



Sustainable Happiness Through Spirituality-Based Holistic Practices: An In-Depth Study from Central India

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Abstract: Background: Sustainable happiness is the ultimate aspiration behind all the pursuits in life. With an increase in stress and mental health disorders, the happiness index is dropping significantly. **Primary objective:** This study investigated the role of spirituality based yogic practices in improving happiness and life satisfaction. **Scope:** The study aims to identify feasible holistic solutions for achieving sustainable happiness in today's fast-paced world. **Methods:** The study involved 459 participants from central India participating in the study. The study population was divided into two spirituality based yogic practices namely, Sudarshan Kriya Yoga (SKY) (N=252) and other yogic practices (N=207). Both the groups underwent a set of self-reported questionnaires at baseline, after 3 months and 6 months of practice. The parameters assessed included, subjective happiness and life-satisfaction using Oxford Happiness Scale, Subjective Happiness scale and Satisfaction with Life scale. **Results:** The results demonstrated a significant benefit of the yogic interventions in improving individual perception on subjective happiness and life satisfaction. The SKY group demonstrated a significant improvement in all three assessment parameters across the time points while the yoga group demonstrated a slight improvement at the 3 months' time point and showed gradual improvement after 6 months' practice. **Implications:** The findings of this study offer a pathway toward an economical and feasible approach to improve mental wellbeing providing sustainable happiness and life satisfaction among individuals. Additionally, it can also help policy makers to adopt holistic practices to increase the happiness quotient of India.

Keywords: *Sudarshan Kriya Yoga, Yoga, Sustainable happiness, life satisfaction, Spirituality*

1. Introduction

Over the past two decades' happiness has been explored in various contexts by several scientists in the context of health, psychology and economics. Previously, psychologists explored the risk indicators and mitigating factors for mental states such as anxiety, depression and self-doubt, coined as poor mental health or mental health disorders however, in the recent past, psychologists are exploring habits and lifestyle that create a more positive state of mind, a term coined as positive psychology as described by Seligman (Seligman, 2002). While studies are still exploring the positive constructs of mind, one of the caveats is the short term or fleeting nature of positive mental states. Sustainable happiness goes one step forward to encompass the concept of long-term joy, ebullience and peace as opposed to fleeting emotions experienced due to momentary materialistic pleasure. The past decade demonstrated a significant difference between subjective fluctuating happiness and authentic durable happiness. (Jain et al., 2019; Sheldon & Lyubomirsky, 2021) According to several studies the reason for the fall of the happiness index is the inability of an individual to successfully manage the stress impulse and the ensuing physiological response. (Schiffrin & Nelson, 2010; Poormahmood et al., 2017; Silva & Figueiredo-Braga, 2018) Stress accompanied by high prevalence of non-communicable disorders have further reduced the chances of achieving sustainable happiness. (Landrum et al., 2022) Sustainable happiness requires mental, social and emotional strength that allows the mind and body to be in homeostasis and contribute to the society. To achieve this balance, it is essential to calm the mind by harmonizing the internal and external landscapes of the mind. (Mauss et al., 2011) More often, happiness is impaired due to limited understanding of oneself and inability to cope up with life events in a positive way. (Clark et al., 2002).

India, the land of spirituality, has always explored paths to sustainable happiness through various practices. In recent times, one of the central Indian states, Madhya Pradesh, has made efforts towards cultivating sustainable happiness for its citizens. The efforts included setting up an exclusive department of happiness under the state ministry known as Rajya Anand Sansthan (RAS). (Rajya Anand Sansthan, 2023) This pioneer department of happiness was established in August 2016, dedicated to address the subjective well-being of the citizens, by providing tools and techniques to incorporate happiness into their lives and help them grow on

the whole into a more peaceful and healthier community. (Rajya Anand Sansthan, 2023) Spirituality, as defined by de Brito et al., (2021) is the human propensity to achieve a higher purpose in life rather than focusing solely on the mundane. It also fosters the practice of considering one's identity beyond an individual, encompassing the whole. (de Brito et al., 2021) Initially scientists linked spirituality with religiosity constructs, studies in the recent past have associated spiritual practices as those fostering mental and physical health and ultimately human flourishing. (Jawaid, 2014) The World Health Organization (WHO) has also proposed the inclusion of 'spiritual' aspects to the multi-faceted concept of health. (Peng-Keller et al., 2022) Additionally, spiritual practices can provide support for overcoming addictive behaviours, improving mental health and reduction in depression, suicidal thoughts and anxiety. (Cook, 2004) A systematic review of 850 studies revealed that higher spiritual involvement fosters positive psychological well-being such as life-satisfaction, happiness and positive affect in life. (Moreira-Almeida et al., 2006) The present study also focuses on three dimensions of happiness namely subjective understanding of happiness, life-satisfaction and happiness in general following spiritual holistic practices such as Yoga.

