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## Effect of continuous brisk walking after yogic practices on functional variables of working women

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### Abstract

Walking with yoga is one of the best methods to improve post-exercise recovery, speed up healing process and reduce muscle stiffness. Regular yoga practice helps to build up flexibility and strength, where regular brisk walking is been proven to enhance your cardiovascular system and enhance mood. Practicing a few yoga poses after a walk helps lengthen and stretch your muscles, keeping you balanced, flexible and walking for miles. We often focus on stretching our lower body after a walk or run, but the repetitive motion of swinging our arms can tighten our chest and shoulders. In order to assess the real facts the investigator made an attempt to examine the impact of yogic practice after brisk walking over Physiological variables of thirty working middle aged women were selected from Coimbatore district. They were age ranged between 40 to 45 years. Treatment group I underwent yogic practice after brisk walking, group II acted as control group. All thirty subjects were inducted for pre and posttest on Physiological variables are (Breath holding time, Resting Pulse rate). The yogic practices after continues brisk walking was given to the experimental group for 3 days per week (Monday, Wednesday and Friday) for the period of six weeks. The control group was not given any sort of training except their routine work. The Physiological variables breath holding time (breath holding test) Resting Pulse rate was assessed by bio-monitor were assessed before and after training period. The result from 't' test and inferred that 8 weeks yogic practice after continues brisk walking treatment produced identical changes over physiological variables of working middle aged women. Further, the findings confirmed the yogic practice after brisk walking is suitable protocol to bring out the desirable changes over physiological, variables of working middle aged women.

**Keywords:** Yoga after continuous brisk walking, physiological and middle aged women

### 1. Introduction

#### Brisk Walking: Slow or Quite Speedy

#### Yoga: Universal Spirit of God

Women's work is often assumed to be solely the realm of women, and it is associated with specific stereotypical jobs that have been associated with the feminine sex throughout history. It is most commonly used in reference to the unpaid labor that a mother or wife performs in the home and family. Women's work is generally unpaid or paid less than "men's work" and is not as highly valued as "men's work". Much of women's work is not included in official statistics on labor, making much of the work that women typically do virtually invisible. Women's lack of access to higher education had effectively excluded them from the practice of well-paid and high status occupations. Entry of women into the higher professions, like law and medicine, was delayed in most countries due to women being denied entry to universities and qualification for degrees.

#### Yogic Practice

Yoga is not a religion. It is a philosophy of life based on certain psychological facts, and its aim is the development of a perfect balance between the body and the mind that permits union with the divine. A perfect harmony between the individual and the cosmos. All the sacred writings of India (the Vedas, the Upanishads, the Puranas and the Tantras) are full of exploits by men and women of all castes, creeds and religions; people from all walks of life that arrived at the highest degree of knowledge through the discipline of yoga-while carrying on their various occupations. The most important aim of our lives should be to maintain good health. Many people take their health for granted and abuse their bodies with a sedentary life style, bad diets, medications and high stress factors. Every person, due to genetic weaknesses, is susceptible to certain ailments that if not prevented can lead to serious

illnesses. When energy is depleted in the body the organs become weak and they cannot function properly. The natural equilibrium will be disturbed and a disorder can develop. Genetic factors will dictate which particular disorder may develop and which organ might be affected. Some people may be prone to a certain condition such as diabetes, cancer, peptic ulcers and heart disease. Yoga acts preventive measures to disease by reducing stress level, keeping the internal organs toned and healthy and maintaining a balanced equilibrium between the physical, mental and spiritual level. The emphasis is to unite the system with a combination of breathing techniques, gentle exercise and mind control. This produces a tranquility that penetrates deep into the mind and soul. It improves the health of the person on all levels.

