

EFFECTIVENESS OF SUDARSHAN KRIYA YOGA ON WELL-BEING AND JOB PERFORMANCE - A PRE-POST PILOT STUDY

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Abstract

Introduction: Economic and Subjective, wherein Economic Well-being represents the present and future financial position and Subjective Well-being represents the non-monetary aspects of living such as health, happiness, stress management, etc., play an essential factor in one's overall well-being. Likewise, Job-performance plays an important role in assessing the productivity and efficiency of the manpower. Well-being and Job Performance can be positively impacted by bringing in certain yogic practices such as Sudarshan Kriya Yoga (SKY), which enables practitioners to return to their natural being. **Objective:** To study the effectiveness of a universal yogic practice of deep breathing intervention (both Pre and Post) like Sudarshan Kriya Yoga (SKY) on Economic Well-being, Subjective Well-being, and Job Performance. **Methods and Materials:** An exploratory, primary data-driven, pre, and post-SKY intervention was conducted on 52 service sector working professionals who were novices to SKY. **Results:** At 95% confidence paired sample t-test is significant for economic well-being and subjective well-being and insignificant for job performance. **Conclusion:** This demonstrates that Sudarshan Kriya Yoga practice has a positive, significant impact on the economic well-being and subjective well-being of service sector working professionals and that it can significantly help in creating positive effects and improve these outcomes when it is incorporated into these professionals' daily routines.

Keywords: Economic, Subjective Well-being, Job-Performance, Sudarshan Kriya Yoga

INTRODUCTION

In today's fast-paced and demanding work environments, the well-being and job performance of the service sector working professionals, and employees play a crucial role in organizational success. After all, it is the set of employees or the human resources who make the organization. Employers are increasingly recognizing the importance of fostering a positive work environment that promotes the physical and mental well-being of their workforce. Psychological well-being plays a mediating role in relation to the effect of safety climate on job stress. This role contributes to the reduction of stress through the improvement of the safety climate (Akbolat et al.). Yoga, an ancient practice originating from India (Bharat), has gained significant popularity worldwide due to its potential benefits for physical and mental health. Sudarshan Kriya Yoga (SKY) is a specific form of yoga practice, that enhances well-being and eliminates stress, and anxiety. Sudarshan Kriya Yoga incorporates rhythmic breathing techniques, meditation, and gentle movement, with the aim of promoting relaxation, reducing stress, and improving overall health and well-being. The practice is perceived as effective for stress relief, promoting an overall sense of well-being, increasing optimism, and enhancing coping (Pandya). Sudarshan Kriya is a beneficial, low-risk, low-cost adjunct to the treatment of stress, anxiety, post-traumatic stress disorder (PTSD), depression, and substance abuse (Butterfield et al.).

The relationship between yoga and well-being has been explored extensively in the literature. Yoga practices, including Sudarshan Kriya Yoga, have been associated with improvements in various physical health parameters. Sudarshan Kriya Yoga harmonizes the body, mind, and emotions (Cardiovascular and Respiratory Parameters) (Kale et al.). Furthermore, yoga has demonstrated positive effects on mental health outcomes, including reductions in anxiety, depression, and perceived stress (MSc).

Yogic breathing is a unique method for balancing the autonomic nervous system and influencing psychological and stress-related disorders. Many studies demonstrate the effects of yogic breathing on brain function and physiologic parameters, but the mechanisms have not been clarified. Sudarshan Kriya yoga (SKY), a sequence of specific breathing techniques (ujjayi, bhastrika, and Sudarshan Kriya) can alleviate anxiety, depression, everyday stress, post-traumatic stress, and stress-related medical illnesses. Mechanisms contributing to a state of calm alertness include increased parasympathetic drive, calming of stress response systems, neuroendocrine release of hormones, and thalamic generators (Brown and Gerbarg, "Sudarshan Kriya Yogic Breathing in the Treatment of Stress, Anxiety, and Depression: Part I—Neurophysiologic Model").

While the benefits of yoga on well-being have been well-documented, its impact on job performance remains an area that warrants further investigation. Performance management is a philosophy and way of thinking about continuous performance improvement through improved performance of employees (Nungu). Job performance refers to the quality and quantity of an employee's work output, as well as their ability to meet organizational goals and objectives (Borman and Motowidlo). Enhanced job performance can lead to increased job satisfaction, career advancement opportunities, and organizational success.

Understanding the potential impact of Sudarshan Kriya Yoga on both well-being and job performance is crucial for organizations seeking to create a supportive work environment that promotes employee health and productivity. Previous studies have explored the effects of yoga interventions on employee outcomes. Workplace Yoga interventions were more effective when compared to no treatment in work-related stress management (Della Valle et al.). Significant reductions in stress and all psychological health measures were found within the Yoga group when compared to the control group, yoga practitioners showed significant decreases in stress, anxiety, and general psychological health, and significant increases in well-being (Maddux et al.). However, there is a dearth of research specifically examining the effects of Sudarshan Kriya Yoga on well-being and job performance among employees.

