

Impact of Common Yoga Protocol Practice on the Overall Well-Being of the Practitioners: An Empirical Study

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ABSTRACT

Yoga is a very ancient and globally accepted practice. The practice of yoga gives various physical and mental health benefits (Sengupta, 2012). This article focuses on the importance of common yoga protocol practices on overall well-being. The Common Yoga Protocol practice involves- Prayer, Loosening Practices, Yogasanas, Pranayamas and Dhyana (Meditation) by Ayush on Yoga for Harmony and Peace.

As the global population continues to age, the prevalence of disability is on the rise. Hence, it becomes crucial to formulate strategies aimed at fostering healthier aging, delaying the onset of disabilities, and elevating overall quality of life. Engaging in regular physical activity plays a pivotal role in promoting healthy aging and preserving one's independence (Josefine, et. al. 2018). Yoga is a way of life which is superior and healthier. It ensures greater success and efficiency in the workplace and higher control over the mind and emotions. With yoga, one can achieve both physical and mental harmony (Satish et. al. 2021). In today's fast-paced world and present post-pandemic conditions, it is more important to attend to your body, mind, heart, and soul. Yogic practices aid in strengthening and promoting good health, enabling us to cope better with stress (Giambrone, C. A. (2019)).

However, the effect of common yoga protocol which comprises; Prayer, Loosening exercises (stretches), Yogasanas (Postures), Pranayamas (Breathing exercises), and Dhyana (meditation) on the overall well-being of practitioners needs to be studied. The study aims to examine the influence of common yoga protocol on quality of life, overall health, perceived stress, mindfulness, and emotional control in practitioners. 37 Practitioners from diverse demographic backgrounds were given training on the Common Yoga Protocol practice by a professional trainer for seven days and were asked to practice it without any dilution for a month. Then the responses were elicited from these practitioners on the impact of this practice on their overall well-being using a structured questionnaire.

PCA (Principal Component Analysis) was used to determine the predominant factors of overall well-being out of 15 factors that were identified. Analysis was also done to record the change in their behavior related to quality of life, in terms of time spent on the practice before and after the training using paired t-tests. Overall, the Common Yoga Protocol practice has a significant positive impact on the overall well-being of the practitioner.

Keywords: Common Yoga Protocol, Overall Wellbeing, Principal Component Analysis, Paired t-test

1. INTRODUCTION

Yoga is a powerful tool for increasing the joy of leading a healthier, happier life while interacting with nature. Yoga is designed to be practiced regularly because it is the science of leading a high-quality life. It has an impact on a person's physical, mental, emotional, and spiritual well-being. Yoga is derived from the Sanskrit word Yuj, which means "to connect" as well as "union" or "oneness" (Yoga for Harmony and Peace by Ayush). This can be explained spiritually as the joining or blending of personal awareness and global consciousness. Yoga is a method of purifying, balancing and harmonizing the body, mind, and emotions. Prayer, Loosening exercises, Yogasanas, Pranayamas, and Dhyana are being practiced to achieve this.

One of the most priceless gifts the ancient Indian sages ever gave to humanity was yoga (Barnes PM et al. 2008). Yoga is more than just a regimen of bodily conditioning exercises. That is only the beginning. The mind, intellect, emotions, and spirituality are all involved. according to what is said in the Bhagavad Gita (Nahin RL et al. 2007). "Samatvam Yoga Uchyate" (BG - 2.48), which translates to "Yoga brings harmony, equilibrium, and equanimity to one's life." Thus it is a path to wellness, i.e. overall well-being.

Modern lifestyle issues are well known. The attention is now turning to addressing non-communicable and lifestyle diseases because we have developed strategies for controlling communicable diseases. Ailments brought on by stress as well as lifestyle-related illnesses like diabetes and hypertension affect people. Depression and stress are now silent killers. Yoga provides a remedy for various conditions. Regular yoga practice does contribute to living a healthy, joyful, and tranquil life.

Yoga training is one of the potential methods for promoting psychological well-being (Lamb, 2004). According to the definition of yoga, it is "a holistic system of various mind-body practices for mental and physical health, including physical postures and exercise, breathing techniques, deep relaxation practices, cultivation of awareness/mindfulness, and meditation." (Khalsa et al. 2012).

