

**Original Research**

**EFFECT OF SIMPLIFIED KUNDALINI YOGA AND PRANAYAMA PRACTICES TO ENHANCE STRENGTH AMONG WORKING WOMEN**

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**Abstract:**

Simplified Kundalini Yoga (SKY), developed by Shri Vethathri Maharishi, encompasses a range of practices including physical exercises, meditation, Kayakalpa, and introspection. The objective of these practices is to enhance both physical and mental well-being by augmenting life force. A study conducted with 45 working women in and around Sankarankovil segmented participants into three groups: one group engaged in SKY practices, another in Pranayama, and a control group without any training intervention. Each group participated in a structured training regimen over 12 weeks, engaging in activities five days per week. Pre-test and post-test evaluations revealed significant improvements in explosive strength among participants in both the SKY practices and the Pranayama groups compared to the control group. These findings indicate that regular engagement in these disciplines may improve explosive strength among working women.

**Key Words: Vital Fluid, Explosive Strength, Improvement, SKY, Pranayama, Kayakalpa, Introspection**

## **1. Introduction:**

The ancient Rishis and esteemed philosophers proposed a fascinating concept: that a bio-magnetic force plays a crucial role in the cohesion of the body and its individual cells. Vethathiri Maharishi expressed this idea with striking clarity, emphasising that this bio-magnetic force extends its influence not just to the physical form but also to the mind. Within the intricate workings of the human brain, those identified a profound fifth element—the vital fluid—that underpins Kayakalpa yoga. This vital fluid, a remarkable product of the nourishment we consume, transforms into cerebrospinal fluid. Here, it is refined and transformed into an essential energy source, functioning as a battery that powers the life force within each of us. The energy generated by this vital fluid is pivotal, as it transforms biomagnetism into tangible bodily strength and vitality. In this way, the interplay between life-force energy and biomagnetism is a cornerstone of physical and mental well-being.

## **2. Review of Literature:**

**Patil & Chandrappa (2015)** assessed the effects of yogic and physical exercises on leg explosive strength and agility. 150 students aged 14-16 years were selected. They were divided into three equal groups: group I underwent yoga practices, group II underwent physical exercise, and group III served as a control group that was not permitted to participate in or receive any special treatment beyond their regular curriculum classes. The training period for this study was six days a week for twelve weeks. Statistical analysis was done. This helped determine which group performed best. Significant increases in leg explosive strength were observed in the physical exercise group, and agility increased in the yoga group [3].

**Telles et al. (2013)**. “Examined the immediate effect of high-frequency yoga breathing on muscle strength and motor speed. Bilateral handgrip strength, leg and back strength, finger tapping and arm tapping speed were assessed in fifty male participants before and after (a) high frequency yoga breathing for 15 minutes and (b) breath awareness for the same duration. Sessions (a) and (b) were on two different days but at the same time of the day. The schedule was alternated for different participants. There was a significant increase in right-hand grip strength after high-frequency yoga breathing. Both finger and arm tapping improved after both practices. “The results suggest a role for high-

frequency yoga breathing in improving the hand grip strength as an immediate effect” [4].

### **3. Statement of Problem:**

The objective of this study is to evaluate the explosive strength of working women and assess the impact of yoga and Pranayama techniques. Specifically, the research seeks to analyse how these practices affect physical strength, mental focus, and emotional well-being. By examining the interrelationship among the body, mind, and spirit, this study will explore the holistic benefits of integrating Sky practices and Pranayama into the routines of working women. The aim is to provide a comprehensive perspective on how these techniques can enhance physical performance while contributing to overall health and personal development.

### **4. Objectives of the study:**

The studies aim to provide a comprehensive understanding of the subject by exploring key aspects, evaluating results, and uncovering insights.

1. To evaluate the physical strength of the working women, especially in the service sector.
2. To apply yoga practices and Pranayama Exercises to the sample respondents.
3. To determine any significant differences in Explosive Strength resulting from SKY practices and Pranayama in working women's physical development.
4. To draw findings and suggestions of the study.

### **5. Null and Alternative Hypotheses:**

**H<sub>0</sub>:** "There are no significant differences in explosive strength resulting from Yoga and Pranayama in the physical development of working women."

**H<sub>1</sub>** "There are significant differences in explosive strength resulting from Yoga and Pranayama in the physical development of working women."

### **6. Scope of the study:**

This research examines the effects of integrating Yoga and Pranayama among working women in the Sankarankovil area. The study evaluates outcomes by comparing data collected before and after implementing these practices. The primary objective of this

investigation is to provide a comprehensive understanding of how these mindfulness techniques influence physical, mental, and emotional well-being.