**Brisk Walking**

Walking is the most natural activity and the only sustained dynamic aerobic exercise that is common to everyone except for the seriously disabled or very frail. No special skills or equipment are required. Walking is convenient and may be accommodated in occupational and domestic routines. It is self-regulated in intensity, duration and frequency, and having a low ground impact, is inherently safe. It is a year-round, readily repeatable, self-reinforcing, habit-forming activity and the main option for increasing physical activity in sedentary populations. Walking has also been shown to reduce anxiety and tension and aid in weight loss. Regular walking may help to improve cholesterol profile, help to control hypertension, and slow the process of osteoporosis. Recent physiological studies have demonstrated that brisk walking provides strenuous enough exercise for cardiovascular training in most adults. A recently developed sub maximal 1-mile walk test provides a simple and accurate means for estimating aerobic capacity and guiding exercise prescription. These new insights and tools will assist the clinician in the prescription of safe and effective walking programs. As a person walks faster the period of double support becomes smaller and smallest fraction of the walking cycle which is called brisk walking. This is the pace used by most exercise walkers. Walking briskly enough to cover a mile in 15 minutes should be able to give the heart and blood vessels a good workout if keep the pace up for 50 or more minutes. It will also burn about 550 calories an hour. The vigorous arm swinging needed to maintain this speed should provide some conditioning to the upper body. To get most from the brisk walking, schedule the walks every other day, increase the speed and distance until to maintain the brisk pace for 20 to 60 minutes. (Johnson and Nelson, 1982).

**Table 1:** Characteristics of training groups (N=30) at pre training mean

Variable	YPABW	CG
Age (Y)	45	44
Height (cm)	156.20	154.20
Weight (kg)	58	60

**2. Materials and methods**

**2.1 Participants**

In order to address the hypothesis presented herein, we selected 30 middle aged working women in Coimbatore District. Their age ranged from 40 to 45 years. The subjects were randomly assigned in to two equal groups namely,

Yogic Practice after Brisk Walking group (YPABW) (n=15) and Control group (CG) (n=15). The respective training was given to the experimental group the 3 days per weeks (alternate days) for the training period of eight weeks. The control group was not given any sort of training except their routine.

**2.2 Research Design**

The evaluated physiological parameters were breath holding time were assessed by breath holding test in seconds and resting pulse rate were assessed by bio-monitor test unit of measurement in beats/ minus. The parameters were measured at baseline and after 8 weeks of Yogic Practice after Brisk Walking were examined. The intensity was increased once in two weeks based on the variation of the exercises.

**2.3 Training Protocol**

The training programme was lasted for 45 minutes for session in a day, 3 days in a week for a period of 8 weeks duration. These 45 minutes included warm up for 5 minutes, and 5 minutes warm down remaining 35 minutes allotted for training programme. The equivalent in Yogic Practice after Brisk Walking is the length of the time each action in total 3 day per weeks (Monday, Wednesday and Friday).

**2.4 Statistical Analysis**

The collected data on physiological variables due to the effect of Yogic Practice after Brisk Walking was statically analyzed with “t” test to find out the significant improvement between pre& posttest if any. In all case the criterion for spastically significance was set at 0.05level of confidence (P<0.05).

**3. Results**

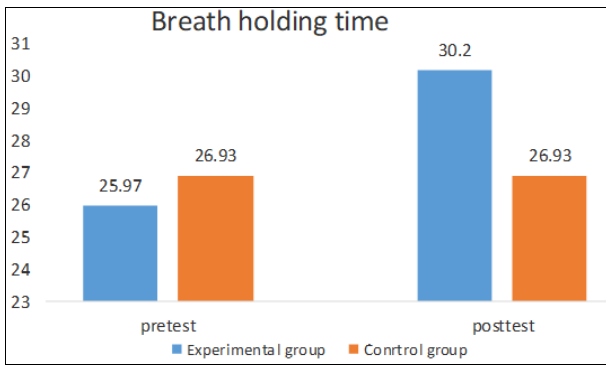
All subjects completed the study according to the aforementioned methodology. The 15 training subjects averaged 96% attendance and no injuries occurred from the training program. There were no significant differences in height or weight between groups either before or after the training and detraining periods.