Yoga is a holistic science that integrates the body, mind, and soul. Regular yoga practice increases calmness, affectability, instinct, awareness, body well-being, and immunity, all of which are crucial for everyone, especially in the wake of a pandemic. Yoga is about a healthy way of living, not just exercising. (Satish et. al. 2021).

Since the beginning of time, yoga has been proven to be effective in the prevention of diseases as well as the promotion of good health and overall well-being. Recent studies have demonstrated the value of yoga in treating a variety of psychosomatic diseases, which have become more prevalent in recent years. Yoga is thus becoming one of the most affordable and cost-effective healthcare solutions in India and around the world. (Nahin RL et. al. 2007).

Yoga is a form of exercise that is becoming more and more popular and emphasizes the harmony of the body, mind, and spirit (Pandurangi AK, et al. 2017). According to recent studies, yoga has positive effects on several adult health outcomes, such as cardiometabolic health, balance and mobility, sleep quality, quality of life, and cognition (Youkhana S et. al. 2017, Zettergreen KK et. al. 2011, Barrows JL et. al. 2016). According to Tullcoch A. et al. (2018), practicing yoga has also been associated with improved subjective well-being and improved mental health outcomes like depression and anxiety. (Cramer H et. al. 2018).

Community-based trials of yoga, rigorously designed and adequately powered, should encompass evaluations of a wide array of health outcomes (Josefine, et. al. 2018). Hence this particular research work is aimed at knowing the behavioral attributes that signify the impact of practicing Yoga that contribute to overall well-being, which include:

1. Feel more energetic
2. Increase in productivity at work
3. Improvement in sleep quality
4. Feel like practicing daily
5. Increase in the concentration level at work
6. Feel more relaxed

7. Feel less anxious about future happenings or outcomes
8. Feel relatively stress-free
9. Feel more confident about handling challenges
10. Feel more enthusiastic
11. Feel calm and less disturbed
12. Reduced body pains (frequency and magnitude)
13. Digestive disorders have reduced (frequency and magnitude)
14. Decrease in the respiratory disorders (frequency and magnitude)
15. Increased control over diet

The effort is also made to measure the change in their behavior related to quality of life due to the amount of time spent practicing Yoga once trained.

1.1 About Common Yoga Protocol

The Common Yoga Protocol, developed through scientific means by the Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homoeopathy (AYUSH) under the Government of India, serves as a holistic practice promoting comprehensive health and wellness for individuals and communities. This protocol encompasses various elements, including Loosening Practices, Yogasanas, Pranayamas, and Dhyana (Meditation), as outlined in the publication "Yoga for Harmony & Peace" by Ayush.

During the 69th session of the United Nations General Assembly (UNGA) on September 27, 2014, the honorable Prime Minister of India, Shri Narendra Modi, called upon the global community to embrace Yoga and designate June 21st as the "International Day of Yoga (IDY)." Consequently, a resolution was adopted to commemorate June 21st each year as IDY.

Yoga stands as a precious inheritance from ancient Indian tradition, symbolizing the unity of mind and body, thought and action, restraint and fulfillment, and the harmonious relationship between humanity and nature. It offers a holistic path to health and well-being, emphasizing the discovery of a profound sense of unity with ourselves, the world around us, and the natural world. It goes beyond mere physical exercise, representing a journey towards this interconnectedness. Ministry of AYUSH has developed a Common Yoga Protocol, after carrying out in-depth research across different segments of the population, aimed at ensuring the overall well-being of the practitioners. Common Yoga Protocol is a comprehensive yogic practice that includes Prayer, Loosening exercise (Sukshma Vyayama), Yogasanas (Standing, Sitting, Prone-line and Supine-line postures), Pranayamas (Breathing exercises), and Dhyana (Meditation).

This common yoga protocol is well recognized by all the practitioners across the world and is performed/practiced on International Day of Yoga thus popularizing this scientific practice commonly known as CYP (Common Yoga Protocol). Practitioners of this protocol are encouraged to practice it throughout the year.