Therefore, the present study aims to fill this gap by conducting a pre-post pilot study to investigate the impact of Sudarshan Kriya Yoga on the well-being covering both economic well-being & subjective well-being and job performance of the service sector working professionals and employees. By assessing the changes in well-being and job performance before and after the intervention, this study will contribute to the existing body of knowledge on the potential benefits of Sudarshan Kriya Yoga in the workplace.

Research questions that will guide this study include: (1) To study the contribution of SKY Yoga on the subjective well-being of the Practitioners, (2) To study the contribution of SKY Yoga on the economic well-being of the Practitioners, and (3) To determine the effect of SKY Yoga on Job Performance of the Practitioners, (4) To determine the dimensions and factors of well-being

Understanding the impact of Sudarshan Kriya Yoga on well-being and job performance has implications for employees, employers, and organizations at large. If this study demonstrates positive effects, it would suggest the integration of Sudarshan Kriya Yoga programs as a potential strategy for improving employee well-being and enhancing job performance. Moreover, it would encourage further research and pave the way for evidence-based interventions aimed at promoting employee health and organizational success.

In the subsequent sections, this paper will provide a comprehensive review of relevant literature, describe the methodology employed in the study, present the findings, and discuss their implications for individuals and organizations.

LITERATURE REVIEW

The relationship between yoga and well-being has been extensively explored in the literature, with numerous studies highlighting the potential benefits of yoga practices for physical and mental health outcomes. Yoga, including Sudarshan Kriya Yoga, has been associated with improvements in various aspects of well-being, making it a promising intervention for promoting employee wellness in the workplace.

Physical well-being is an essential component of overall well-being, and yoga has demonstrated positive effects on various physical health parameters (Agte and Chiplonkar), (MSc). In a study by (Cramer et al.), a systematic review and meta-analysis of randomized controlled trials (RCTs) examining the effects of yoga on cardiovascular risk factors, it was found that yoga interventions led to significant reductions in systolic and diastolic blood pressure, as well as improvements in lipid profiles. These findings suggest that yoga, including Sudarshan Kriya Yoga, can contribute to the prevention and management of cardiovascular diseases, which are prevalent in the working population. Sudarshan Kriya Yoga may have therapeutic implications in the adjunctive (non-pharmacological) management of cardiovascular diseases and respiratory diseases. The present study confirmed the positive effect of Sudarshan Kriya Yoga on Lipid Profile and Pulmonary Function over a period of 8 days (Subramanian et al.).

Furthermore, yoga has been shown to enhance immune system function. Sudarshan Kriya and Pranayam are known to reduce stress and improve immune functions. (Kochupillai et al.). The effects of yoga on immune parameters indicated that regular yoga practice was associated with increased levels of immune cells, such as natural killer cells and lymphocytes, as well as enhanced immune cell functionality. These findings suggest that yoga interventions may boost the immune system, potentially reducing the susceptibility to illness and

promoting overall well-being among employees. Yoga resists the autonomic changes and impairment of cellular immunity seen in examination stress (Gopal et al.).

In addition to physical health benefits, yoga has consistently demonstrated positive effects on mental health outcomes (MSc). Several studies have highlighted the potential of yoga, including Sudarshan Kriya Yoga, to reduce stress and promote relaxation. Adults who practice SKY regularly are more likely to report being happier than non-SKY practitioners. In addition, the trend indicates that as SKY practice increases, the likelihood of happiness increases. SKY is a high-reach low-cost activity, and our findings may be used to help inform public health initiatives to promote happiness in communities (Sloan and Kanchibhotla).

These findings suggest that Sudarshan Kriya Yoga can serve as an effective stress management tool, potentially enhancing well-being in the workplace (MSc).

The effects of yoga on job performance have been less explored in the literature. However, a few studies have examined the relationship between yoga interventions and employee outcomes, including job performance. Cognitive performance after the yoga exercise bout was significantly superior as compared with the aerobic and baseline conditions for both inhibition and working memory tasks (Gothe et al.). The studies also suggest that Yoga at the workplace may result in positive psychological empowerment of the employees (Dwivedi et al.). (Adhia et al.) conducted research on yoga as a way of life and its impact on organizational performance. Using organizational factors, such as Job Satisfaction, which have a crucial bearing on organizational effectiveness. The study confirms the useful role that the Yoga way of life can play in improving these factors positively among managers. The results show a significant difference among those who are introduced to the practice of the yoga way of life. However, in order to get the benefit of yoga in its entirety, one has to adopt yoga as a technique of life management. This would include not only the Raj Yoga practices of asana, pranayama, and meditation, but also imbibe the concept of detached action (Karma Yoga), trust in God's justice system (Bhakti Yoga), and seeking the knowledge of self (Jnana Yoga). Such an integrated approach can yield superior results for individual happiness and also for organizational performance (Adhia et al.), (MSc).

These studies suggest that yoga practices may have a positive impact on job performance, potentially enhancing productivity and employee well-being in the workplace.