**Table 2:** Computation of ‘t’ ratio on breath holding time of working middle aged working women on experimental group and control group (Scores in beat/min/seconds)

Group	Test	Mean	Std. Deviation	T ratio
Breath holding time	Experimental Group	Pre-test 25.97	1.99	10.81*
		Post-test 30.20	2.57	
Control Group	Pre-test	26.43	2.27	1.21
	Post-test	26.93	2.33	

\*significant level 0.05 level (degree of freedom 2.14, 1 and 14)

Table II reveals the computation of mean, standard deviation and ‘t’ ratio on Resting pulse rate of experimental and control group. The obtained ‘t’ ratio on cardiorespiratory endurance were 10.81 and 1.21 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the experimental group ‘t’ values were greater than the table value of 2.14, it was found to be statistically significant. The control group ‘t’ value is less then table value of 2.14 it was found to be statistically insignificant.



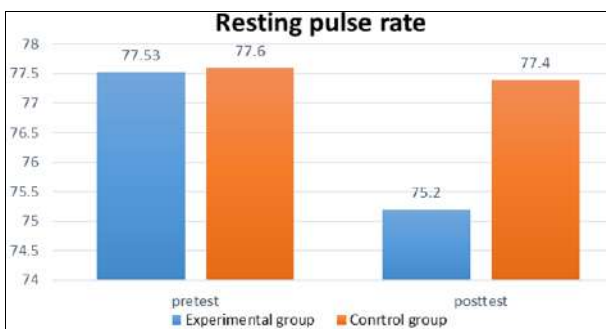
**Fig 1:** Bar diagram showing the mean value on breath holding time of working middle aged working women on experimental group and control group

**Table 3:** Computation of ‘t’ ratio on resting pulse rate of working middle aged working women on experimental group and control group (Scores in beat/min/seconds)

Group	Test	Mean	Std. Deviation	T ratio
Resting Pulse rate	Experimental Group	Pre-test 77.53	2.56	7.57*
		Post-test 75.20	2.81	
	Control Group	Pre-test 77.60	2.22	0.77
		Post-test 77.40	2.61	

\*Significant level 0.05 level (degree of freedom 2.14, 1 and 14)

Table III reveals the computation of mean, standard deviation and ‘t’ ratio on Resting pulse rate of experimental and control group. The obtained ‘t’ ratio on cardiorespiratory endurance were 7.57 and 0.77 respectively. The required table value was 2.14 for the degrees of freedom 1 and 14 at the 0.05 level of significance. Since the experimental group ‘t’ values were greater than the table value of 2.14, it was found to be statistically significant. The control group ‘t’ value is less than table value of 2.14 it was found to be statistically insignificant.



**Fig 2:** Bar diagram showing the mean value on resting pulse rate of working middle aged working women on experimental group and control group

**4. Discussion**

Women have as much equality in the family and the society, the rights to one’s own body and the openings of wider opportunities for self-development. Integrating yoga and walking into your workout routine is a great way to stay active and support your physical and mental health. Both activities are low-impact and accessible to people of any age or fitness background. Practicing a few yoga poses after a walk helps lengthen and stretch your muscles, keeping you balanced, flexible and walking for miles. We often focus on stretching our lower body after a walk or run, but the repetitive motion of swinging our arms can tighten our chest and shoulders. You don’t need any specific skills or

expensive equipment to walk or start doing yoga, but you will reap multiple health benefits if you stick to both. It is good option for the people who want a fit, toned body without bulging muscles. If you want to look good without worrying about over bulking, try picking one of these. I have been into various forms of fitness from tennis, cycling and trekking to Bharatanatyam and gym training.

