

Comparative study on balance among yoga and Bharatanatyam practicing students

Dr. S Jagadeeswari Bharathiraja

Assistant Professor, Department of Physical Education and Sports, Pondicherry University, Kalapet, Puducherry, India

Abstract

The intention of the study was to compare the balance among Yoga and Bharatanatyam practicing students. To achieve this purpose of the study 20 Yoga practicing students were selected from Peace and Cure Yoga Centre, Puducherry and 20 Bharatanatyam practicing students were selected from Sri Saravanan Dance School, Puducherry. Student's age ranged from 10 to 15. The nature and importance of this study was explained to the subjects and they were expressed their willingness to participate as subjects for this study. They were named into two groups which was Yoga practicing students (YPS) considered as Group I and Bharatanatyam practicing students (BPS) considered as group II. Balance is the criterion variable. Balance was measured by Stroke Stand test. The collected data were statistically analyzed by 't' test. The data was analyzed using SPSS statistical package. The level of confidence was fixed at 0.05 level of significance. From the results of the study it can be concluded that there is significant difference between YPS and BPS on balance. Thus, the result clearly indicates that the balance in the Yoga practicing students were better than the Bharatanatyam practicing students.

Keywords: yoga, bharatanatyam and balance

Introduction

Overview of Yoga

The Sanskrit word yoga has the literal meaning of "yoke", or "the act of yoking or harnessing", from the root word yuj. In Vedic Sanskrit, the term "yoga" besides its literal meaning, the yoking or harnessing of oxen or horses, already has a figurative sense, where it takes the general meaning of "employment, use, application, performance" (Gombrich, 1988) [1].

In the Yoga Sutras of Patanjali (2001) [2] there is a concise definition of Yogasanas: "Sthiram sukham aasanam", meaning a position which is comfortable and steady". Asanas are practiced to develop the ability to sit comfortably in one position for an extended period of time, ability necessary for meditation. Raja yoga equates yogasana with a stable sitting posture. The Hatha Yogis, however, found that certain specific asanas, open energy channels and psychic centres. They found that developing control of the body through these practices enabled them to control the mind and energy. Yogasanas became tools to higher awareness, providing the stable foundation necessary for the exploration of the body, breath, mind and higher states. For this reason, asana practice comes first in texts such as Hatha Yoga Pradipika. In the yogic scriptures it is said that there were originally 8,400,000 asanas, which represent the 8,400,000 incarnations every individual must pass through before attaining liberation from the cycle of birth and death. These asanas represented a progressive evolution from the simplest form of life to the most complex; that of a fully realised human being. Down through the ages the great rishis and yogis modified and reduced the number of asanas to the few hundred known today. Through their practice, it is possible to bypass many evolutionary stages in one lifetime. Of these few hundred,

only eighty-four most useful are discussed in detail. The main object of hatha yoga is to create balance between the interacting activities and processes of the pranic and mental forces. Once this is achieved, the impulses generated awake SUSHUMNA NADI, the central pathway in the spine, through which the kundalini shakti rises to sahasrara chakra, thereby illumining the higher centres of human consciousness. Hatha yoga, therefore, not only strengthens the body and improves health but also activates and awakens the higher centres responsible for the evolution of human consciousness.

Overview of Bharatanatyam

Bharatanatyam – bha/expression, ra/rhythm, ta/beat, and natya/dance is an interdisciplinary dance form that originated in the state of Tamil Nadu in south India. It is a co-curricular activity that is familiar to people of Asian Indian origin. This dance is not addressed in the US school curriculum because Asian Indian students are a minority in America and dance education in general is neglected in our educational system. According to Risner (2010) [3], "... I became more and more miffed that so little attention is paid to the status and well being of postsecondary dance education in the United States" (p. 133). Overall dance education is not venerated in our school curriculum and Bharatanatyam is not visible in US schools although many Asian Indian people utilize this style of dance to teach their young adults. A Bharatanatyam dancer is a transnational interpreter, who helps teach Asian Indian students about their culture, religion, history, heritage, and literature through the medium of dance. Risner (2010) [3] rightly posits that, "Historically, dance and dance education has shared important social bonds with their communities, both by definition and out of necessity" (p. 127). Bharatanatyam, learned using socio-cultural instruction