Yoga and meditation have their roots in spirituality, thereby fostering a broader outlook on life. (Antony, 2014) Although many scientists have looked at the mental and physical health aspects of yogic practices, its connection to spiritual well-being is rarely established. (Kishan, 2020) A systematic review of empirical research established a link between yogic practices and their spiritual component, demonstrating a positive correlation between the two. The review further noted that yoga promotes spiritual qualities such as insight, inner peace, compassion, service, happiness from within, and faith. (Csala et al., 2021) It also highlighted differences between Western and Eastern perspectives on yogic practices in relation to spirituality, noting that physical benefits primarily motivate Western practitioners, whereas Eastern practitioners are more inclined toward the spiritual aspects of yoga. (Csala et al., 2021) Several yogic practices such as Sudarshan Kriya, Pranayamas and meditation that have spiritual aspects as well have positive effects on mental and physical health (Zope & Zope, 2013; Agte et al., 2011; Sengupta, 2012; Anand et al., 2018) However, earlier studies have not adequately examined the role of these practices in promoting long-term sustainable happiness. Holistic practices grounded in spirituality may serve as valuable tools for enhancing overall and enduring well-being. Therefore, the present study addresses an important gap in the literature by exploring how spirituality-based practices can foster a positive outlook, life satisfaction and sustainable happiness.

2. Methods

2.1 Study Design

An open-label feasibility trial was conducted consisting of an experimental arm and an active control arm. The experimental arm involved daily practice of Sudarshan Kriya Yoga (SKY arm) while the active control arm involved Hatha Yoga practice (Yoga group). Data were collected at three different time points i.e. baseline, 3 months (day 90) and 6 months (day 180) following the intervention. All data were collected online using standardized questionnaires assessing the study outcomes. Participant confidentiality was maintained throughout the study. Follow-up assessments were conducted telephonically using participants registered contact numbers. This study was conducted in accordance with the ethical principles of the Declaration of Helsinki and was approved by the Institutional Ethics Committee of Sri Sri Institute for Advanced Research (IEC No. SSIAR/IEC/2021-22/005).

2.2 Participants

Participants were enrolled after strict adherence to the predefined eligibility criteria. A total of 459 participants from Madhya Pradesh were enrolled in this study. Of these, 252 participants were from the SKY group and 207 were from the yoga arm. These non-randomized participants were recruited from SKY and Yoga programs conducted across the four major cities of Madhya Pradesh, namely Indore, Bhopal, Jabalpur, and Gwalior. Participants in the SKY group were recruited from the database of the Art of Living International Center and had enrolled in a four-day online SKY program conducted for participants from Madhya Pradesh, whereas participants in the Yoga group were recruited through Yoga camps conducted within the state. All participants were informed about the study procedures, potential benefits, and possible risks in their local language. Individuals meeting the eligibility criteria and willing to participate provided written informed consent approved by the Institutional Ethics Committee. The study period spanned from September 2020 to October 2021.

Inclusion criteria

1. Healthy participants aged 18-55years
2. Residents of major towns and metropolitan cities of Madhya Pradesh, India
3. Novice to SKY practice in SKY group

Exclusion criteria

1. Participants with terminal illness, communicable disease or comorbidities such as hypertension or cardiovascular disease
2. Pregnant or lactating mothers

3. People who did not provide consent to participate.

2.3 Intervention

Sudarshan Kriya Yoga (SKY)

The SKY group had undergone a four-day online workshop to learn the SKY technique. The workshops were facilitated by experienced instructors trained by the Art of Living Foundation. The participants were given home practice and were encouraged to practice daily. The participants were provided weekly follow up on an online platform and the frequency of practice was monitored by research staff telephonically. SKY is a cyclic rhythmic breathing technique having its roots in traditional yoga. SKY is a 25 minutes' procedure including three yogic components – pranayama, Om chanting and Sudarshan Kriya. The pranayama uses Ujjayi breath. Ujjayi involves experiencing the conscious sensation of the breath touching the throat (Mahour & Verma, 2017). This slow breathing technique is performed at a rate of 2–4 breaths per minute (bpm). This technique improves lung capacity allowing more passage of air through the lungs (Singh et al., 2009). Om is chanted three times with prolonged exhalation. Lastly, Sudarshan Kriya rhythmic breathing is done with slow (20 bpm), medium (40–50 bpm), and fast (60–80 bpm). A SKY session is done in a seated posture and eyes closed during the session.

