The Bioscan AN INTERNATIONAL QUARTERLY JOURNAL OF LIFE SCIENCES 21(2): 22640-22644, www.thebioscan.com

EFFECT OF AEROBIC DANCE TRAINING ON STRESS AMONG WORKING WOMEN

Dr.I.Diravia Gladina[1], Dr. P. Buvanendiran[2] & Dr.M. Suresh Kumar[3]

[1]Director of Physical Education, Holy Cross College, Tiruchirappalli, Tamilnadu, India.
[2]Head/Senior Lecture, Sports and Exercise Science Unit, Faculty of Science, University of Kelaniya, Sri Lanka.
[3]Director of Physical Education, Ganesar College of Arts and Science, Ponnamaravathy, Tamil Nadu, India.

DOI: https://doi.org/10.63001/tbs.2026.v21.i02.pp22640-22644

KEYWORDS

Aerobic Dance,
Stress,
Working Women.

Received on:
30-05-2026
Accepted on:
18-06-2026
Published on:
28-06-2026

Abstract

The purpose of the study was to examine the effect of aerobic dance training on selected stress among working women. The variables selected for the study was stress measured by perceived stress scale. Thirty working women from Tiruchirappalli district, Tamilnadu were selected as participants for the study and were randomly selected from Tiruchirappalli and assigned into two equal groups, namely an experimental group (n=15) and a control group (n=15). The experimental group underwent a structured aerobic dance training programme for a period of 12 weeks, while the control group was instructed to continue their regular routine without participating in any specific training programme. Pre-test and post-test measurements was obtained for stress. The collected data was statistically analysed using Analysis of Covariance (ANCOVA) to determine the adjusted post-test differences between the experimental and control groups. The result reveals that aerobic dance training group produced significant effect on stress among working women.

INTRODUCTION

Modern working women experience increasing occupational and domestic responsibilities that may restrict their participation in regular physical activity. Prolonged working hours, sedentary occupations, work-related demands and limited opportunities for exercise can negatively influence physical fitness and psychological well-being. Regular participation in physical activity is therefore important for maintaining functional fitness and managing psychological stress. Health-related physical fitness includes several components that contribute to an individual's ability to perform daily activities efficiently. Among these components, muscular strength and muscular endurance are particularly important. Muscular strength refers to the ability of a muscle or muscle group to exert force against resistance, whereas muscular endurance refers to the ability of muscles to sustain repeated contractions or maintain activity for an extended period (Badave et al., 2020).

Aerobic dance is a rhythmic form of physical activity that combines continuous body movements with music. It provides an enjoyable method of exercise and can involve repeated movements of the upper and lower body, changes in movement intensity and coordinated muscular activity. Regular participation in aerobic dance may therefore contribute to improvements in physical fitness while also providing an opportunity for psychological relaxation. Stress is another important concern among working women. Occupational responsibilities and lifestyle demands may contribute to psychological stress. Physical activity programmes that are enjoyable and socially engaging may provide an alternative approach to managing stress (Teychenne et al., 2026). Aerobic dance, because of its combination of rhythmic

movement, music and group participation, may be particularly suitable for this population. Therefore, the present study was designed to investigate the effect of a 12-week aerobic dance training programme on stress among working women.

BACKGROUND OF THE STUDY

Working women require adequate physical fitness to perform occupational and daily activities effectively. Muscular strength supports the performance of tasks that require force production, while muscular endurance allows individuals to continue physical activities without excessive fatigue. Contemporary exercise programmes increasingly incorporate enjoyable and accessible activities rather than relying exclusively on conventional gym-based exercise. Dance-based exercise programmes represent one such approach. Aerobic dance combines continuous movement patterns with music and may provide both physical and psychological benefits. The repeated movements performed during aerobic dance sessions require active participation of several major muscle groups. Systematic participation over an extended period may contribute to improvements in muscular fitness. In addition, participation in group exercise can provide social interaction and enjoyment, which may contribute to psychological well-being.

OBJECTIVES OF THE STUDY

The study was conducted with the following objectives:

1. To determine the effect of 12 weeks of aerobic dance training on stress among working women.
2. To compare the adjusted post-test scores of the experimental and control groups on the selected variables.
3. To examine whether aerobic dance training could be used as an effective physical activity programme for reducing stress among working women.

STATEMENT OF THE PROBLEM

The purpose of the study was to investigate the effect of aerobic dance training on stress among working women.

HYPOTHESIS

1. There would be a significant difference in stress between the aerobic dance training group and control group after the 12-week training programme.

METHODOLOGY

The variables selected for the study was stress measured by perceived stress scale. Thirty working women were selected as participants for the study and were randomly selected from Tiruchirappalli district, Tamilnadu and assigned into two equal groups, namely an experimental group (n=15) and a control group (n=15). The experimental group underwent a structured aerobic dance training programme for a period of 12 weeks, while the control group was instructed to continue their regular routine without participating in any specific training programme. Pre-test and post-test measurements was obtained for stress. The collected data was statistically analysed using Analysis of Covariance (ANCOVA) to determine the adjusted post-test differences between the experimental and control groups. The pre-test scores were used as covariates, and the adjusted post-test scores of the experimental and control groups were compared. The level of significance was fixed at 0.05.