teaches valuable social and language skills incidentally along with helping Asian Indian students use this dance form as transnational literacy. O'Shea (2003) ^[4] claims that, "The dance form operates as, in Arjun Appadurai's (1996) ^[5] terms, intentional cultural productions for non resident Indians in places as Los Angeles, Singapore, and Manchester" (p. 178).

Objectives of the Study

- The purpose of this study is to compare the difference on balance among Yoga and Bharatanatyam practicing students.
- The purpose of the study is to promote the importance of Yoga and Bharatanatyam among children.

Statement of the Problem

The problem was stated as "Comparative study on balance among Yoga and Bharatanatyam practicing students".

The Purpose of the study was,

- To discover the relationship between Yoga and Bharatanatyam on balance.
- To compare balance among Yoga and Bharatanatyam students.

Hypothesis

In the light of the various scholarly literature reviewed, deliberations with subject experts and on my own comprehension of the problem, the following hypotheses were framed.

- First hypothesis is there would be significant difference on balance among Yoga and Bharatanatyam students.
- Second hypothesis is the yoga practicing students would be superior in balance than the bharatanatyam practicing students.

Review of Related literature

Chen *et al.*, (2009) ^[6] had examined the trends on "The Effect of Yoga Exercise Intervention on Health Related Physical Fitness in School-Age Asthmatic Children". The study contains the following. The purpose of this study was to investigate the effect of yoga exercise on the health-related physical fitness of school-age children with asthma. The study employed a quasi-experimental research design in which 31 voluntary children (exercise group 16; control group 15) aged 7 to 12 years were purposively sampled from one public elementary school in Taipei County. The yoga exercise program was practiced by the exercise group three times per week for a consecutive 7 week period. Each 60-minute yoga session included 10 minutes of warm-up and breathing exercises, 40 minutes of yoga postures, and 10 minutes of cool down exercises. Fitness scores were assessed at pre-exercise (baseline) and at the seventh and ninth week after intervention completion. A total of 30 subjects (exercise group 16; control group 14) completed follow-up. Results included: 1. Compared with children in the general population, the study subjects (n = 30) all fell below the 50th percentile in all five physical fitness items of interest. There was no significant difference in scores between the two groups at baseline (i.e., pre-exercise) for all five fitness items. 2. Research found a positive association between exercise habit after school and

muscular strength and endurance among asthmatic children. 3. Compared to the control group, the exercise group showed favorable outcomes in terms of *balance* and muscular endurance. Such favorable outcomes remained evident even after adjusting for age, duration of disease and steroid use, values for which were unequally distributed between the two groups at baseline. 4. There was a tendency for all item-specific fitness scores to increase over time in the exercise group. The GEE analysis showed that yoga exercise indeed improved BMI, balance, and muscular endurance. After 2 weeks of self-practice at home, yoga exercise continued to improve BMI, *balance*, muscular strength, and cardiopulmonary fitness.

Moses (1972) ^[7] conducted a study to investigate the effect of yoga on *balance*, vital capacity and breathe holding time and found significant improvement in all these factors.

Ravikumar (2009) ^[8] conducted a study to find out the effect of selected yogic practices and aerobic exercises on somato type components and its relationship with health related physical fitness and biochemical variables. Forty-five college male students were selected randomly from in the Government boys' hostel, laws pet, Pondicherry. Their age ranges from 18 to 25 years. They were divided into three groups namely control group, yogic group and aerobic group. The training period the yogic group and the aerobic group underwent fourteen weeks of training on their respective program. The yogic group was trained on asanas and pranayama. The aerobic group was trained on aerobic exercises with rhythmic music with various types of aerobic type movements. The progressive load method was used up to fourteen weeks for the respective groups. The training was given during for 5 days a week. The data pertaining to pre test and post test of experimental variables were derived through the following methods. Health related physical fitness components such muscular strength and endurance, *muscular balance*, cardio vascular endurance & body composition.

