.452
Presence of meaning	25.850 (7.2568)	23.900 (1.2395)	$t = 1.186$ (paired t -test)	.251
Search for meaning	24.600 (7.5343)	23.150 (7.2568)	$z = -2.021$ (Wilcoxon)	.043*

Table 4. Spearman's rank correlation between anxiety, resilience and meaning in life ($N = 20$).

	Anxiety	Resilience	Meaning presence	Meaning search
Anxiety	1	−0.525**	−0.580*	0.524**
Resilience	−0.525**	1	0.612**	−0.448*
Meaning presence	−0.580**	0.612**	1	−0.324
Meaning search	0.524**	−0.448*	−0.324	1

Note: ** $p < .01$; * $p < .05$.

participants felt less of a need to actively search for meaning, potentially due to a more settled or refined sense of purpose.

These findings indicate that while the intervention had a notable impact on reducing participants' anxiety levels, its effects on resilience and meaning in life (both presence and search) were more nuanced. The qualitative shift in the search for meaning underscores a more subtle transformation that may reflect a deeper sense of contentment or clarity among participants, even if quantitative changes in presence of meaning were not statistically significant.

Given that anxiety and search for meaning did not follow a normal distribution based on the Shapiro–Wilk test results, Spearman's rank correlation, a non-parametric method, was used to assess the relationships among these variables. However, resilience and the presence of meaning followed a normal distribution, indicating that the parametric test could be appropriate. Despite this, for consistency and to account for the mixed normality results, Spearman's rank correlation was applied across all variables.

Table 4 displays the correlations between anxiety, resilience, and meaning in life pre-intervention. Spearman's rank correlation revealed significant associations at baseline: a positive correlation between resilience and the presence of meaning in life ($r = 0.612$, $p = .002$) and a negative correlation between resilience and anxiety ($r = -0.525$, $p = .009$). These findings highlight the interconnectedness of resilience, anxiety, and meaning in life before the intervention.

Qualitative assessment

Thematic analysis was conducted on the participants' responses to semi-structured interview questions, pre- and post-intervention (Figure 3). Key themes were identified, namely, anxiety and coping strategies, resilience, meaning in life, importance of meaning, and personal growth. These themes were compared to assess participant perspectives and coping strategy shifts.

Integration of quantitative and qualitative findings

The study used mixed methods combining the quantitative and qualitative data to assess the impact of the psychospiritual intervention. This integration included analyzing and contrasting the results from two data sets to derive comprehensive conclusions on the efficacy of the intervention. The process aimed to enhance the analysis of the numerical results by incorporating detailed and context-specific data from qualitative observations. This approach provided a more advanced comprehension of how and why the intervention could have influenced the participants' anxiety, resilience, and meaning in life which is further elaborated in the discussion part.