2. LITERATURE REVIEW

Dr. Meera K Bhojani et. al. 2021 conducted a study using the Depression Anxiety Stress Scale 21 (DASS) to evaluate the impact of PG Scholars practicing the "International Yoga Day Protocol" as a Stress Mitigation Strategy during the COVID-19 epidemic. Data is gathered from a relatively small sample of 15 PG students who were

following the International Yoga Day Protocol from the Ministry of Ayush using the DASS 21 scale questionnaire. Before and after the practice, the data from the chosen respondents were gathered, and the observations were then analyzed using a paired t-test. Stress, anxiety, and depression are the factors taken into account for the analysis. It is found that people who practice yoga poses dramatically lower their stress, anxiety, and depression scores.

Josefine Osth et. al. 2019, In this research, the impact of a 12-week yoga program on the well-being of Swedish adults aged 65 to 85, who were otherwise healthy but not physically active, was investigated. The yoga sessions primarily emphasized physical postures and movements. To assess the outcomes, the results were compared to those of participants engaged in a concurrent 12-week aerobic exercise program. The yoga intervention was grounded in Hatha Yoga, which incorporates gentle physical postures (asanas), breathing exercises, and limited meditation. Well-being was evaluated using the Life Satisfaction Index. The study's findings suggest that yoga is beneficial for improving well-being, mobility, mood, and cognitive function.

Kaitlin N Harkess et. al. 2016, conducted a scientific investigation on the "Longitudinal mental health benefits of a yoga intervention in women experiencing chronic stress." The study's objective is to assess yoga's achievable psychological advantages for everyone. A yoga class lasting one hour was given to the 116 members of the sample over two months. The psychological well-being indicators were assessed at three different times: baseline, post-test, and a one-month follow-up. According to the study, stressed-out people may experience some benefits from short-term yoga practice.

The article by **Satish et. al. 2021**, on the Role of yoga in health well-being: A Systematic review concentrated on the value of yoga for physical well-being. The study evaluated the advantages of yoga for health and wellness in terms of a disciplined life, happiness, positivity, immunity, level of fitness, mindfulness, and well-being. The study's conclusion, drawn from a review of the literature, is that practicing different yoga styles contributes to better health and wellness. The majority of yoga practitioners noticed an improvement in their health as a result of their practice. The study clearly shows that regular yoga practice is strongly associated with improved health outcomes.

Mahananda Sharanappa H et. al 2021, investigated how students at the sports hostel physiological, physical, and psychological alterations were affected by yoga asanas and pranayama. Twenty students from the sports hostel were chosen as the study's sample size. The analysis made use of the paired t-test. Based on the findings, it was determined that a 12-week yoga program enhanced physical fitness, including muscular strength and flexibility, as well as psychological factors, like anxiety and stress.

Lalit Madaan et. al. (2020) the study was carried out by conducting a certification course in yoga asanas and pranayama to a group of 181 participants. The primary aim of the study was to investigate and compare the impact of yoga asanas and pranayama on the mental well-being of adult practitioners. To assess psychological variables such as depression, anxiety, and stress, the Depression Anxiety Stress Scale (DASS) was employed. The study's analysis revealed that when it comes to maintaining mental health, yoga asanas had a more substantial effect in comparison to pranayama. Specifically, those practicing yoga asanas experienced significant reductions in their stress, anxiety, and depression scores, whereas pranayama practitioners only demonstrated significant reductions in stress scores. The study followed a quasi-experimental design, including both pre-and post-tests.

Amit Aggarwal et. al. (2020) studied the effect of three yoga asanas (the cat, fish, and cobra poses) and anulom violin in primary dysmenorrhea, researchers evaluated the impact of yoga asanas and pranayama on pain, severity, and quality of life in this condition. A randomized controlled sampling group of three subjects divided the subjects into three groups, each with ten participants. The first group is exposed to yoga asanas, the second group is exposed to pranayama exercises, and group c is exposed to both of these interventional procedures. Each intervention is conducted for four weeks. The study found that yoga asanas and pranayama techniques are more successful in treating primary dysmenorrhea than utilizing a single intervention regimen.