While previous studies have highlighted the benefits of yoga interventions, including Sudarshan Kriya Yoga, on well-being, there is a need for more research specifically examining the effects of Sudarshan Kriya Yoga in the workplace. The present study aims to address this gap by conducting a pre-post pilot study to evaluate the effectiveness of Sudarshan Kriya Yoga on the well-being and job performance of employees. By exploring the changes in well-being and job performance before and after the intervention, this study will contribute to the existing body of knowledge and provide valuable insights into the potential benefits of Sudarshan Kriya Yoga in the workplace.

In conclusion, yoga practices, including Sudarshan Kriya Yoga, have demonstrated positive effects on physical and mental well-being outcomes (Parmar et al.). Yoga interventions have been associated with improvements in cardiovascular health, immune system function, stress reduction, and psychological well-being (Parmar et al.). However, more research specifically examining the effects of Sudarshan Kriya Yoga in the workplace is warranted. The subsequent sections of this paper will describe the methodology employed in the study, present the findings, and discuss their implications for individuals and organizations in more detail.

RESEARCH METHODOLOGY

Study Design:

A pre-post pilot study design was employed to investigate the effectiveness of Sudarshan Kriya Yoga on well-being and job performance among service sector working professionals and employees. This design involves collecting data from participants before and after the intervention of Sudarshan Kriya Yoga (SKY) to assess changes in the outcome variables of interest such as Economic Well-being, Subjective Well-being, and Job-Performance. This design is made suitable for exploratory research and provides valuable insights into the potential effects of an intervention.

For the purpose of the study, the following definitions were taken for all the variables as follows:

Economic Well-being: While various definitions were evaluated including that of OECD, however, considering the larger coverage and comprehensiveness, the definition as updated till 2016 by the Council on Social Work Education, USA, has been considered. As per the council, Economic Well-being means "Economic well-being is defined as having present and future financial security. Present financial security includes the ability of individuals, families, and communities to consistently meet their basic needs (including food, housing, utilities, health care, transportation, education, child care, clothing, and pay taxes), and have control over their day-to-day finances. It also includes the ability to make economic choices and feel a sense of security, satisfaction, and personal fulfillment with one's personal finances and employment pursuits. Future financial security includes

the ability to absorb financial shocks, meet financial goals, build financial assets, and maintain adequate income throughout the lifespan.

Economic well-being may be achieved by individuals, families, and communities through public policies that ensure the ability to build financial knowledge and skills, access to safe and affordable financial products and economic resources, and opportunities for generating income and asset-building. It occurs within a context of economic justice within which labor markets provide opportunities for secure full employment with adequate compensation and benefits for all.” Council of Social Work Education, USA, Updated October 2016.

Likewise, the definition of subjective well-being has been covering aspects such as (a) Happiness, (b) Quality of Life, (c) Satisfaction, (d) Mindfulness & Exercise, and (e) pointers on three basic human tendencies such as (i) Lust, (ii) Anger, and (iii) Greed.

For Job-performance, the (Ramos-Villagrasa et al.), Koopmans Assessing Job Performance Using Brief Self-report Scales: The Case of the Individual Work Performance Questionnaire was adopted on applied for feedback both pre and post-Sudarshan Kriya Intervention with the participants.

Sudarshan Kriya Yoga (SKY) is a cyclical controlled breathing and meditation practice taught by the nonprofit Art of Living Foundation. A fundamental aim of SKY is to elicit a mind-body interaction of calmness and alertness. A typical SKY breathwork session is 30 minutes long and consists of 4 distinct yogic breathing stages (Ujjayi, Bhastrika, OM, and Sudarshan Kriya) done in a seated posture with eyes closed. Ujjayi involves experiencing the conscious sensation of the breath touching the throat. This slow breath technique is performed at a rate of 2 to 4 breaths per minute (bpm). During Bhastrika, the air is rapidly inhaled and forcefully exhaled at a rate of 30 bpm. Three 1-minute rounds of Bhastrika are followed by a few minutes of normal breathing.

Next, Om is chanted 3 times with a very prolonged expiration. Lastly, Sudarshan Kriya's rhythmic breathing is done with slow (20 bpm), medium (40 to 50 bpm), and fast (60 to 80 bpm) Respirations. After completing breathwork, the meditation component of SKY is performed, which consists of 15 minutes of deep rest, in which the participant may choose to lie down, followed by 10 minutes of yoga Nidra (body scan) in the supine position. (Sloan and Kanchibhotla), (Brown and Gerbarg, “Sudarshan Kriya Yogic Breathing in the Treatment of Stress, Anxiety, and Depression: Part I—Neurophysiologic Model”), (Sloan and Kanchibhotla, “The Association of Sudarshan Kriya Yoga Frequency With Sleep Quality: A Cross-sectional Study From Singapore”)

(Kashyap) has done a very comprehensive analysis of the relationship between economic growth and well-being. Before addressing the parameters to measure the effectiveness of the dimensions and factors of well-being, a detailed analysis was done to meet the research objective of defining the same. (Kashyap's) study explores the relationship between economic growth and well-being and highlights the need for a more holistic approach to measuring welfare. The author argues that traditional metrics like Gross Domestic Product (GDP) are insufficient and misleading and that we need to consider a range of factors that contribute to well-being. One important factor is the distribution of consumption goods, which can have a significant impact on people's quality of life. In addition, measures of health and education are essential indicators of well-being, as are employment security, leisure time, and environmental factors like air and water quality. Personal safety, social support, and political participation are also key factors that contribute to overall well-being. The author emphasizes the need for sound measurement of these factors, and for policies that prioritize the well-being of society as a whole. This requires a deeper understanding of the determinants of well-being, and a willingness to challenge traditional economic models that prioritize growth at all costs.