Yoga

The Yoga group had a single yogic session of Hatha Yoga practice where the participants were taught Suryanamaskara and Pranayama. The intervention consisted of practice of 5-10 rounds of Suryanamaskara (Sun salutations) followed by 5 minutes of alternate nostril breathing and 3 rounds of Kapalbhathi. While the yogic sessions were conducted daily, participants could opt to practice by themselves or attend the in-person sessions for the entire study duration. The frequency of practice for the yoga group was monitored by research staff telephonically. Suryanamaskara or the sun salutation is a blend of twelve yogic postures that consists of three backward bends and two forward bends. The yogic stretches are coordinated with repeated inhalation and exhalations in each posture. (Bhutkar et al., 2008) Alternate nostril breathing involves taking long deep breath in and out for a long deep breath from one nostril and exhaling slowly from the other nostril. After exhalation, the participants are told to inhale again from the same nostril and exhale for the same duration from the other nostril. This completes one cycle of the breath. Inhalations and exhalations from alternate nostrils are continued in this fashion for 5 minutes followed by 2 minutes of relaxation. (Sinha et al., 2013) Finally, Kapalbhathi pranayama involves deep inhalations and forced mild to violent exhalations

using the abdominal muscles and diaphragmatic movements (Malhotra et al., 2022). This pranayama was done 3 times following an interval of 5 minutes where the participant takes normal breaths in and out.

2.4 Assessment Tools

Oxford Happiness Questionnaire-short form: The Oxford Happiness Questionnaire (OHQ), has been derived from the Oxford Happiness Inventory, (OHI). The Oxford Happiness Questionnaire short-form is a recently developed eight-item measure of happiness. It is an 8-point Likert scale developed by Hills and Argyle (2002). The reliability of this scale is 0.91 (Hills & Argyle, 2002).

Satisfaction with Life Scale: The structure of subjective well-being has been conceptualized as consisting of two major components: the emotional or affective component and the judgmental or cognitive component. The Satisfaction with Life Scale (SWLS) was developed as a measure of the judgmental component of subjective well-being (SWB). The SWLS is recommended as a complement to scales that focus on psychopathology or emotional well-being because it assesses an individual's conscious evaluative judgment of his or her life by using the person's own criteria (Diener et al., 1999)

Subjective happiness scale: The SHS is a 4-item scale of global subjective happiness. Two items ask respondents to characterize themselves using both absolute ratings and ratings relative to peers, whereas the other two items offer brief descriptions of happy and unhappy individuals and ask respondents the extent to which each characterization describes them. (Lyubomirsky & Lepper, 1999).

2.5 Data Analysis

Univariate analysis of variance (ANOVA) was performed with type of practice (SKY/Yoga) and gender as independent variables, while questionnaire scores served as dependent variables. Subsequently, pairwise comparisons were conducted across combinations of gender and intervention type. A two-tailed t-test was used with a significance level of 0.05 and a 95% confidence interval. Where applicable, post hoc tests with multiple-comparison corrections were applied to reduce the risk of Type I error. Descriptive statistics, including means and standard deviations, were calculated according to gender and intervention group.

3. Results

A total of 459 adults participated in the study from the Indian state of Madhya Pradesh. Over the course of 6-months of study period, a total of 23 participants (5%) dropped out of the

study, 18 from the Yoga arm and 5 from the SKY arm, respectively. The participants in both arms had a similar gender distribution with no significant difference between groups. The mean age of the participants was 36 years in the SKY group and 38 years in the Yoga group with no significant difference between groups. (Table 1).

Table 1. Demographic Data of Participants from SKY Arm and Yoga Arm

Characteristics	Type	SKY arm (252)	Yoga arm (207)	Total population (459)	p value (SKY-Yoga arm)
Gender n (%)	M	133 (52.7%)	89 (42.9%)	222 (48.3%)	0.06
	F	117 (46.4%)	120 (57.0%)	237 (51.6%)	
Age (years)	Mean (SD)	36.26 (12)	38.08 (14.2)	37.17 (13.6)	0.08
	Min	18	18	18	
	Max	55	62	62	
Alcohol	N(%)	58 (23%)	43 (20%)	101 (22%)	0.07
Smoking	N(%)	27 (10%)	19 (9.1%)	46 (10%)	0.4
Diet	Vegetarian N(%)	145 (57.3%)	123 (59.4%)	268 (58.3%)	0.68
	Non- Vegetarian N(%)	107 (42.4%)	84 (40.5%)	191 (41.6%)	

Note: demographic details between the two arms before the start of the study and both the arms demonstrate no significant difference.