Frida Hylander et. al. researched Yin Yoga and Mindfulness. The primary goal of this study is to assess how the YOMI program affects people who experience stress, and mindfulness. This study was conducted as a pilot randomized controlled group on a sample size of 45 people for five weeks. According to the chosen sample, gender-based stratified sampling is used. The target audience's mental health improved at the end of the program.

Johnna Medina et. al. (2015), researched how hatha yoga's involvement affected several aspects of distress tolerance. a sample size of 52 females who are habitual with high emotional eating in response to stress. The study shows that there is a higher significant reduction in emotional eating with practitioners compared with the control group without any practice during the 8-week training period.

Margaret M et. al. (2019) conducted a study on college students to examine the mind-body connection and quantify the impact of yoga and mindfulness meditation on the participants' perceptions of stress, self-compassion, and mindfulness. A sample of 92 college students in the southern United States were enrolled in either yoga or mindfulness classes. For 10 weeks, the targeted participants attended lessons twice a week for 50 minutes each. From the result of multiple regression analysis, it is evident that self-compassion in wellness programming for college students may boost the effectiveness of mind-body therapies.

The main goal of the present study was to evaluate the impact of Yoga training on the overall well-being of practitioners. The list of common behavioral attributes that were studied in the past includes;

2.1 Body-Mind Relationship

Adolescence is a time of transition, and yoga practice during this time helps to integrate and harmonize the body and mind. There are knots or tensions in both the mind and the body. There is an equivalent muscular and bodily knot for every knot in the mind. By releasing these knots via yoga practice, the mind becomes light, creative, cheerful, and balanced, and experiences an increase in self-assurance in all areas of life. (Szopa J et. al. 2009).

2.2 Happiness

If a person's mind is not in good shape, regardless of how strong their body may be, they will not be able to advance and lead happy lives. Yoga brings about mental tranquility, which gives them the confidence to face any difficulty in life. More specifically, yoga is suitable for today's stressed-out individuals. (Murugesan R et. al.).

2.3 Improved Fitness

The most evident benefits related to yoga are increased fitness and greater flexibility. It also has several additional advantages, including a decrease in aches and pains and an increase in muscle strength. (Sahu, 2020).

2.4 Mindfulness, Stress Relief, and Mental Health

Yogasanas are a series of soft, slower-paced positions that are great for reducing stress, promoting relaxation, improving mindfulness, and improving health. (Smith J A, 2011).

3. RESEARCH METHODOLOGY

The study aims to investigate the effect of common yoga protocol on the overall well-being of practitioners. 37 Practitioners from diverse demographic backgrounds were given training on the Common Yoga Protocol practice by a professional trainer for seven days and were asked to practice it without any dilution for a month. These 37 participants who attended 7 days of CYP were the respondents for the study. Then the responses were elicited from these practitioners on the impact of this practice on their overall well-being using a structured questionnaire. Likert's

5-point scale was used to capture the respondent’s opinions on the effectiveness of the program and its benefits. The questionnaire consists of two parts: one about socio-demographic factors and the other related to parameters about overall well-being. The validity and reliability of the instrument were tested using Cronbach’s alpha.