Walking and yoga fit the bill. Each adapts to varying workout goals and intensities; together, they combine all the health benefits you need to get in shape with well-toned muscles. The sports activities also assured that the importance of yoga after brisk walking increase the muscles ability to contract faster and move explosively through joint range. Results also indicate the yoga after brisk walking are suitable for developing agility and skill as most exercises and performed explosively without decreasing velocity and elongated concentration is turned into shortness concentration with maximum movement. Low-intensity exercises increase our body’s energy levels, and this is ideal for counteracting fatigue, one of the biggest struggles of an online student. When a student needs to study long hours for major exams, their body is bound to be fatigued. Yoga, aerobic exercises, dancing, and more exercise routines that involve the body’s upper and lower regions help decrease the risk of coronary diseases and depression. Yoga also helps stabilize the heart rate and enhances cardiovascular functions. It is also a proven way to increase strength and improve conditioning.

Yoga could be as effective as cycling or brisk walks in reducing the risk of a heart attack or stroke, new research suggests. Yoga may provide the same benefits in risk-factor reduction as traditional physical activity such as cycling or brisk walking. (Denis Campbell, 2014).

Kanniyan, A. (2015) [6]. Isolated and combined effect of brisk walking and yoga training on the physiological parameters of sedentary males.

In general, the more active you are, the better, but small increases in physical activity can have a pretty dramatic impact on your health. For example, the biggest decrease in risk of death by any cause is seen in sedentary people who take up 30 minutes of daily activity such as walking. Just like that, with that small change, their overall risk of death by any cause drops by 20 per cent. Further increases in physical activity mean that your risk continues to drop, but now you need to do a lot more in order to achieve a significant decrease in risk. In summary, the biggest beneficial change occurs when you get off the couch and start moving. (Vanesa Martinez, 2020).

Murphy, et al., (1998) [8]. Training effects of short and long bouts of brisk walking in sedentary women.

Four weeks of intensive yoga practice in healthy adult female volunteers significantly lower heart rate (Raju et al., 1997) [13]. For middle aged men and women hypertensive patients the yogic practice is an effective mode to reduce the blood pressure (Damodaran et al., 2002) [3].

Influence of brisk walking reduced heart rate in sedentary women (Hardman et al., 1992) [17]. Pollock et al., (1971) [11] suggested that walking is appropriate for middle aged men to reduce heart rate and blood pressure. Phillard et al., (2002) reported that twelve weeks of brisk walking significantly decreased blood pressure and body fat of women aged between 40 and 45 years. Brisk walking is positively associated with heart rate of previously sedentary women.

The average walking speed is around 3 miles per hour or 4.5 to 5 kilometers per hour. However this different individuals depending on their fitness levels. Walking briskly enough to cover a mile in 15 minutes, a person should be able to give the heart rate blood vessels a good workout, keep that pace up for 50 or more minutes. It will burn out 500 calories an hour. The vigorous arm swinging needed to maintain this speed should provide some conditions to the body. The influence of yogic practice after continuous brisk walking for the period of 8 weeks was assessed on physical, physiological variables. The following dependent variables were assessed by using standard tests.

The result from this study are very encouraging and it demonstrates the benefits of yogic practice after continuous brisk walking.

## 5. Conclusions

From the results of the study and discussion the following conclusions were drawn.

Findings from the current study suggest that working middle aged women who are more competent in Yogic practice after brisk walking spend more time engaged in physical and physiological in particular during time periods of the day that represent key carnal activity opportunities for working middle aged women. Bodily competency appears to be a better predictor of women's Yogic practice after brisk walking during fitness-based physical activity opportunities than breathing competency. This suggests that improving movement skill competency, particularly physical variables are flexibility and cardio respiratory endurance. Physiological variables are breath holding time and resting pulse rate among women is a potential avenue for promoting working women's yogic practice after brisk walking activities throughout the day. Findings from the current study substantially contribute to the understanding of yogic practice after brisk walking in women and will assist in evidence-based intervention design to increase performance.

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