



Original Research Article

Static Balance and Flexibility of Teen Aged Yoga Students and Bharatnatyam Dancers: A Comparative Analysis

Pintu Sil

Assistant Professor

State Institute of Physical Education for Women, Hastings House, 20B Judges Court Road, Alipore, Kolkata, India,

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ABSTRACT

Objective: The purpose of the study was to compare the static balance and flexibility between teen aged yoga students and Bharatnatyam dancers.

Methodology: For these purpose a total of thirty five (N=35) teen aged female students were selected randomly from two different districts of West Bengal. Among them eighteen were the Yoga students (N=18) and seventeen were the Bharatnatyam dancers (N=17). The average age of the yoga students was 16.47 yrs and Bharatnatyam dancers were 15.59 yrs. Static balance and flexibility were considered as criterion measure for the present study. Stork stand test and modified sit and reach test were used to measure the parameters static balance and flexibility respectively. Mean and standard deviation were used as descriptive statistics and significance of difference between group means was analyzed by t-test. Only 0.05 level of significance was considered in this study.

Results: Result revealed that yoga students had higher level of static balance (Mn=20.46 Sec & SD=14.20) and flexibility (Mn=45.38 cm & SD=5.51) than the Bharatnatyam dancers (Mn=16.82 Sec & SD=10.33 and Mn=41.88 cm & SD=4.84 respectively) and difference between means for flexibility (t=2.05) was significant statistically (p<0.05) but mean difference for static balance between two groups (t=0.89) was not significant statistically (p>0.05).

Conclusion: From the findings it was concluded that teen aged girls who participated Yoga on regular basis had significant higher level of flexibility than the girls who participate Bharatnatyam dance occasionally.

Key words: Static balance, Flexibility, Bharatnatyam dancer, Yoga students, Teen aged girls.

INTRODUCTION

Yoga is a complete science of life that originated in India thousands of years ago. Yoga helps to develop the potential attributes to its fullness and to enable and equip man to enjoy peaceful and blissful life. ^[1] The great sage Patanjali systematically presented the science of yoga in the form 'Sutras' the aphorisms. Yogic practices promote inner health and harmony by providing proper exercise and rhythm to every part of the body. ^[2] They also enable us to have complete control per our bodily

functions and mental activity, so that one can always maintain good health. Yoga-asana forms the best system of physical culture. Regular practice of asana tones up the nervous system, endocrine glands, blood circulation, digestion excretion and respiration.

Bharathanatyam is a form of indian classical dance that originated in the temples of Tamil Nadu. ^[3-7] Bharata Natyam is known for its grace, elegance, purity, tenderness, expression and sculpturesque poses. Lord Shiva in his Nataraja form is

considered the God of this dance. Today, it is one of the most popular and widely performed dance styles and is practiced by male and female dancers all over the world, although it is more commonly danced by women.

There are three divisions in Bharathanatyam; Nirutham, Niruthiyam and Natyam. Nirutham is a pure dance without any emotions, expressions or sahityam. It involves Adavus (These are a combination of hand movement and feet movement as well as head movements and eye movements). Niruthiyam has sahityam (a sentence which means something). It has emotions, expressions and has a meaning shown by the hastas. Nirutham involves all four types of Abinayam. Natyam is when a Nirutham and Niruthiyam are combined together with music in the background. This type of dance requires the dancer's imagination and initiative to tell a story through dancing and music. There are 4 types of abhinaya in dance. They are 1. Anghika - Physical or body movements; 2. Vachika - the song being played, poetry; 3. Aaharya - Ornamentation of a character/dancer e.g. jewellery, costume and 4. Satvika - Involuntary movements e.g. trembling, break of voice, tears.

Performing yoga and Bharatnattyam involve various kinds of movements and postures which affect the fitness and health of the performers. The objective of the study was to compare the two fitness components namely static balance and flexibility between teen aged female yoga students and Bharatnattyam dancers.

MATERIALS AND METHODS

Subject

For these purpose a total of thirty five (N=35) teen aged female students were selected randomly from two different districts of West Bengal. Among them eighteen were the Yoga students (N=18) and seventeen were the Bharatnattyam dancers (N=17). The average age of the yoga students was 16.47 yrs and Bharatnattyam dancers were 15.59 yrs.

Criterion Measure

Static balance and flexibility were considered as criterion measure for the present study.

Tools and Test Used

Stork stand test and modified sit and reach test were used to measure the parameters static balance and flexibility respectively.

Statistical Procedure Adopted

Mean and standard deviation were used as descriptive statistics and significance of difference between group means was analyzed by t-test. Only 0.05 level of significance was considered in this study. All calculations were done by Excel-2007 software.

RESULTS AND DISCUSSION

Mean and standard deviation of static balance and flexibility for the Yoga students and Bharatnattyam dancer have been presented in Table-1. Significance of difference between group means for Yoga students and Bharatnattyam dancers have analyzed by t-test and results have also presented in Table-1. The result present graphically in Figure-1.