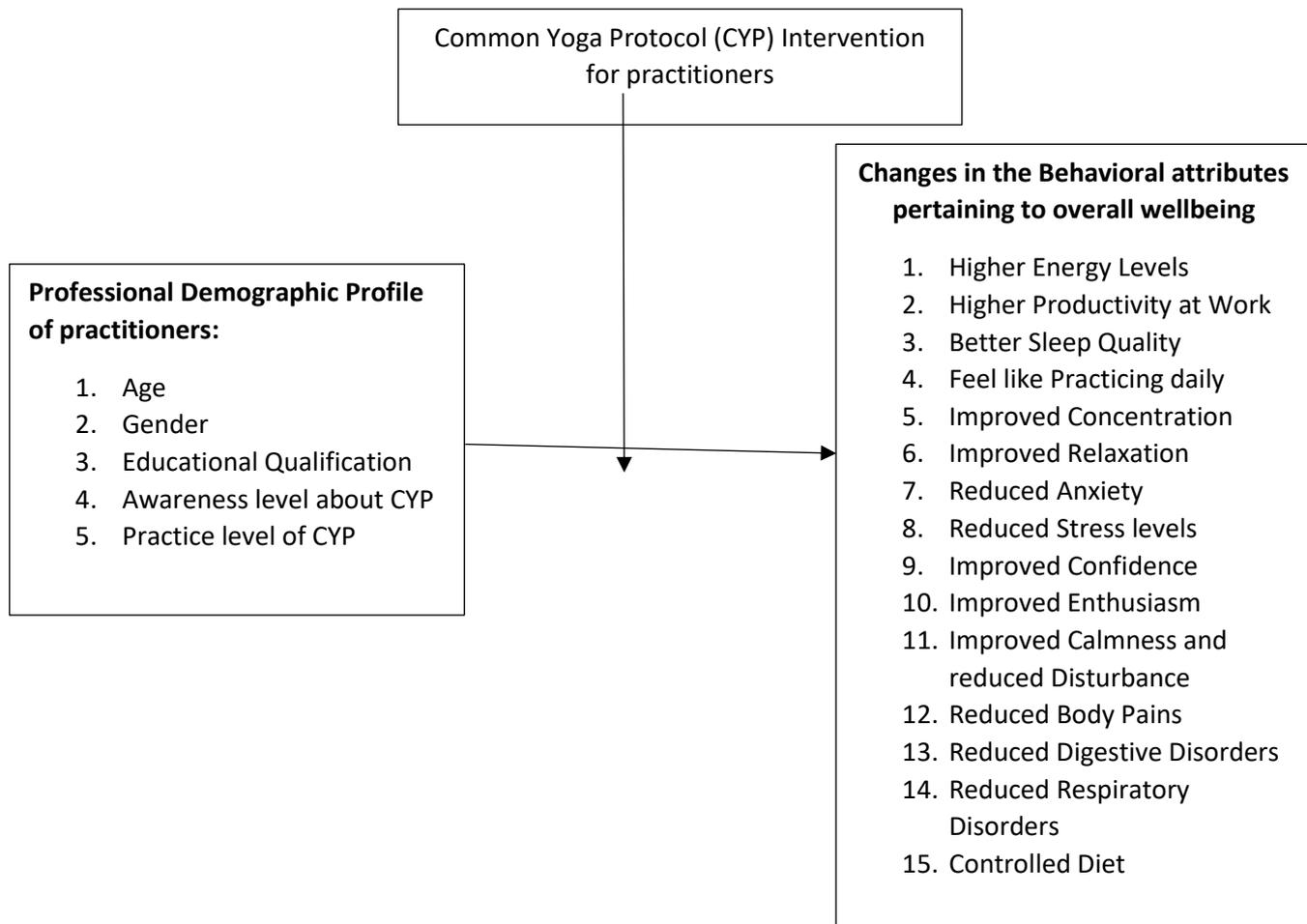
This study is an empirical study where information was collected from the practitioners before and after the CYP practice. Before the intervention, the first set of information was collected from the practitioners. The intervention lasted for a month. At the end of the intervention, the information was collected again from the same practitioners. The pre-processed data was analyzed using SPSS. The current study examines the statistical significance of the mean difference between measurements before and after interventions by applying a paired t-test. Principal Component Analysis was then employed to identify the primary factors contributing to observed changes in participants following the CYP Practice. To assess the suitability of the sample, KMO and Bartlett's Test were utilized. The demographic characteristics of the respondents were summarized using tables displaying the distribution of frequencies.

3.1 Research Questions:

Research questions that were studied in this research paper include:

- **Question 1:** What is the impact of common yoga protocol on the overall well-being of practitioners?
- **Question 2:** What is the effect of practicing common yoga protocol on various Behavioral attributes of the overall well-being of practitioners?