Table 2 presents the happiness scores measured using the Oxford Happiness Scale. The baseline scores were comparable between groups, indicating no initial differences in the study population. In the SKY group, happiness scores showed a significant improvement at the 3-month time point and continued to increase further at the 6-month assessment compared with baseline. In the yoga group, a statistically significant improvement was observed at 3 months; however, scores declined at the 6-month time point relative to 3 months, while still showing a non-significant improvement from baseline.

Table 2. Mean Scores and Standard Deviation for OHQ- Happiness Index among SKY Arm, Yoga Arm and Total Population

	SKY arm (N = 252)	Yoga arm (N = 207)	Total population (459)	p value (SKY-Yoga arm)
	Mean score (SD)	Mean score (SD)	Mean score (SD)	
Pre	4.18(0.69)	4.17(0.70)	4.18(0.70)	0.89
Post 90	5.30 (0.73)	4.35(0.68)	4.82(0.71)	<0.001**
Post 180	5.12 (1.46)	4.28 (1.39)	4.7 (1.43)	0.04*
p value (pre-90)	0.03*	<0.001**	<0.001**	
p value (pre-180)	0.05*	0.89	0.17	

Note: *p value < .05- significant. **p value < .001- significant.

Table 3 presents the Subjective Happiness Index among individuals practicing Yoga and SKY. The findings indicate an overall improvement in self-perceived happiness scores among participants. At the 3-month time point, the increase in scores was statistically significant in the SKY group, while the improvement in the Yoga group was non-significant. However, by the 6-month assessment, the increase in happiness scores was statistically significant in both practice groups.

Table 3. Mean Scores and Standard Deviation for Subjective Happiness among SKY Arm, Yoga Arm and Total Population

	SKY arm (N = 252)	Yoga arm (N = 207)	Total population (459)	p value (SKY-Yoga arm)
	Mean score (SD)	Mean score (SD)	Mean score (SD)	
Pre	18.52 (3.55)	18.69 (3.38)	18.60 (3.48)	0.63
Post 90	19.6 (3.36)	19.5 (3.40)	19.58 (3.38)	0.88
Post 180	24 (3.26)	22 (3.06)	23 (3.17)	0.032*
p value (pre-90)	<0.001**	0.08	<0.001**	
p value (pre-180)	<0.001**	<0.001**	<0.001**	

Note. *p value < .05- significant. **p value < .001- significant.

Table 4 presents subjective life satisfaction, a precursor to happiness, following Yoga and SKY practices. With regular practice, a significant improvement in individuals' perception of life satisfaction was observed in both groups. The SKY group showed a gradual and significant improvement from baseline to 3 months, and further from 3 months to 6 months. In contrast, the Yoga group did not show substantial improvement after 3 months but demonstrated a significant increase by the 6-month assessment.

Table 4. Mean Scores and Standard Deviation for Life satisfaction Assessing Individual's Assessment between SKY Arm and Yoga Arm

	SKY arm (N = 252)	Yoga arm (N = 207)	Total population (459)	p value (SKY-Yoga arm)
	Mean score (SD)	Mean score (SD)	Mean score (SD)	
Pre	23.75 (6.68)	24.5 (6.6)	24.13 (6.6)	0.23
Post 90	27.19 (5.43)	24.88 (5.16)	26.035 (4.4)	0.043**
Post 180	28.04 (4.55)	26.24 (4.21)	27.14 (4.40)	0.05*
p value (pre-90)	<0.001**	<0.001**	<0.001**	
p value (pre-180)	<0.001**	<0.001**	<0.001**	

Note. *p value < .05- significant. **p value < .001- significant.