Overall, this study provides a compelling argument for a more nuanced approach to measuring welfare, one that takes into account a range of factors that contribute to overall well-being. By prioritizing the well-being of society, rather than simply pursuing economic growth, we can create a more sustainable and equitable future for all.

Keeping in mind the larger focussed study needed in the field of well-being, as part of one of the research objectives, to examine different dimensions and factors of well-being, based on the comprehensive review of literature on aspects of well-being, a systematic flow-based dimensional chart (Refer Chart 1.1) on the factors and dimensions of well-being is formulated as part of the research study. However, any further enhancement of such factors and dimensions is welcomed as part of the enhanced research objectives.

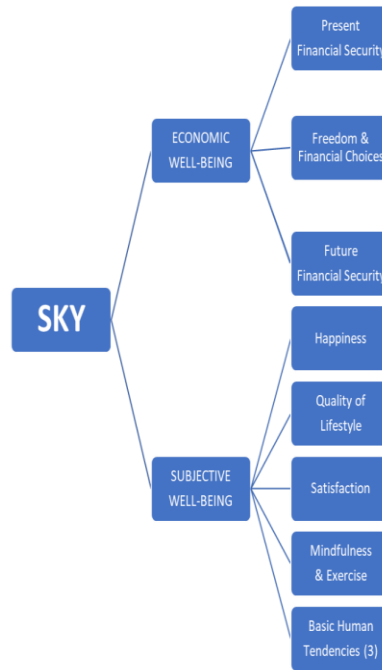


Chart 1.1 (Factors & Dimensions of Well-being)

Notes

- SKY means Sudarshan Kriya Yoga (SKY) - a rhythmic breathing yogic practice (MSc).

Participants:

The study was exploratory research done on a pilot basis, with a pre- and post-intervention of Sudarshan Kriya Yoga on four different cohorts of working professionals from the service sector over a period of time. The population of the study was working professionals and employees from the service sector in India. The sample of the study was 52 service sector working professionals across India. A purposive sampling technique was used to determine the sample. An individual working professional was the sampling element.

The sample only included individuals who expressed an interest in participating and meet the inclusion criteria. Inclusion criteria were to include being previously or currently employed, having no prior experience with Sudarshan Kriya Yoga, and being willing to participate in the intervention and data collection. Participants were informed about the purpose of the study and their rights as research participants before providing informed consent.

Tools used for data collection:

- A self-made standard questionnaire using the Likert Scale for capturing inputs on variables such as - Economic Well-being, Subjective Well-being
- The standard questionnaire of Koopsman (2014) was used for measuring Job Performance pre and post-SKY intervention

The analysis of the pre and post-pilot study was done using statistical tool SPSS and the measures of significance were identified.

Intervention Protocol:

The intervention consisted of a Sudarshan Kriya Yoga (SKY) program also known as SKY Breathing Yoga delivered over a period of 4 days. Four different cohorts (groups of participants) were introduced to the practice of Sudarshan Kriya Yoga. Feedback on the standard questionnaire was obtained from all the cohorts both pre when they didn't have experience with SKY, and post, and after the intervention of SKY, over a 4 days' workshop covering all the practices of Sudarshan Kriya Yoga which included - Ujjai Breathing, Three Stage Pranayama, Three rounds of Bhashtrika, Chanting of Om, three times and followed by rhythmic breathing as per the guidance of the trained SKY instructor (Sloan and Kanchibhotla), (Brown and Gerbarg, "Sudarshan Kriya Yogic Breathing in the Treatment of Stress, Anxiety, and Depression: Part I—Neurophysiologic Model"), (Sloan and Kanchibhotla, "The Association of Sudarshan Kriya Yoga Frequency With Sleep Quality: A Cross-sectional Study From Singapore").

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Participants attended three-hour sessions per day, with a total of 4 sessions throughout the intervention period covering 12 hours of engagement. The interventions were conducted in a suitable space within the participants' workplace reach to enhance accessibility and convenience.

DATA ANALYSIS:

Pre- and post-data were measured using a self-reported standard questionnaire. T-test (Paired) and Pearson's correlation test were conducted using SPSS. The paired sample t-test is used to analyze the effectiveness of yogic practice on economic well-being, subjective well-being, and job performance. A 95% confidence paired sample t-test is significant for economic well-being and subjective well-being and insignificant for job performance, which shows that yogic practice impacts a positive significant impact on economic well-being and subjective well-being. On the other hand, there is no significant impact is visible on the job performance.