Framework for studying the impact of CYP among practitioners



4. DISCUSSION AND RESULTS:

4.1 Demographic Profile

Demographic Variables		Frequency	Percentages %
Gender	Male	20	54
	Female	17	46
Age	>60	9	24
	50-60	4	11
	35-50	9	24
	25-34	12	33
	19-34	3	8
Education Qualification	Doctorate	3	8
	PG	19	51
	UG	13	35
	PUC	2	6

Source: Data Analysis

Demographic analysis:

1. The majority of the respondents around 54% are male practitioners and 46% are female practitioners.
2. 33% of the practitioners are in the age group of 25-34 followed by 24% in the age group of 35-40 and above 60 years. Minute percentages of respondents fall in the age group of 50-60 (11%) and 19-34 years (8%).
3. 51% of practitioners are with academic qualifications in post-graduate studies, followed by 35% with UG. And remaining 8% of practitioners have a doctorate and 6% with PUC qualifications.

4.2 Paired t-test

Effectiveness of Continuous Yoga Protocol using paired t-test:

This test is mainly used to examine the difference in means of the dependent samples. This test is also called a dependent sample t-test.

H₀: There is no significant difference in the average time spent by practitioners practicing Yoga during the pre and post-certification program

H₁: There is a significant difference in the average time spent by practitioners in practicing Yoga during pre and post certification program

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	SD	Std. Error Mean	95% Confidence				
					Lower	Upper			
Pair 1	Q: How long you have been practicing YOGA daily on average before and after the certification program?	1.216	1.004	.165	.882	1.551	7.370	36	.000

Source: Data Analysis

The above table gives the mean difference in the period of practicing yoga after and before CYP. The paired t-test analysis revealed a significant difference in the average time spent practicing yoga before and after the certification program ($t=7.370$, $df=36$, $P<0.001$). The obtained p-values are less than 0.05, **therefore, we reject the null hypothesis and conclude that the average time spent practicing yoga increased after the certification program.**

4.3 Correlation Analysis

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	Q: How long you have been practicing YOGA daily on average before and after the certification program?	37	.568	.000

Source: Data Analysis

Furthermore, the correlation analysis showed a significant relationship between the average time spent practicing yoga before and after the certification program ($r=0.568$, $p < 0.001$). This suggests that an increase in the time spent practicing yoga before the program is associated with an increase in the time spent practicing yoga after the certification program.

Therefore, it is concluded that there is a significant relationship in the average time spent practicing Yoga during pre and post-certification programs. **The paired t-test demonstrates that the CYP is effective as the average time spent practicing yoga has substantially increased after the certification program.**

4.4 Principal Component Analysis:

Determination of predominant behavioral attributes using Principal Component Analysis

a. Sampling Adequacy test using KMO and Bartlett's Test:

This test is performed to determine whether the sample size considered for analysis is sufficient to apply Factor Analysis to extract the factors from the set of components. As the KMO value is **0.655** which is higher than the threshold value of 0.5, it can be concluded that the sample size is adequate to apply Principal Component Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.755	
Bartlett's Test of Sphericity	Approx. Chi-Square	483.424
	df	105
	Sig.	.000

Source: Data Analysis

Since the value of KMO is more than 0.7 and it is concluded that the sample size is adequate to carry out the analysis.

b. Principal Component Analysis:

It is a method of reducing a large number of attributes (components/factors) to a smaller number considering their significance. These are the components that can explain most of the variance associated with the correlated variables.

Communalities		
	Initial	Extraction
1. Feel More Energetic	1.000	.630
2. My productivity at work has increased	1.000	.831
3. My Sleep quality has improved	1.000	.763
4. I feel like practicing daily	1.000	.568
5. My Concentration level at work has increased	1.000	.830
6. I feel more relaxed than before	1.000	.526
7. I feel less anxious about future happenings or outcomes	1.000	.932

8. I feel relatively stress-free than before	1.000	.857
9. I feel more confident about handling challenges as and when they arise	1.000	.730
10. I feel more enthusiastic	1.000	.545
11. I feel calm and less disturbed	1.000	.787
12. Body pains have reduced a bit	1.000	.731
13. Digestive disorders have reduced a bit	1.000	.854
14. Respiratory disorders have reduced a bit	1.000	.620
15. Helped me in controlling my diet	1.000	.742

Source: Data Analysis

The communalities table explains the mean proportion of variance due to common factors. From the above table, the variables with the highest variance proportion are Productivity, Concentration, Anxious, Stress, and Digestive Disorder.