Classical Dance, as practiced in India, has a long history of the oral tradition. However it is important to note that along with this very significant oral tradition, there exists a parallel unconscious 'documentation' of dance that strongly authenticates the oral tradition. The teaching, instruction and performance practices of the classical dances in India have been carefully passed from one generation to the next through the oral tradition. Though based on Sanskrit texts like the *Natyashastra*, *Sangita Ratnakara* and *Abhinaya Darpanam*, the specific technicalities of the dance and the interpretation of the content continued to be in the hands of the professional families. They were the dancers, musicians and teachers who actually practiced the dance form. But when one looks beyond the texts, examining the other visual and literary art forms that were contemporary to the dance texts, we have a wealth of an amazing amount of indirect documentation of the dance that corresponds to what is written in the texts. Scholars such as Dr Kapila Vatsyayan have already done monumental, pioneering work in researching the inter-relationships between the different artistic forms. They have conclusively established the significant links between the same. *Vishnudharmottara Purana* very clearly stages the inter-dependence of the arts leading to one philosophical thought underlying all Indian art forms (Shah, 2005) ^[9].

Methodology

Purpose

The intention of the study was to compare the balance among Yoga and Bharatanatyam practicing students.

Selection of Subjects

To achieve this purpose of the study 20 Yoga practicing students were selected from Peace and Cure Yoga centre, Puducherry and 20 Bharatanatyam practicing students were selected from Sri Saravanan Dance School, Puducherry. Student’s age ranged from 10 to 15.

Procedure

The nature and importance of this study was explained to the subjects and they were expressed their willingness to participate as subjects for this study. They were named into two groups which was Yoga practicing students (YPS) considered as Group I and Bharatanatyam practicing students (BPS) considered as group II.

Selection of Variables

Balance is the criterion variable. Balance was measured by Stroke Stand test.

Statistical Analysis

The collected data were statistically analyzed by ‘t’ test. The data was analyzed using SPSS statistical package. The level of confidence was fixed at 0.05 level of significance.

Test Administration

3.8.2. Balance (Stock Stand Test)



Fig 1

Purpose

The purpose of the study was to measure the static balance of the subject while supported on the ball of the foot of the dominant leg.

Equipments

A stop watch or a wristwatch with a second hand was required.

Procedure

The subject stood on the foot of the dominant leg, placed the other foot on the inside of the supporting knee and place the hand on the hips. Upon a given signal, the subject raises the heel from the floor and maintained the balance as long as possible without moving the ball of the foot from its initial position or letting the heel touch the floor.

Scoring

The score was the greatest number of seconds counted between the time the heel was raised and the balance was lost. Three trails were given with the preferred foot. Only the highest score was recorded (Barry 1988).

Data Analysis and Interpretation

Analysis of Balance

Mean, standard deviation, standard error of the mean and ‘t’ ratio was calculated on stock stand and is presented in table 1.

Table 1: ‘T’ Table on Balance among Yoga and Bharatanatyam Students

Group	Mean	Standard deviation	Standard error mean	‘t’ Ratio
Yoga	5.1945	4.2374	0.970	2.7787*
Bharatanatyam	2.498	1.772		

* Significant at 0.05 level of confidence with degrees of freedom 19. The table value is 2.093.

Table 1 shows that the mean of Yoga and Bhratnatyam students were 5.1945 and 2.498 respectively. The calculated ‘t’ value for Yoga and Bhratnatyam players is 2.78 which was higher than the required table value at 0.05 level. The means of Group I and Group II are significantly different at $p < 0.05$. The calculated t exceeds the critical value ($2.7787 > 2.093$), this indicates that there was a significant difference among Yoga and Bharatnatyam students on balance.