LIMITATIONS AND FUTURE DIRECTIONS:

It is essential to acknowledge the limitations of this study. The small sample size and convenience sampling method may limit the generalizability of the findings. Based on the findings of this pre-post pilot study, a larger comprehensive study covering a larger sample size of Sudarshan Kriya Practitioners is warranted to analyze the effectiveness at scale.

RESULTS

Results: At 95% confidence paired sample t-test is significant for economic well-being and subjective well-being and insignificant for job performance. This demonstrates that yoga practice such as Sudarshan Kriya has a positive, significant impact on the economic well-being and subjective well-being of service sector working professionals and that it can significantly improve these outcomes when it is incorporated into these professionals' daily routines. The detailed analysis and the key statistical indicators are provided as part of Table 1.1 (Pilot Pre and Post SKY intervention study).

BATCH	SKY	ANALYSIS (%)	QUALITATIVE ANALYSIS	Paired T-test	Conclusion
1	n=24	<ul style="list-style-type: none"> - 12.50% of respondents do not practice any kind of yogic practice - 33.33% of respondents practice it occasionally and - 54.17% of respondents yogic practice is part of their daily routine 	<ul style="list-style-type: none"> - Before the intervention, good quality of life was selected 19 times by the respondents' followed by Happiness positive work culture. - Post-intervention good quality of life, and Happiness positive work culture were given the same priority by the respondents' 	At 95% confidence paired sample t-test is significant for economic wellbeing and subjective well-being and insignificant for the job performance	Positive Significant Impact of SKY on Economic and Subjective Well-being
2	n=6	No significant analysis. The conclusion was drawn basis of overall Cohort feedback	No significant analysis.	No significant analysis.	No significant analysis.
3	n=10	<ul style="list-style-type: none"> - 80% of respondents never practiced any kind of yogic practice - 20% of respondents follow some kind of yogic practice 	<ul style="list-style-type: none"> - Before the intervention, Happiness positive work culture was selected 8 times, good quality of life was selected 7 times, and higher 	At 95% confidence paired sample t-test is insignificant for economic well-being and job performance	No Positive Significant Impact of SKY on Economic and Subjective Well-being

BATCH	SKY	ANALYSIS (%)	QUALITATIVE ANALYSIS	Paired T-test	Conclusion
			<p>salary& compensation was selected 3 times by the respondents.</p> <p>- Post training, Happiness positive work culture is selected 7 times, good quality of life is selected 6 times, and higher salary& compensation is selected 5 times by the respondents.</p> <p>So after the intervention, there is a positive impact on higher salary& compensation</p>		
4	n=12	<p>- 16.67% of respondents never practiced any kind of yogic practice - 66.67% of respondents practice it occasionally and</p> <p>- 16.67% follows yogic practice always</p>	<p>- Before the intervention, good quality of life was selected 10 times by the respondents followed by career freedom and positive outlook towards future financial freedom.</p> <p>- Post the intervention, Happiness-positive work culture and positive outlook towards future financial freedom are selected 10 times and given the same priority by the respondents followed by good quality of life</p>	<p>- At 95% confidence paired sample t-test is insignificant for economic well-being and subjective well-being</p> <p>- while job performance is significant for one-tailed t-test</p>	<p>- No significant impact on economic well-being and subjective well-being.</p> <p>- It is significant and has a positive impact on job performance</p>
	N= 52				

Pre- and post-data was measured using a self-reported standard questionnaire. Independent T-tests (Paired) and one-tailed t-tests were conducted using SPSS. The results of the study show that in the case of Batch 1 (n=24), the Positive Significant impact of SKY on Economic and Subjective Well-being, whereas, in the case of Batch 4 (n=12), the Positive Significant impact of SKY on Job-Performance.

The Batch wise where N=52 (Batch 1 n=24, Batch 2 n=6, Batch 3 n=10 and Batch 4 n=12), data analysis is as follows.

BATCH 1: N=24

Primary data was collected by using a well-structured questionnaire. The sample size is 24. 12.50% of respondent do not practice any kind of yogic practice while 33.33% of respondent practices it occasionally and 54.17% of respondent yogic practice is part of their daily routine (Refer Chart 1.2, as below). Samples are collected before and after the intervention of the yogic practice.



Chart 1.2: Pie-chart depicting the response on the Yogic Practices followed, Batch 1.