### 7. Methodology:

A study was conducted with 45 working women from Sankarankovil to evaluate their mental and physical strength. The participants were divided into three groups: 15 practised yoga, 15 practised pranayama, and 15 had no specific practice. Over 12 weeks, a program combining yoga and pranayama was implemented. After the training, participants' mental and physical strength was reassessed, and feedback was gathered through a questionnaire that was thoroughly analysed.

### 8. Limitations:

The study's sample size was limited to 45 participants.

The Yoga and Pranayama practices were conducted with working women for 12 weeks.

### 9. Data Analysis and Interpretation:

**Table 1**  
**Training Schedule for SKY Practices (EX. GROUP - I)**  
**Duration: Per week, 5 days**

Sl.No.	Name of the practice	Round	Duration of the practice (in minutes)
1	Nadi Sudhi& Meditation	***	10
2	Hand exercise	1	4
3	Leg exercises	1	4
4	Breathing exercises	1	4
5	Eye exercises	1	4
6	Kapalapathi	3	4
7	Kayakalpa exercises	1	5
8	Relaxation	1	5
<b>Total</b>		--	<b>40</b>

**Table 2**  
**Training schedule for pranayama (Ex. Group- II)**  
**Duration: Per week, 5 days**

Sl.No.	Name of the practice	Round	Duration of the practice (in minutes)
	Prayer & AUM (Om) Meditation	--	5
	Loosening Exercise:		

1	Jogging	1	3
2	Forward and backward bending	15	2
3	Side bending	15	2
4	Twisting	15	2
Deep Relaxation technique		1	5
Pranayama:			
5	NadiSoodhana	10	3
6	Anuloma	10	3
7	Viloma	10	3
8	Nadi Sudhi	10	3
9	Sitali	5	3
10	Seethali	5	3
11	Bhramari	5	3
<b>Total duration</b>			40

**Table 3**

**Challenges of Working women in the study Area**

Sl. No	Variables	WAS	Rank
1	Reduced Flexibility	3.537	III
2	Higher Risk of Injuries	3.186	VI
3	Poor Breathing Efficiency	3.942	I
4	Increased Stress and Anxiety	3.813	II
5	Reduced Focus and Concentration	2.811	IX
6	Hormonal Imbalance & Menstrual Issues	3.049	VII
7	Poor Posture & Body Alignment	3.462	IV
8	Increased Probability of Burnout	2.768	X
9	Posture and Back Pain	3.257	V
10	Poor Training Continuity	2.944	VIII

Working women encounter a range of challenges that significantly affect their training and overall performance. Among these challenges, poor breathing efficiency is identified as the most critical issue, closely followed by elevated levels of stress and anxiety, both of which can adversely impact physical endurance and mental readiness.

Additional concerns include reduced flexibility, suboptimal posture and body alignment, and diminished athletic performance, indicating that physical limitations and technical deficiencies are prevalent.

Furthermore, factors such as hormonal imbalances, menstrual issues, and an increased risk of injuries contribute to disruptions in training and overall well-being. While challenges such as inconsistent training continuity, diminished focus and concentration, and a heightened likelihood of burnout are ranked lower, they nevertheless influence consistency and long-term athletic development.

These challenges highlight the critical need for specialised interventions to enhance the physical well-being and psychological resilience of the female workforce. Such targeted support is essential to address the unique pressures they face in their demanding working environments.

**Table 4**  
**Respondents' Opinion on Sky Practices**

Sl. No	Variables	Yoga practices		“t” value	Sig. value
		Before	After		
1	Enhances Muscular Strength	2.566	3.336	11.822	< 0.05*
2	Improves Flexibility & Mobility	2.460	3.316	9.586	< 0.05*
3	Improves Concentration & Mental Clarity	2.410	3.284	8.011	< 0.05*
4	Enhances Emotional Balance	2.391	3.148	10.346	< 0.05*
5	Improves Breathing Efficiency	2.313	3.084	8.095	< 0.05*

\*Significant at 5 per cent level

Table 4 presents a comparison of respondents’ opinions on various dimensions of SKY practices before and after the intervention. The mean scores for all five variables increased substantially in the post-practice period, indicating a positive effect of SKY practices. Specifically, improvements are observed in muscular strength, flexibility and mobility, concentration and mental clarity, emotional balance, and breathing efficiency. The calculated *t* values for all variables are high and statistically significant at the 5 per cent level ( $p < 0.05$ ), confirming that the differences between the before and after scores are not due to chance. Among the variables, enhancement of muscular strength and emotional balance recorded particularly strong *t-values*, suggesting a pronounced effect of SKY practices in these areas. Overall, the results clearly demonstrate that regular

practice of SKY leads to significant improvements in both physical and psychological well-being among respondents.