Diagram Showing the Mean Values Of Yoga and Bharatanatyam Students on Balance (Stock Stand)

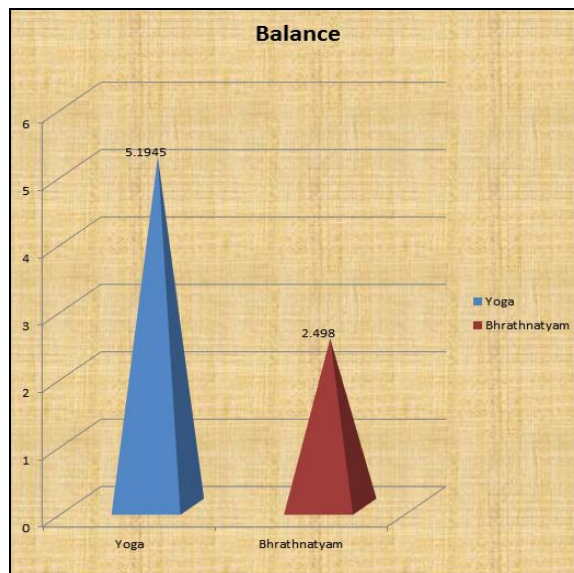


Fig 2

Discussion on Findings

The ultimate purpose of the research is to find out the significant difference on balance among Yoga and Bharatanatyam practicing student to monitor their physical fitness performance. Followings are the discussion and findings based on the analysis and interpretation of the research. Madanmohan Yoga increases resistance against balance in the practitioner which makes him lead a purposeful and healthier life.

Michael Agnew *et al.* (2008) the outcomes of this study illustrate the potential of Yoga as a low impact exercise regime for improving low back stability via neuromuscular control and proprioception. There was no significant difference in trunk strength and endurance when comparing the two groups; therefore, the Yoga exercise was equally effective as the regular exercises.

Conclusion

Based on the limitation and delimitation of the present study, the following conclusions are drawn,

First hypothesis hypothesizes that there would be significant difference on balance among Yoga and Bharatanatyam students. The result of the study reveals that there is a significant change in balance among Yoga and Bharatanatyam students. Thus, the first hypothesis is accepted.

Second hypothesis hypothesizes that the yoga practicing students would be superior in balance than the Bharatanatyam practicing students. The result of the study concludes that the Yoga practicing students were higher than the Bharatanatyam practicing students in balance due to the regular, steady and prolonged practice of yaga asanas. Thus, the first hypothesis is accepted. Hence, the hypothesis of the study was accepted and the null hypothesis was rejected.

References

1. Gombrich RF, Gombrich R, Obeyesekere G. Buddhism transformed: religious change in Sri Lanka. Motilal Banarsidass Publication, 1988, 8.
2. Yoga sutras of patanjali. Weiser Books, 2001.
3. Risner D. Dance education matters: Rebuilding postsecondary dance education for twenty-first century relevance and resonance. *Journal of Dance Education*. 2010; 10(4):95-110.
4. O'shea J. At Home in the World? The Bharatanatyam Dancer as Transnational Interpreter. *TDR/ the Drama Review*. 2003; 47(1):176-186.
5. Appadurai A. *Modernity at large: cultural dimensions of globalization* U of Minnesota Press, 1996, 1.
6. Chen TL, Mao HC, Lai CH, Li CY, Kuo CH. The Effect of Yoga Exercise Intervention on Health Related Physical Fitness in School-Age Asthmatic Children. *Hu li za zhi the journal of nursing*. 2009; 56(2):42-52.
7. Moses R. Effect of Yoga on flexibility and respiratory measures of vital capacity and breath holding time, 1972.
8. Ravikumar H. Effect of select yogic practices and aerobic exercises on somatotype components and its relationship with health related physical fitness and biochemical variables, 2012.
9. Shah P. *Vishnudharmottara-Purana*. Parimal, 2005.