Overall well-being (Multiple responses):
 Pre and Post-SKY Intervention - Overall Well-being (Table 1.2)

\$PreOverallwellbeing Frequencies

	Responses	Percent of Cases	
		N	Percent
Pre_Overallwellbeing ^a			
Pre_O_Higher Salary & Compensation	4	6.1%	16.7%
Pre_O_Happiness - Positive work culture	17	25.8%	70.8%
Pre_O_Good Quality of Life	19	28.8%	79.2%
Pre_O_Skills Developments/Enhancement	11	16.7%	45.8%
Pre_O_Career Freedom	3	4.5%	12.5%
Pre_O_Positive Outlook towards future financial freedom	10	15.2%	41.7%
Others	2	3.0%	8.3%
Total	66	100.0%	275.0%

\$Postoverallwellbeing Frequencies

	Responses	Percent of Cases	
		N	Percent
Post_overallwellbeing ^a			
Post_O_Higher Salary & Compensation	6	7.8%	25.0%
Post_O_Happiness - Positive work culture	20	26.0%	83.3%
Post_O_Good Quality of Life	20	26.0%	83.3%
Post_O_Skills Developments/Enhancement	13	16.9%	54.2%
Post_O_Career Freedom	7	9.1%	29.2%
Post_O_Positive Outlook towards future financial freedom	10	13.0%	41.7%
Others	1	1.3%	4.2%
Total	77	100.0%	320.8%

a. Dichotomy group tabulated at value 1.

Before SKY intervention, good quality of life was selected 19 times by the respondents followed by Happiness-positive work culture. Post-SKY intervention, good quality of life, and Happiness-positive work culture are given the same priority by the respondents. Pre and Post SKY Intervention, 24 samples were collected (Refer to Table 1.2, as above)

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_eco_wellbeing	1.7778	24	.31063	.06341
	Post_eco_wellbeing	1.9472	24	.26810	.05473

Table 1.2.1

		Paired Differences					Significance			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Pre_eco_wellbeing - Post_eco_wellbeing	-.16944	.34500	.07042	-.31513	-.02376	-2.406	23	.012	.025

Table 1.2.2

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Subjective_wellbeing	2.5104	24	.37455	.07645
	Post_Subjective_wellbeing	2.6806	24	.21795	.04449
Pair 2	Pre_Jobperformance	1.6620	24	.84141	.17175
	Post_Jobperformance	1.8056	24	.27705	.05655

Table 1.2.3

		Paired Differences					Significance			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Pre_Subjective_wellbeing - Post_Subjective_wellbeing	-.17014	.34269	.06995	-.31485	-.02543	-2.432	23	.012	.023
Pair 2	Pre_Jobperformance - Post_Jobperformance	-.14352	.79094	.16145	-.47750	.19046	-0.889	23	.192	.383

Table 1.2.4

Summary of Analysis, Batch 1 - The paired sample t-test is used to analyze the impact of yogic practice on economic well-being, subjective well-being, and job performance (Refer to Table 1.2.1 to 1.2.4). At 95% confidence paired sample t-test is significant for economic well-being and subjective well-being and insignificant for job performance, which shows that yogic practice impacts a positive significant impact on economic well-being and subjective well-being. On the other hand, there is no significant impact is visible on the job performance.

BATCH 3: N=10

Primary data was collected by using a well-structured questionnaire. The sample size was 10. Out of the sample collected 80% of respondents never practiced any kind of yogic practice while 20% of respondents follow some kind of yogic practice (Refer to Chart 1.3, as below). Samples are collected before and after the intervention of the yogic practice.

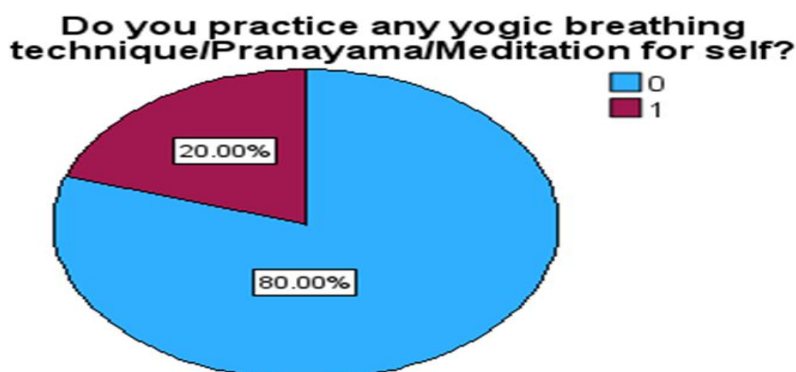


Chart 1.3: Pie-chart depicting the response on the Yogic Practices followed, Batch 3.

Overall well-being (Multiple responses):
Pre and Post-SKY Intervention - Overall Well-being (Table 1.3)

\$Pre_Overallbeing Frequencies				\$Post_overallwellbeing Frequencies					
		Responses		Percent of Cases		Responses		Percent of Cases	
		N	Percent			N	Percent		
Pre_Overall_wellbeing ^a	Pre_O_Higher Salary & Compensation	3	9.7%	30.0%	Post_well_being ^a	Post_O_Higher Salary & Compensation	5	18.5%	50.0%
	Pre_O_Happiness - Positive work culture	8	25.8%	80.0%		Post_O_Happiness - Positive work culture	7	25.9%	70.0%
	Pre_O_Good Quality of Life	7	22.6%	70.0%		Post_O_Good Quality of Life	6	22.2%	60.0%
	Pre_O_Skills Developments/Enhancement	4	12.9%	40.0%		Post_O_Skills Developments/Enhancement	4	14.8%	40.0%
	Pre_O_Career Freedom	5	16.1%	50.0%		Post_O_Career Freedom	2	7.4%	20.0%
	Pre_O_Positive Outlook towards future financial freedom	4	12.9%	40.0%		Post_O_Positive Outlook towards future financial freedom	3	11.1%	30.0%
Total		31	100.0%	310.0%	Total		27	100.0%	270.0%

a. Dichotomy group tabulated at value 1.