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
PC1	8.267	55.111	55.111	8.267	55.111	55.111	4.723	31.485	31.485
PC2	1.539	10.257	65.368	1.539	10.257	65.368	4.128	27.517	59.002
PC3	1.188	7.921	73.289	1.188	7.921	73.289	2.143	14.287	73.289

Extraction Method: Principal Component Analysis.

Source: Data Analysis

The cumulative percentage variance of the three components is 73.289. Out of which a significant portion of the total variance is explained by the first component i.e. around 55.111%.

Component Matrix			
	Component		
	PC1	PC2	PC3
a) Feel More Energetic	.691	-.338	.195
b) My productivity at work has increased	.851	-.232	-.044
c) My Sleep quality has improved	.753	-.414	.155
d) I feel like practicing daily	.646	.119	-.370
e) My Concentration level at work has increased	.902	-.095	.089
f) I feel more relaxed than before	.694	.045	-.207
g) I feel less anxious about future happenings or outcomes	.406	.612	.626
h) I feel relatively stress-free than before	.773	.467	.203
I) I feel more confident about handling challenges as and when they arise	.765	.297	-.398
j) I feel more enthusiastic	.646	.230	-.273
k) I feel calm and less disturbed	.784	.299	-.286
l) Body pains have reduced a bit	.783	.227	.259
m) Digestive disorders have reduced a bit	.783	-.355	.339
n) Respiratory disorders have reduced a bit	.776	-.125	-.048
o) Helped me in controlling my diet	.762	-.397	-.065

Source: Data Analysis

The PCA revealed several predominant factors that contribute to the overall well-being of practitioners. The analysis identified three principal components that explain a significant portion of the total variance.

The first principal component which accounted for the highest variance, indicated that regular yoga practice is associated with increased productivity and concentration at work. These findings align with previous research that

has shown the cognitive benefits of yoga, such as improved productivity and concentration levels at work. The second principal component highlighted the reduction in anxiety and stress levels than before among the practitioners. The third principal component revealed that yoga practice is associated with reduced digestive disorders. This finding is supported by previous studies that have shown the positive effects of yoga on gastrointestinal health, including enhanced digestion and reduced symptoms of conditions such as irritable bowel syndrome [4]. Overall, the PCA results provide empirical evidence for the multifaceted benefits of yoga on various aspects of well-being.

5. CONCLUSION

Based on the literature reviews, it is evident that the practice of various yoga styles contributes to positive health and wellness outcomes. The frequency of yoga practice is highly correlated with these positive outcomes. Additionally, studies have shown that yoga training improves physical fitness, and psychological variables such as anxiety, stress, and mental health [1,2,3]. Furthermore, combining yoga asanas and pranayama techniques has been more effective than using a single intervention protocol in addressing specific health issues [3]. Fewer studies demonstrated the positive effects of yoga on stress reduction, mindfulness, and overall mental health [4,5].

From the paired t-test and correlation analysis, it is evident that the certification program had a positive impact on the average time spent practicing yoga by the practitioners. The time spent in practice drastically increased by the practitioners after the certification program. The PCA revealed several predominant factors that contribute to the overall well-being of practitioners. The analysis identified three principal components that explain a significant portion of the total variance: increased productivity and concentration at work; reduced anxiety and stress; and improvements in digestive disorders. The findings of PCA highlighted the positive effects of yoga on work productivity, concentration, anxiety, stress, and digestive disorders. These findings suggest that practicing yoga can have positive effects on both physical and mental well-being.

From the analysis, it is evident that endorsing the incorporation of yoga as a comprehensive method for enhancing health and fostering well-being.

6. FUTURE SCOPE OF THE RESEARCH

Overall, the evidence suggests that incorporating yoga into one's lifestyle can have significant positive effects on health and well-being. However, further research is needed to explore the comparative study between different yoga practices and their impact on overall well-being. Future studies can also explore the psychological perspective of yoga on mental well-being and design customized yoga training courses for different professions and demographics. There is a scope where future studies could explore the specific mechanisms through which yoga influences these predominant factors and investigate the long-term effects of sustained yoga practice on overall well-being.

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