

## **Efficacy of Different Yogic Practices on Total Body Balance Among the Working Men of North Tripura**

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### **Abstract:**

The purpose of this article is to examine the physical effects—that is, total body balance—of six weeks of various yoga practices on working males. Purposively, 120 males who worked in offices and educational institutions were selected as study subjects. They were then equally divided into three experimental groups and a control group ( $n = 30$ ). The age range of the people was 25 to 45 years old. While the control group received no instruction, the experimental groups practiced Power Yoga, Restorative Yoga, or a mix of the two. The investigator and instructor used the Flamingo Balance Test to measure total body balance both before and after the intervention. The influence was observed using the analysis of covariance, or "F-ratio," at the 0.05 level of significance. When compared to the control group, statistical analysis showed a significant improvement in the overall body balance of all experimental groups. Total Body Balance's findings about the data gathered from the pre- and post-tests revealed a substantial difference because of the impact of various yoga training programs. The tabulated  $F$  (2.68) is less than the adjusted computed  $F$  (6.89). It is determined that not every training program has the same impact on the working men of North Tripura in terms of enhancing or altering their Total Body Balance. It is clear by comparing the pair-wise difference of adjusted means with critical difference that groups A (5.509928), B (5.696454), and C (5.216312) are similarly effective, while group D (6.343972), which is the control group, is the least successful. Therefore, group C is the recommended program out of the three, as its adjusted mean (5.216312) is lower than the adjusted means of group A (5.509928) and group B (5.696454). Therefore, it is recommended that working men in North Tripura receive a combination of restorative and power yoga instruction to improve their balance.

**Keywords:** Yoga interventions, Controlled group, power yoga training, restorative yoga and Total Body Balance.

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### **Introduction**

Yoga-based activity takes many forms, ranging from the practise of standing postures that aim to improve strength, flexibility and balance through to relaxation and meditation based forms (Patel et al., 2012).

It which requires individuals to practice self-control and be aware of their limits and potentials through the maintenance of their postures (asanas), could improve physical and emotional balance (Raub, 2002; Woodyard, 2011).

Yoga is theorized to create balance, physically and emotionally, by using postures, or asanas, combined with breathing techniques, or pranayama (Feuerstein, 2000). A regular, disciplined practice of yoga over time results in increased strength, balance, stamina, flexibility, and relaxation (Taylor, 2001).

Body balance, whose goal is to stabilize the body against the law of gravity in both the upright position and during movement, is an important function for human beings (Horak and Macpherson, 1996).

The effectiveness of body balance requires the activities and proper functioning of the vestibular, visual, somatosensory, muscular, and central nervous systems (Horlings et al., 2009; McCollum et al., 1996).

Yoga techniques enhance physiological responses, such as emotional balance and body harmony, in motion; they also enhance strength, balance and flexibility, which are factors that induce important influence in the activities of daily living, and substantially improve dynamic postural control in individuals over the age of 60 (Gauchard et al., 1999; Oken et al., 2006).

The mind-body connection, foundational to yoga, has made it a compelling research subject. Studies have demonstrated yoga's positive effects on balance, mobility and cognition. In studies involving healthy community-dwelling individuals, yoga was shown to improve postural control, gait speed and mobility (Kelley et al., 2014; Tiedemann et al., 2013).

When looking at cognitive-motor interference (CMI), yoga practitioners were significantly better at allocating attention during the dual-task trials suggesting that a yoga practice can improve dynamic balance and executive cognitive function by reducing CMI (Subramaniam and Bhatt, 2017).

Yoga has a lot of potential, but the vast majority of these studies lack scientific rigor, such as a lack of proper controls, insensitive outcome measures, and very low sample sizes (Jeter et al., 2014; Walsh and Shapiro, 2006).

Yoga possesses many favorable characteristics including its ability to target flexibility, strength, balance and mental focus. Because of yoga's multifaceted approach it warrants being studied as an intervention for improving reactive balance and adding scientific rigor to a promising potential intervention that will foster successful aging.

The history of power yoga is inextricably related to that of modern yoga. Even though power yoga has the same goals as traditional systems, it was one of the first types of yoga to deviate from them. Power yoga practitioners claim that the practice increases posture, mental focus, flexibility, and stamina. Sweating, like any other physical activity, helps to eliminate toxins and reduce anxiety (Sullivan et al., 2017). It can aid in weight loss because it is more strenuous than most traditional types of yoga, burning more calories in the process.

Gentleness, support, and therapeutic effects are some of the characteristics that define restorative yoga. Restorative yoga is essentially a non-active healing technique. This style of yoga, as the name implies, "restores" the body's parasympathetic nervous system function,

which aids in the body's ability to heal, rest, and recover balance. Restorative yoga encourages deeper breathing and longer asanas (postures), which help to produce a feeling of calm. This reaction can drop blood pressure, help with moderate breathing, and create a calmer, more balanced mood (Lindberg, 2020).