Theme	Phase	Key Findings	Participant Quotes
Anxiety & Coping Strategies	Pre-intervention	Anxiety acknowledged with varying frequency and managed through less structured means.	"Sometimes, doing practices like yoga and meditation where I can find my center again." (P12) "I ignore my anxiety, trying to understand the situation and establish a new order, sometimes looking at it from a different perspective but not recognizing any specific teachings or methods." (P1)
	Post-intervention	Significant reduction in anxiety levels; participants reported adopting more structured and effective coping strategies.	"I was able to put into practice in my life, with small steps, the parts of the Bhagavad Gita teaching that I learned and understood. I understood and learned the benefits of yoga, meditation and its destination, that yoga can appeal to everyone." (P7) "I let myself be in the moment. It passes." (P9)
Challenges & Resilience	Pre-intervention	The meaning of life is seen as multi-faceted, with varying degrees of engagement.	"I don't converse with people who drag me down. Sometimes I wait, sometimes I take action." (P13) "For 3 years I was subjected to mobbing... I focused on my personal development and drew new road maps for myself." (P6)
	Post-intervention	Participants discussed changes in their search for and understanding of life's meaning.	"By taking refuge in God, trying to be brave and thinking positively." (P5) "The Bhagavad Gita's perspective contributed a lot to my life, adding a beautiful meaning. It helped me understand more deeply the saying 'You reap what you sow,' fundamentally changing my understanding of life." (P6) "Yin yoga classes helped me become more aware of my daily actions, significantly impacting my approach to challenges." (P15)
Meaning in Life	Pre-intervention	The meaning of life is seen as multi-faceted, with varying degrees of engagement.	"Never stop trying to be in the moment and take the right actions." (P16) "To find the common Essence in all living beings. To wake up from the illusion of separation to unity again." (P18)
	Post-intervention	Participants discussed changes in their search for and understanding of life's meaning.	"Recalling the teaching of the Bhagavad Gita and creating space for my body with yin yoga practice made me reflect on more gratitude, about not making assumptions. These were things I was already working on, but it was good to remember." (P16) "Training our 'nefs' (the ego or lower self) to act in favor for all. Discovering our true essence and fermenting within the 'hakikat' (the ultimate truth or reality)." (P5)
Importance of Meaning	Pre-intervention	Participants had diverse and personal interpretations of what gives life meaning.	"It expresses the life energy and commitment to life within us, so it is important." (P3) "The most important thing that connects us to life is our ties (family, friendship, relationship with all living things)." (P13)
	Post-intervention	The intervention led participants to a more nuanced understanding of life's meaning.	"Meaning enables us to overcome difficulties and keep going." (P2) "Being calm and composed. Thinking about what can be done without worrying about why it happened." (P10) "Through his teachings, Krishna raises each individual to the plane they are in, showing how valuable it is to approach existence without prejudice. This taught me the serenity of acceptance and surrender." (P6)
Personal Growth	Pre-intervention	There is a strong theme of personal change and development, with an emphasis on self-improvement.	"I try to improve myself in the areas I enjoy and invest in my personal development." (P6) "I usually adapt myself to the situation. I try to be adaptable, I can give up my comfort zone." (P5)
	Post-intervention	A clearer focus on personal growth as an ongoing journey, with specific strategies for self-improvement.	"Finding relaxation in every pose in yoga practice has been very good for me. It helped me take care of my body's needs, increasing my awareness in daily life because I would do assignments related to the teachings." (P17) "It is obvious that this perspective will contribute a lot to my life. - Bhagavad Gita God's song added a beautiful meaning to my life. It helped me understand more deeply the saying 'You reap what you sow.' It made me understand at a deep level that although we know the meaning of the word due to its content, we actually always create karma with a story about war from Krishna's perspective in education." (P7)

Figure 3. Thematic analysis of the participants' responses to semi-structured interview questions.

Discussion

To the knowledge of the researchers, this is the first study evaluating the impact of Bhagavad Gītā and Yin Yoga with a repeated measures mixed method design involving samples from Türkiye. The significant reduction in post-intervention anxiety levels, as indicated by the quantitative results, was reinforced by qualitative feedback in which participants described adopting more effective coping strategies. Specifically, participants noted that incorporating yoga and meditation into their daily routines helped them manage anxiety more effectively, while others embraced proactive mental health practices such as journaling and self-reflection. As illustrated by the statement of one participant (P15) who integrated yoga and meditation into their daily practice, these activities assisted them in finding their center and regulating anxious moments. Some participants (P7, P17) took a proactive approach to mental health by journaling and self-analyzing transitory anxious thoughts (Figure 3). These findings suggest that the intervention reduced anxiety and equipped participants with valuable life skills.

The pre-intervention responses showed that participants used various, often less effective, coping mechanisms, with some even ignoring their anxiety. Post-intervention, there was a noticeable shift towards more constructive strategies, such as social support, personal growth, and mindfulness. These findings align with existing literature, which highlights the effectiveness of mindfulness-based stress reduction (MBSR) and cognitive-behavioral therapy (CBT) in reducing anxiety by altering individuals' perceptions and reactions to stressors (Hofmann et al. 2013; Khoury et al. 2013).