There was no impact on overall well-being. Before the SKY intervention, Happiness-positive work culture was selected 8 times, good quality of life was selected 7 times, and higher salary & compensation was selected 3 times by the respondents. Post-SKY intervention, Happiness-positive work culture was selected 7 times, good quality of life was selected 6 times, and higher salary & compensation was selected 5 times by the respondents. So after the SKY intervention, there was a positive impact on higher salaries & compensation (Refer to Table 1.3, as above).

		Paired Samples Test						Significance			
		Paired Differences				95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper					
Pair 1	Pre_Economic_wellbeing - Post_Economic_wellbeing	-.02857	.36140	.11429	-.28710	.22996	-.250	9	.404	.808	
Pair 2	Pre_Jobperformance - Post_Jobperformance	.04837	.30816	.09745	-.17208	.26881	.496	9	.316	.632	

Table 1.3.1

Summary of Analysis, Batch 3 - Paired sample t-test is used to analyze the impact of yogic practice on economic well-being and job performance (Refer to Table 1.3.1). At 95% confidence paired sample t-test is insignificant for economic well-being and job performance, which shows that yogic practice, has no significant impact on economic well-being and job performance.

BATCH 4: N=12

Primary data was collected by using a well-structured questionnaire. The sample size was 12. Out of the sample collected 16.67% of respondents never practiced any kind of yogic practice while 66.67% responded practiced it occasionally and 16.67% follows yogic practice always (Refer to Chart 1.4, as below). Samples are collected before and after the training of the yogic practice.



Chart 1.4: Pie-chart depicting the response on the Yogic Practices followed, Batch 4.

Overall well-being (Multiple responses):
Pre and Post-SKY Intervention - Overall Well-being (Table 1.4)

		Responses		Percent of Cases
		N	Percent	
PO ^a	Pre_O_Higher Salary & Compensation	5	12.5%	41.7%
	Pre_O_Happiness - Positive work culture	6	15.0%	50.0%
	Pre_O_Good Quality of Life	10	25.0%	83.3%
	Pre_O_Skills Developments/Enhancement	5	12.5%	41.7%
	Pre_O_Career Freedom	7	17.5%	58.3%
	Pre_O_Positive Outlook towards future financial freedom	7	17.5%	58.3%
Total		40	100.0%	333.3%

a. Dichotomy group tabulated at value 1.

		Responses		Percent of Cases
		N	Percent	
PO ^a	Post_O_Higher Salary & Compensation	3	6.5%	25.0%
	Post_O_Happiness - Positive work culture	10	21.7%	83.3%
	Post_O_Good Quality of Life	9	19.6%	75.0%
	Post_O_Skills Developments/Enhancement	6	13.0%	50.0%
	Post_O_Career Freedom	5	10.9%	41.7%
	Post_O_Positive Outlook towards future financial freedom	10	21.7%	83.3%
	Others	3	6.5%	25.0%
Total		46	100.0%	383.3%

a. Dichotomy group tabulated at value 1.

Before the intervention, good quality of life was selected 10 times by the respondents followed by career freedom and a positive outlook towards future financial freedom. Post-intervention, Happiness-positive work culture, and positive outlook toward future financial freedom are selected 10 times and given the same priority by the respondents followed by good quality of life (Refer to Table 1.4, as above).

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Economic_wellbeing	2.1875	12	.16643	.04804
	Post_Economic_wellbeing	2.1250	12	.15766	.04551
Pair 2	Pre_subjective_wellbeing	2.4000	12	.40000	.11547
	Post_subjective_wellbeing	2.2348	12	.28342	.08182
Pair 3	Pre_jobperformance	1.5556	12	.32133	.09276
	Post_jobperformance	1.7222	12	.33333	.09623

Table 1.4.1
Paired Samples Test

		Paired Differences						Significance		
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Pre_Economic_wellbeing - Post_Economic_wellbeing	.06250	.23080	.06663	-.08414	20914	.938	11	.184	.368
Pair 2	Pre_subjective_wellbeing - Post_subjective_wellbeing	.16515	.46426	.13402	-.12982	46013	1.232	11	.122	.244
Pair 3	Pre_jobperformance - Post_jobperformance	-.16667	.31958	.09226	-.36972	.03639	-1.807	11	.049	.098

Table 1.4.2

Summary of Analysis, Batch 4 - Paired sample t-test was used to analyze the impact of Sudarshan Kriya on economic well-being, subjective well-being, and job performance (Refer to Table 1.4.1 and 1.4.2). At 95% confidence paired sample t-test is insignificant for economic well-being and subjective well-being while job performance is significant for the one-tailed t-test. It shows that yogic practice has no significant impact on economic well-being and subjective well-being. It is significant and has a positive impact on job performance.