### **Objectives of the study**

# To evaluate the impact on total body balance of Restorative Yoga, Power Yoga, and their combination.

# To investigate which yoga training programme will be more effective to improve the total body balance of working men of North Tripura.

### **Methodology**

The study's subjects were 120 working men from North Tripura who were recruited at random. Individuals who had participated in any additional training programmes were excluded from the training. To ensure they were medically fit to take part in the different training sessions, the subjects had a health examination. The subjects were between the ages of 25 and 45.

### **Experimental Design**

In this study an experimental design called as randomized pre-test/post-test design was used. The subjects were divided into three experimental groups and one control group, each made up of 30 working men. The subjects were randomized to the training programmes at random in each of the four groups. The subjects were selected at random by drawing lots, and the treatment was administered at random.

### **Collection of Data**

The scores regarding functional response, i.e. total body balance, among working men in North Tripura were gathered using 'Flamingo Balance Test'. On the beam, participants stood barefoot and balanced on their favourite leg, flexing their free leg and placing their foot close to their buttocks. For balance, they might grasp the instructor's hand. The instruction "go" began the timing, which was reset each time balance was lost (by releasing go of the foot or falling). We counted falls during a 60-second period. A score of zero was awarded and the test was ended if there were more than 15 falls in the first 30 seconds. Before and after the test administrations, adequate rest was taken in order to collect all of the data. Five days week training were scheduled as the experimental programmes, with each group receiving around one hour every day.

Pre- and post-tests were administered to each of the four groups, as needed, both before and after the experimental programme was completed.

### **Administration of yoga interventions**

First, the subjects in group A receives 45-minute restorative yoga practice five days a week for six weeks. Every training day, there were six sets of asanas in the sessions. Whereas, group B subjects are given 45 minutes of Power yoga five days every week for six weeks. Each training day's practice includes eight sets of asanas. Conversely, however, group C subjects receive 45-minute combined yoga practice (Restorative & Power) five days a week for six weeks. Every

training day, the workouts comprised four sets of Restorative yoga poses and four sets of Power yoga poses.

**Results**

The mean and standard deviation of working men of North Tripura pertaining to total body balance in restorative yoga training group under various experimental settings are as follows:

**Table- 1**

**A DESCRIPTIVE INVESTIGATION OF THE TOTAL BODY BALANCE OF WORKING MEN FOLLOWING RESTORATIVE YOGA TRAINING**

<b>Variables</b>	<b>Experimental conditions</b>	<b>Mean</b>	<b>S.D</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Range</b>
Total Body Balance	Pre test	6.67	2.41	1	10	9
	Post test	5.73	1.99	2	10	8

The mean and standard deviation of working men of North Tripura pertaining to total body balance in power yoga training group under various experimental settings are as follows:

**Table- 2**

**A DESCRIPTIVE INVESTIGATION OF THE TOTAL BODY BALANCE OF WORKING MEN FOLLOWING POWER YOGA TRAINING.**

<b>Variables</b>	<b>Experimental conditions</b>	<b>Mean</b>	<b>S.D</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Range</b>
Total Body Balance	Pre test	6.47	2.32	2	10	8
	Post test	5.77	2.14	2	10	8

The mean and standard deviation of working men of North Tripura pertaining to total body balance in combine yoga interventions (Power & restorative yoga training) for different experimental conditions are as follows:

**Table- 3**

**A DESCRIPTIVE INVESTIGATION OF THE TOTAL BODY BALANCE OF WORKING MEN FOLLOWING COMBINE YOGA INTERVENTION GROUP (POWER & RESTORATIVE YOGA TRAINING)**

<b>Variables</b>	<b>Experimental conditions</b>	<b>Mean</b>	<b>S.D</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Range</b>
Total Body Balance	Pre test	6.27	2.14	1	10	9
	Post test	5.13	1.48	2	8	6

The mean and standard deviation of working men of North Tripura pertaining to total body balance under various experimental circumstances in the control group are as follows:

**Table- 4**  
**A DESCRIPTIVE INVESTIGATION OF TOTAL BODY BALANCE OF WORKING MEN OF CONTROL GROUP**

Variables	Experimental conditions	Mean	S.D	Minimum	Maximum	Range
Total Body Balance	Pre test	6.1	2.52	2	10	8
	Post test	6.13	2.46	2	10	8

The following tables present the results of the analysis of covariance and mean difference method applied to the total body balance of working men in North Tripura amongst four groups: Control Group (CG), Combination Yoga Training (CYT), Restorative Yoga Training (RYT), and Power Yoga Training (PYT).