While resilience did not show a significant increase quantitatively ($p = .452$), qualitative data suggested a nuanced enhancement in resilience. Participants reported shifts towards more constructive coping mechanisms and a deeper engagement with spiritual and religious practices. This divergence between quantitative and qualitative findings highlights the complex nature of resilience, which may not be fully captured by standard measures (Ong et al. 2006; Windle 2011). Future research could benefit from using more sensitive measures of resilience and incorporating longitudinal designs to track changes over time.

Resilience and meaning in life presented more nuanced results. Although there was no significant quantitative increase in resilience ($t = -0.121$, $p = .452$), qualitative data suggested a shift in participants' resilience experiences that standard quantitative measures might not fully capture. Participants reported feeling less overwhelmed by challenges and adopting more active strategies for dealing with difficulties, signaling improvements in both emotional and adaptive resilience. For instance, one participant noted a shift from seeking external help to embracing a more religious and spiritual mindset, reflecting the intervention's alignment with cultural and religious values, which fostered deeper spiritual engagement. The difference between the quantitative and qualitative findings highlights the complexity of resilience as a construct, which is often multidimensional, contextually variable, and influenced by individual perceptions (Ong et al. 2006; Windle 2011). Future research could benefit from using more sensitive measures of resilience and incorporating longitudinal designs to track changes over time.

The qualitative data suggests participants' sense of meaning in life was impacted by the intervention, which suggested a deepened sense of purpose. This highlights the limitations of quantitative measures in fully capturing the depth of psychospiritual

transformations. For example, one participant initially expressed an existential view of life, stating, ‘I have not understood the meaning of life ... I think religions are essentially stories that humanity has created to find an explanation for the meaning in life ...’. However, post-intervention, their perspective shifted to a more meaning-driven outlook: ‘The meaning of life is to focus on what one cares about and to be able to fulfill the tasks related to these cares in daily life. Everyone’s *dharma* is unique’ (P13). This response, accompanied by the Sanskrit term ‘dharma’, meaning duty or righteousness, learned during the intervention, indicates not just a shift in understanding but an integration of the intervention’s teachings into their life views.

The quantitative analysis revealed a significant reduction in search for meaning scores ($z = -2.021$, $p = .043$), suggesting that after the intervention, participants felt less of a need to actively search for meaning, likely due to a more settled or refined sense of life purpose. Correlation analysis further supports this interpretation, showing a relationship between the reduction in search for meaning and the reduction in anxiety levels. Participants who experienced a greater decrease in anxiety also tended to report a reduction in the search for meaning, indicating that the intervention may have fostered a more stable and contented outlook. This aligns with the qualitative reports, where participants often described a shift from actively searching for meaning to living with a more integrated sense of purpose. The variability in search for meaning scores further illustrates this complexity. For instance, Participant P4, who scored 8, saw meaning as simply ‘Love’ and a guide for life, while Participant P17, who scored 33, described a deeper understanding, viewing life as an eternal journey of learning and connection. These contrasting views at the extremes of the scale underscore the diverse interpretations and depth of personal reflection elicited by the intervention.

Integrating psychospiritual interventions, such as those based on the Bhagavad Gītā and Yin Yoga, into mental health programs can profoundly impact individuals’ psychological and spiritual well-being. The qualitative data from this study offer valuable insights into which components participants found most beneficial, informing the development of future programs. Customizing interventions to meet individual spiritual and psychological needs could enhance the efficacy of psychospiritual programs. Additionally, implementing support mechanisms – such as online communities, follow-ups, or peer groups – could help sustain the benefits of the intervention. Participants highlighted challenges with certain behavioral assignments, such as the ‘act of kindness’ task and ‘thought tracking’, suggesting that future interventions might benefit from incorporating simpler tasks or providing examples to guide participants.

Limitations

While the intervention had a significant positive effect on participants’ psychospiritual well-being, several limitations of the study must be acknowledged. These limitations underscore the complexity of researching psychological and spiritual phenomena but also present opportunities for future research and methodological refinements. One challenge was delivering the Gītā’s teachings in a predominantly Muslim cultural context, which necessitated a secular and culturally sensitive approach to avoid misinterpretations. This highlights the importance of tailoring spiritual teachings to ensure they are appropriately received and applicable across diverse cultural settings.