**Table 5**  
**Respondents' Opinion on Pranayama Practices**

Sl. No	Variables	Pranayama Practices		“t” value	Sig. value
		Before	After		
1	Enhances Lung Capacity	2.894	3.387	7.353	< 0.05*
2	Boosts Cardiovascular Efficiency	2.726	3.247	6.206	< 0.05*
3	Improves Reaction Time	2.661	3.181	8.848	< 0.05*
4	Controls Stress & Improves Focus	2.970	3.156	6.435	< 0.05*
5	Enhances Recovery & Reduces Fatigue	2.898	3.053	6.279	< 0.05*

\*Significant at 5 per cent level

Table 5 presents the respondents’ opinions on the benefits of Pranayama practices, comparing mean scores before and after the intervention. The results reveal a consistent increase in mean values across all five variables following Pranayama practice, indicating a favourable impact on both physiological and psychological aspects of the respondents. Notably, improvements in lung capacity, cardiovascular efficiency, reaction time, stress control, focus, and recovery, with reduced fatigue, are evident. The computed *t* values for all variables are statistically significant at the 5 per cent level ( $p < 0.05$ ), confirming that the observed improvements are significant and not due to random variation. Among the factors studied, improvement in reaction time showed the highest *t*-value, suggesting a strong influence of Pranayama on neuromuscular coordination and alertness. Overall, the findings substantiate that regular practice of Pranayama significantly improves physical endurance, mental focus, and the respondents' overall well-being.

**Table 6**  
**Pre-Test and Post-Test Results of the Control Group (No Exercise)**

Sl. No	Variables	12 Weeks		“t” value	Sig. value
		Before	After		
1	Enhances Muscular Strength	3.533	3.556	1.493	> 0.05
2	Improves Flexibility & Mobility	3.127	2.572	1.659	> 0.05

3	Improves Concentration & Mental Clarity	3.098	2.687	1.629	> 0.05
4	Enhances Emotional Balance	3.142	2.314	1.768	> 0.05
5	Improves Breathing Efficiency	2.579	3.668	1.737	> 0.05

\*Significant at 5 per cent level

Table 6 presents the pre-test and post-test results of the control group, which did not participate in any exercise programme during the 12-week study period. The analysis shows that there were no statistically significant differences between the pre-test and post-test mean scores for any of the selected variables, as all calculated t-values were not significant at the 5 per cent level ( $p > 0.05$ ).

Although minor variations in mean scores were observed across variables such as muscular strength, flexibility and mobility, concentration and mental clarity, emotional balance, and breathing efficiency, these differences were not statistically significant. This indicates that the absence of a structured exercise intervention did not result in measurable improvements in either physical or psychological parameters among the respondents. Thus, the control group results confirm that no significant change in the selected variables occurred during the study period when no exercise was undertaken.

### 10. Findings:

Working women face challenges that affect their training and performance, primarily poor breathing efficiency, high stress, and anxiety, which hinder endurance and mental readiness.

Other issues include reduced flexibility, suboptimal posture, hormonal imbalances, menstrual problems, and a higher injury risk. Though less critical, inconsistent training and burnout also impact long-term athletic development.

Feedback indicates that SKY practices significantly improve overall well-being. Mean scores increased across all variables, with muscular strength showing a notable rise (t-value of 11.822).

Flexibility, mobility, concentration, and mental clarity also benefited, along with emotional balance, breathing efficiency, injury prevention, and hormonal balance.

The respondents' feedback indicates that Pranayama practices significantly improve lung capacity, cardiovascular efficiency, reaction time, stress control, and overall recovery, as evidenced by higher post-practice mean scores.

Enhancements in hormonal and metabolic functions further confirm its wide-ranging benefits. With all t-values significant at the 5 per cent level, Pranayama clearly contributes to better physical, mental, and metabolic well-being.

### **13. Conclusion:**

The study conclusively establishes that the practice of Simplified Kundalini Yoga (SKY) and Pranayama significantly enhances the explosive strength of working women in and around Sankarankovil. Throughout the 12-week intervention, both experimental groups showed significant improvements in explosive strength compared with the control group, thereby confirming the efficacy of these yogic practices in enhancing physical performance. By assessing respondents' physical strength before and after the intervention, the study demonstrates that consistent engagement in SKY practices and Pranayama contributes not only to enhanced muscular power but also to improved overall physical development. The findings underscore the potential to incorporate these practices into school physical education programs to promote holistic well-being and support healthy growth among adolescents.

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