Table1: Descriptive and Inferential statistics for both variables

Sl No.	Name of the variables	Yoga Students	Bharatnattyam dancers	Mean diff.	S.E.	t-value
		Mean ± SD	Mean ± SD			
1	Static Balance	20.46 ± 14.20	16.82 ± 10.33	3.69	4.11	0.89
2	Flexibility	45.38 ± 5.51	41.88 ± 4.84	3.50	1.72	2.05*

*Significant statistically as the table value of "t" at 0.05 level of confidence was =2.04

It has found that the balance and flexibility were higher for Yoga students than the Bharatnattyam dancers. Table-1 also revealed that the difference between means for static balance between Yoga and Dancer

groups were not statistically significant but the difference between means for flexibility between Yoga and Dancer groups were statistically significant. Studies related to these fields reported that regular Yoga

practice and aerobic or step dance practice can elicit improvements in the health-related aspects of physical fitness. [8,9]

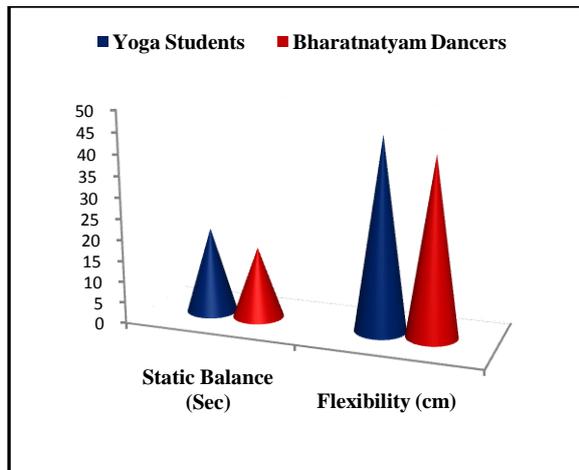


Figure-1: Graphical Representation of results for both variables

Higher flexibility found for yoga group in the present study might be due to that the yoga students performed yoga on regular basis whereas the dancers were not practiced and performed dance regularly. Several studies reported practicing yoga exercise helps to increases the flexibility much more. [10,11] In this study the dancers performed the dance occasionally and not in regular basis. They practiced the dance for more duration before the stage show performance. As a result their flexibility as well as balance was lower than the Yoga group of students.

CONCLUSION

On the basis of above findings and within the limitation of the present study following conclusion was drawn:

- ❖ The teen aged female students performing Yoga on regular basis had significant higher level of flexibility than the female teen aged students who performed Bharatnatyam dance occasionally.

REFERENCES

1. Norris, R. Carroll, D. Cochrane, R. The effects of physical activity and exercise training on psychological stress and well-being in an adolescent population, *Journal of Psychosomatic Research*. 1992; 36(1):55–65.
2. West, J. Otte, C. Geher, K. Johnson, J. Mohr, D.C. Effects of Hatha Yoga and African Dance on Perceived Stress, Affect, and Salivary Cortisol, *Annals of Behavioural Medicine*. 2004; 28(2):114-118.
3. International Tamil Language Foundation. *The Handbook of Tamil Culture and Heritage*. Chicago: International Tamil Language Foundation. 2000; p. 1201.
4. Wikipedia, the free encyclopedia, (2016): https://en.wikipedia.org/wiki/Bharata_Natya_m
5. Samson, Leela. *Rhythm in Joy: Classical Indian Dance Traditions*. Lustre Press Pvt. Ltd. New Delhi. 1987; p. 29.
6. Banerjee, T. P. *Indian Ballet Dancing*. Abhinav Publications: New Jersey. 1983; p. 43.
7. Bowers, F. *The Dance in India*. A M S Press, Inc. New York: 1967; p. 13 & 15.
8. Mark, D. T. Robert, G. H. Jake, L. Ezra, A. A. Effects of Hatha Yoga Practice on the Health-Related Aspects of Physical Fitness, *Preventing Cardiology*. 2001; 04(04):165-170.
9. Irez, G. B. Saygin, O. Yildirim, S. and Ceylan, H. Aerobic dance or step dance: which exercise can increase balance, flexibility and muscle strength of university students? *SSTB International Refereed Academic Journal of Sports, Health*. 2014; 13 (04):143
10. Manna, S. and Ghosh, S. S. Effect of selected Yogic practices on muscular strength muscular endurance and flexibility of collegiate women, *Yoga, Medicine and Sports Science: Proceedings of UGC sponsored international conference; CHC Athletic Association, BHU*; 2015, P: 66-75.
11. Donahoe-Fillmore, B. Brahler, C.R. Fisher, M.I. and Beasley, K. The Effect of Yoga Postures on Balance, Flexibility, and Strength in Healthy High School Females, *Journal of women's health physical therapy*. 2009; 34(1):10–17.

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