4. Discussion

The present study explored the concept of spirituality beyond a religious perspective and assessed its impact on sustainable happiness and life satisfaction. Our findings demonstrated improvements in subjective happiness scores and life satisfaction with increasing duration of practice. Spirituality and practices based on spirituality (yoga, meditation, prayer) have been associated with lower stress levels (Barnes et al., 2019), improved quality of life (Woodyard, 2011) and sleep (de Diego-Cordero et al., 2022). Numerous research studies have demonstrated the positive effects of yogic interventions on mental well-being (Tulloch et al., 2018; Hendriks et al., 2017; Goyal et al., 2014) in psychiatric distress. (Hamilton-West et al., 2019; Surekha et al., 2014) and positive mental well-being such as gratification (Soriotulla S & Deb, 2023), empathy and compassion. (Kristeller & Johnson, 2005) A possible mechanism underlying the improvement in happiness following SKY may be due to the improved lung efficiency and energy levels through regulated breathing. (Sayyed et al., 2010; Ahmad et al., 2016).

A previous study involving a four-week yogic asana and meditation program reported improvement in subjective happiness among university students. The authors suggested yoga and meditation facilitate harmony between the body, mind and spirit thereby achieving balance in life. (Gobec S & Travis, 2018) Another study reported a significant enhancement in individual and peer happiness among the practitioners following laughter yoga in cancer patients (Werdani et al., 2023) The aim of the present study was not to compare the efficacy of different practices, but rather to examine whether such interventions could promote sustained long-term happiness. Our findings demonstrated that both practices were associated with improved happiness and life satisfaction over time, although the SKY group showed comparatively greater improvements than the Yoga group.

Yoga and Happiness

Several studies have documented the biological and psychological benefits of yogic practices and meditation. A comprehensive review on neuroimaging studies in yoga practitioners improved in grey matter volume in the insula and hippocampus, increased functional connectivity and activation of prefrontal cortical regions (Van Aalst et al., 2020) Research has also suggested the role of yogic practices in increased neurotransmitter release such as dopamine and serotonin, creating a feeling of happiness or well-being. (Dfarhud et al., 2014) In addition, yogic and meditative practices have been postulated to improve vagal activity thereby reducing anxiety and other negative emotions. (Tyagi & Cohen, 2016; Udupa & Sathyaprabha, 2018).

Sudarshan Kriya Yoga and Happiness

To the best of our knowledge, the present study is among the first in India to demonstrate that sustainable happiness is achievable through practices that connect one to inner self and strengthen one's perspective about life. Although both the groups demonstrated an improvement in happiness scores and life satisfaction, the Sudarshan Kriya arm demonstrated statistically significant gains in happiness scores. These findings are consistent with previous observations reported among SKY practitioners in Singapore. (Sloan & Kanchibhotla, 2021) The study also suggests a positive correlation of happiness with increased frequency of practice. Specific components of SKY, such as Ujjayi breathing and rhythmic cyclical breathing, have been shown to create thalamic and vagal response with increased arousal of parasympathetic activation. (Swani, 2015) These physiological responses associated with breath can alter the emotional states of an individual creating a positive psychological effect in one's mind. (Homma & Phillips, 2022) Life satisfaction is an essential indicator for happiness.

(Gamble & Gärling, 2012) A study on healthcare professionals during COVID-19 pandemic also demonstrated the benefits of the 4-day virtual SKY session in improving life satisfaction of the individuals. (Kanchibhotla et al., 2021) Our study demonstrates an improvement in life satisfaction scores among both the groups highlighting the role of yogic practices in providing a positive outlook to life.

Although the present study demonstrated improvements in happiness and life satisfaction among participants practicing Yoga and SKY, a few limitations should be acknowledged and accounted for in further trials. First, the use of convenience sampling rather than random sampling may have introduced selection bias among the participants. Secondly, only limited demographic information was collected which may have influenced interpretation of the findings. Inclusion of broader socio-economic and demographic variables may provide deeper insight into factors associated with happiness outcomes. Finally, a formal dose-response analysis examining practice frequency and long-term outcomes would have strengthened the findings.

5. Conclusion

Positive psychology indicators such as happiness, well-being and life-satisfaction are increasingly recognized as markers of mental-health. Happiness is the end goal of human aspiration irrespective of status or achievement. The present study explored the benefits of spirituality-based yogic practices in promoting long-term happiness and life satisfaction. The findings demonstrated improved happiness scores among yogic practitioners irrespective of the practice. However, the SKY group showed statistically improved scores even after 6 months of practice whereas the Yoga group showed comparatively modest changes over time. These findings suggest that yogic practices, which are economical, feasible, and physically beneficial, may also serve as effective tools for promoting sustainable happiness.

Author Contribution

Both the authors have equally contributed to the research and the manuscript preparation.

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Conflict of Interest

The authors declare no potential conflict of interest

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