The use of self-reported measures introduces potential biases, such as social desirability bias and inaccuracies in self-assessment, which may not fully capture the complexity of participants' experiences. Measuring intangible variables like meaning in life and resilience through quantitative scales can be particularly challenging, as these tools might overlook critical aspects of participants' perceptions. Furthermore, the study's focus on short-term outcomes does not address the long-term sustainability of the intervention's effects. Psychospiritual development is a complex, ongoing process that requires longitudinal studies to fully understand. If a full longitudinal study is not feasible, follow-up studies over one or two months could offer more insight into the intervention's longer-term impact.

The study's convenience sampling and modest sample size, which may have introduced a floor effect, suggest that the findings, while insightful, are preliminary, potentially reflecting the specific sample and limiting their generalizability. The sample's all-female composition may limit the generalizability of the results, as women typically report higher spirituality levels and are more engaged in holistic spiritual practices and religious activities than men (Robinson et al. 2019). This trend extends to healthcare, where women, including providers and patients, show greater involvement in spiritual care (Rassoulilian, Gaiger, and Löffler-Stastka 2021; Sousa, Marina, and Ricou 2022) and a stronger preference for complementary and alternative therapies with spiritual elements (Vina et al. 2021). Gender differences in spirituality, coping mechanisms, and suicide risk factors, with women displaying higher spirituality scores, further support this trend (Mirkovic et al. 2021; Zeilani et al. 2023).

The online format, while convenient, presents challenges in replicating the energetic and communal experience of in-person yoga sessions. Traditional yoga practice often emphasizes the connection with a teacher or guru, which can be difficult to achieve in an online setting. Future studies could explore hybrid models that incorporate both online and in-person sessions.

Finally, the study's qualitative data collection was limited to short comments rather than an extensive exploration of participants' experiences. Moreover, the relatively brief duration and low frequency of psychospiritual sessions were designed for feasibility but may have limited the intervention's impact. Future research could consider a longer intervention cycle with follow-up to better assess long-term effects.

Conclusion

As the first study of its kind within the Turkish context, the exploration into the impact of Bhagavad Gītā and Yin Yoga on anxiety, meaning in life, and resilience reveals the untapped potential of culture and religion-sensitive psychospiritual interventions. Delivered online to individuals in Türkiye, these results suggest significant reductions in anxiety, enhanced coping strategies, and a deeper sense of meaning, emphasizing the need for further exploration into this novel approach. The subtle shifts noted, particularly in the qualitative assessments, illustrate the shortcomings of quantitative measures in fully reflecting the depth of psychospiritual change. Therefore, the findings advocate for additional, controlled research to delve further into the impact of this promising approach on anxiety reduction, resilience enhancement, and the facilitation of personal growth and meaning in life. In conclusion, the study results suggest the feasibility of

psychospiritual intervention in addressing anxiety, the search for meaning in life, and resilience among the Turkish population.

Looking ahead, future research should consider long-term studies to assess the lasting impact of these interventions and develop refined measurement tools that better capture the spiritual and psychological outcomes. Furthermore, adapting these interventions to diverse cultural and religious contexts could improve their universal applicability and effectiveness. This holistic approach aims to broaden our understanding of how psychospiritual interventions impact mental health and personal growth, intending to expand the utilization of these practices for boosting well-being in different cultural settings.

Providing a universal toolkit applicable to a variety of situations, psychospiritual modules are adaptable beyond the limits of Indian spiritual teachings. These frameworks may be employed in social work, nursing, medicine, and other healthcare fields to foster universal spiritual values. Their adaptability reflects the growing recognition and acceptance within scientific and medical fields. Emphasizing the uniqueness and applicability of these psychospiritual interventions underscores their significance in many professional domains and advocates for a comprehensive approach to well-being that recognizes the interconnection of the mind, body, and spirit.

Declaration of Generative AI and AI-assisted technologies in the writing process: During the preparation of this work, the authors used ChatGPT to improve readability and language. After using this tool/service, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

Acknowledgement

The authors thank all the participants who participated in this study and the yoga instructors, Didem Uycan and Özgen Şengelen, for their contributions.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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