Overall, the results of the study show that in the case of Batch 1 (n=24), the Positive Significant impact of SKY on Economic and Subjective Well-being, whereas, in the case of Batch 4 (n=12), the Positive Significant impact of SKY on Job-Performance.

It is essential to acknowledge that these findings are based on a pre-post pilot study design with a small convenience sample, which limits the generalizability of the results. Future research should employ larger and more diverse samples to further validate these findings and explore potential mechanisms underlying the observed improvements.

CONCLUSION

This study aimed to evaluate the effectiveness of Sudarshan Kriya Yoga on well-being and job performance among service sector working professionals, and employees. The findings of this pre-post pilot study provide valuable insights into the potential benefits of Sudarshan Kriya Yoga as an intervention for enhancing employee well-being and job performance in the workplace.

The results of this study demonstrated significant improvements in well-being in the case of select participants and enhanced job performance. These findings align with previous research on the positive effects of Sudarshan Kriya Yoga on treating stress (MSc), and anxiety in turn enabling a positive and calm state of mind, which helps the SKY practitioners to live well economically, with more happiness and satisfaction. At the same time, having a positive outlook towards enhancing the performance at Job. (Sloan and Kanchibhotla), (Brown and Gerbarg, "Sudarshan Kriya Yogic Breathing in the Treatment of Stress, Anxiety, and Depression: Part I—Neurophysiologic Model"), (Sloan and Kanchibhotla, "The Association of Sudarshan Kriya Yoga Frequency with Sleep Quality: A Cross-sectional Study from Singapore"), (MSc).

The observed patterns suggest that Sudarshan Kriya Yoga may serve as a valuable tool for promoting employee well-being and enhancing job performance.

The significant improvements in well-being and reductions in perceived stress levels among participants indicate that Sudarshan Kriya Yoga is effective in mitigating the negative impact of workplace stressors. The practice of Sudarshan Kriya Yoga provides employees with a structured framework for relaxation, mindfulness, and self-care, allowing them to develop coping strategies and build resilience. By reducing stress levels, employees may experience improved emotional well-being, increased energy levels, and enhanced overall functioning, thereby contributing to better job performance.

The enhancement in job performance by bringing in interventions of Sudarshan Kriya Yoga may positively influence employee productivity, efficiency, and task performance. The practice of Sudarshan Kriya Yoga promotes mental clarity, focus, and attention, which can translate into improved work performance and increased job satisfaction. Moreover, the observed increase in job satisfaction further highlights the potential of Sudarshan Kriya Yoga as an intervention for fostering positive employee experiences and organizational outcomes.

As part of the ongoing research on the subject of well-being, Sudarshan Kriya Yoga as a holistic intervention may address both physical and mental well-being, thereby promoting a healthy and thriving workforce. Investing in employee well-being not only improves individual outcomes but also has organizational benefits, such as reduced absenteeism, enhanced employee engagement, and increased retention rates. Organizations that prioritize employee well-being create a positive work environment that supports overall organizational success.

Based on the findings of this study, several recommendations can be made for practitioners, organizations, and policymakers. First and foremost, organizations should consider integrating Sudarshan Kriya Yoga programs as part of their employee well-being initiatives. Offering regular yoga sessions or incorporating Sudarshan Kriya Yoga practices within wellness programs can provide employees with accessible and effective tools for managing stress, improving well-being, and enhancing job performance.

Practitioners, such as human resource professionals, should receive training on the benefits of Sudarshan Kriya Yoga and be equipped to support and promote its adoption within organizations. Furthermore, organizations should create a supportive and conducive environment for employees to engage in yoga practices, such as providing dedicated spaces for yoga sessions or flexible scheduling to accommodate participation.

Policymakers play a crucial role in supporting employee well-being and job performance. They can advocate for the inclusion of wellness programs, including Sudarshan Kriya Yoga, in workplace health and safety policies. Additionally, policymakers should encourage research funding and collaborations to further explore the effectiveness of Sudarshan Kriya Yoga as an intervention for employee well-being and job performance.

In conclusion, the findings of this study highlight the significant positive impact of Sudarshan Kriya Yoga on well-being and job performance among service sector working professionals and employees. The practice of Sudarshan Kriya Yoga demonstrates its potential as an effective intervention for promoting employee well-being, reducing stress levels, enhancing job performance, and increasing job satisfaction. By incorporating Sudarshan Kriya Yoga into workplace wellness programs and policies, organizations can cultivate a healthier and more productive workforce. This, in turn, can lead to improved individual outcomes, organizational success, and overall societal well-being.

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CONFLICT OF INTEREST

None.

ETHICS APPROVAL

The research is approved by the Amity School of Economics and Sri Sri Institute of Advance Research (SSIAR).

Consent of Participants and for Publication

Standard Questionnaire Survey respondents gave consent for the de-identified use of data at an aggregate level purely for the purpose of this research-stipulated work and publication standards will be followed basis authentic sources and recommendations.

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