**Table- 5**  
**ANALYSIS OF COVARIANCE OF TOTAL BODY BALANCE OF WORKING MEN**

	RYT	PYT	R & P YT	CG	SOV	df	SS	MSS	F- ratio
Pre means	6.67	6.47	6.27	6.1	B W	3 116	5.43 664.7	1.81 5.73	0.31
Post means	5.73	5.77	5.13	6.13	B W	3 116	15.42 504.17	5.14 4.35	1.18
Adjusted means	5.51	5.70	5.22	6.34	B W	3 115	20.49 114.19	6.83 0.99	<b>6.89</b>

**\*Sig. at .05 levels Tab. F. 05 (3,115) = 2.68**

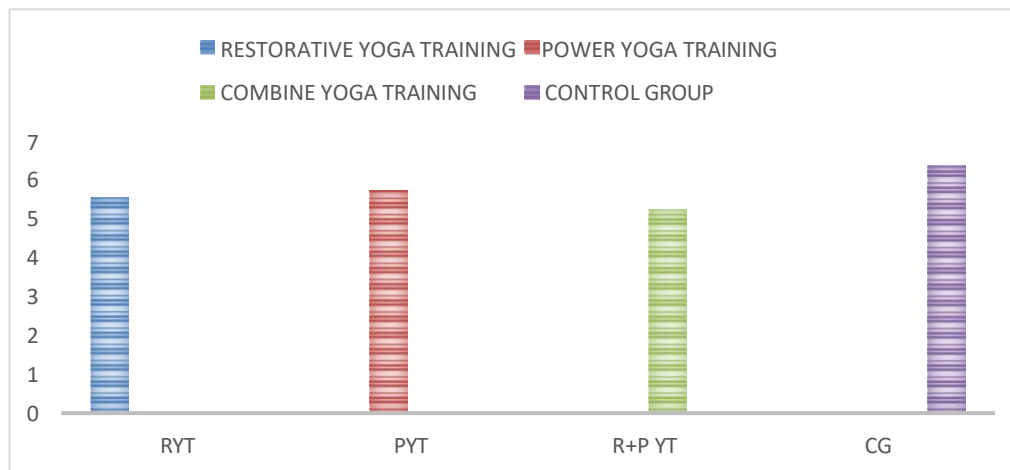
The above table- 5 revealed that the adjusted calculated F (6.89) is greater than tabulated F (2.68). Hence, there were significant effects on all the four groups namely; restorative yoga training group, power yoga training group, combine (restorative + power yoga) training group and control group in relation to Balance. It is concluded that all the training programs are not equally effective in improving or changing the Balance among the working men of North Tripura.

In order to find out which training program is more effective, pair wise comparison analysis (LSD test) on adjusted means of posttest data was calculated. The result pertaining to this is presented in table- 6.

**Table- 6**  
**Adjusted mean scores on Total Body Balance during post testing in different groups**

Restorative Yora Training (A)	Power Yoga Training (B)	Retotative+Power Yoga Training (C)	Control Group (D)	Adjusted Mean Difference	Cd At 5 % Level
5.509928	5.696454			0.18653	<b>0.509433</b>
5.509928		5.216312		0.293616	
5.509928			6.343972	<b>0.83404</b>	
	5.696454	5.216312		0.480141	
	5.696454		6.343972	<b>0.64752</b>	
		5.216312	6.343972	<b>1.12766</b>	

**Total Body Balance**



Comparing the pair wise difference of adjusted means with critical difference, it is evident that group A (5.509928), group B (5.696454) and Group C (5.216312) are equally effective whereas group D (6.343972) is least effective as it is control group. Thus, it may be concluded that out of three training program group C is preferred as its adjusted mean (5.216312) is smaller than adjusted mean of group B (5.696454) and group A (5.509928). Hence, combine (restorative + power yoga) training is recommended for improving the Balance among the working men of North Tripura.

**Discussion**

The findings of Total Body Balance in relation to data which were collected from Pre- test, post-test showed a significant difference due to implication of different yoga training programs. Adjusted calculated F (6.89) is greater than tabulated F (2.68). It is concluded that all the training programs are not equally effective in improving or changing the Total Body Balance among the working men of North Tripura. Comparing the pair wise difference of adjusted means with critical difference, it is evident that group A (5.509928), group B (5.696454) and Group C (5.216312) are equally effective whereas group D (6.343972) is least effective as it is

control group. Thus, it may be concluded that out of three training program group C is preferred as its adjusted mean (5.216312) is smaller than adjusted mean of group B (5.696454) and group A (5.509928). Hence, combine (restorative + power yoga) training is recommended for improving the Total Body Balance among the working men of North Tripura.

### Conclusion

As per the hypothesis stated in the study, that there would be a significant difference in the total body balance of working men after giving Restorative yoga training, Power yoga training, and their combination training is accepted as the tabulated F (2.68) is smaller than the adjusted calculated F (6.89). Thus, all three yoga training programmes benefited working men in the North Tripura district to improve the total body balance. It may be concluded that out of four training program group C is preferred as its adjusted mean (5.216312) is lower than the adjusted means of other three training groups. Hence, combine (restorative + power yoga) training is recommended for improving the Total Body Balance among the working men of North Tripura.

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