RESULTS

Table 1. Descriptive Statistics of Stress

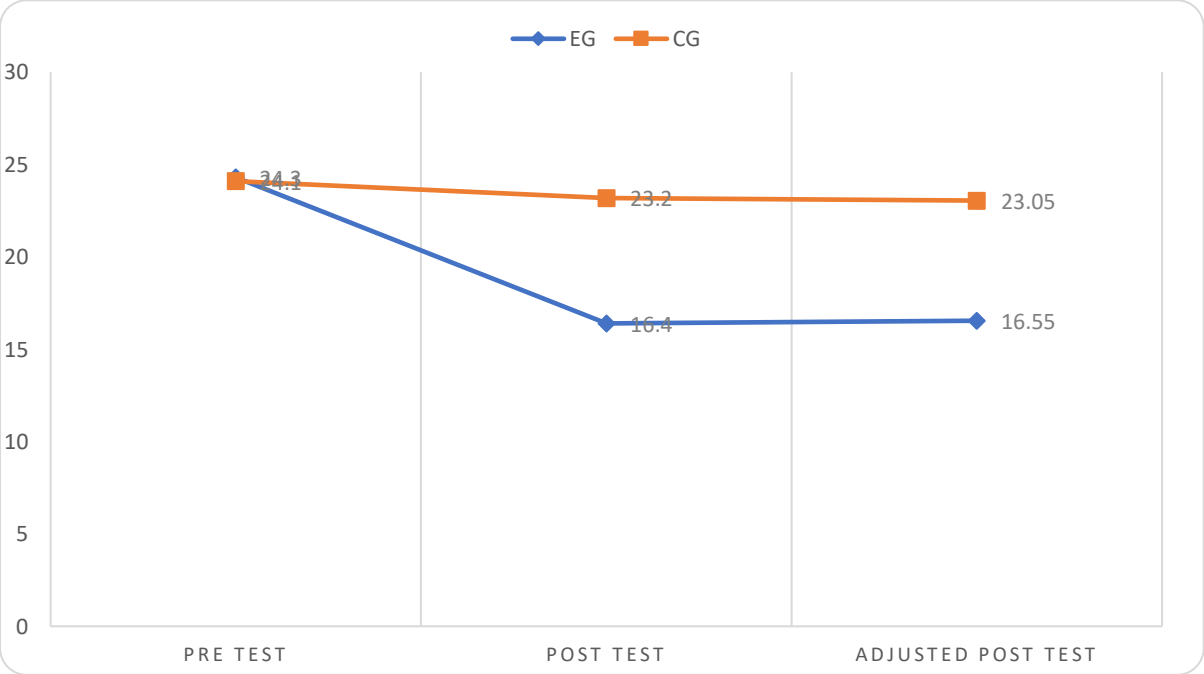
Group	N	Pre-Test Mean	Post-Test Mean	Mean Difference
Experimental	15	24.30	16.40	−7.90
Control	15	24.10	23.20	−0.90

Table 2. Analysis of Covariance of Post-Test Scores on Stress

Variable	Adjusted Experimental Mean	Adjusted Control Mean	F-value	p-value	Result
Stress	16.55	23.05	20.18*	< .001	Significant

The adjusted post-test mean score for stress was 16.55 for the experimental group and 23.05 for the control group. The obtained F-value of 20.18 was statistically significant at the 0.001 level ($p < .001$). Since a lower stress score indicates a lower level of perceived stress, the experimental group demonstrated lower stress than the control group after adjusting for pre-test scores. These findings suggest that the 12-week training programme was effective in reducing perceived stress among the participants compared with the control condition.

Figure 1. Line diagram of Experimental and Control Groups on Stress



DISCUSSION

The purpose of the present study was to determine the effect of aerobic dance training on stress among working women. Aerobic dance involves repeated rhythmic movements that require coordinated activity of various muscle groups. Regular participation in such activities may provide a systematic physical stimulus. The 12-week intervention was therefore designed to examine whether structured participation in aerobic dance could influence stress. The

psychological dimension of the study focused on stress. Working women may experience stress associated with occupational responsibilities and everyday demands. Participation in an enjoyable, music-based group exercise programme may provide an opportunity for physical activity and psychological relaxation. The actual direction and magnitude of the effect should, however, be interpreted from the obtained stress scores.

CONCLUSION

The result reveals that aerobic dance training group produced significant effect on stress among working women.

REFERENCES

1. Babu, K. J., Edwin, A. P., & Gladina, I. D. (2026). Effect of pranayama practices on selected physiological variables among college girls. *International Journal of Multidisciplinary Research and Modern Education, 11*.
2. Babu, K. J., Edwin, A. P., Gladina, I. D., Mahalakshmi, G., & Jabakumar, K. I. (2026). Effect of micro-breaks on attention, mental fatigue, and cognitive performance among college students. *International Journal of Multidisciplinary Research and Modern Education, 12*.
3. Barranco-Ruiz, Y., Ramirez-Velez, R., Martínez-Amat, A., & Villa-Gonzalez, E. (2019). Effect of two choreographed fitness group-workouts on the body composition, cardiovascular and metabolic health of sedentary female workers. *International Journal of Environmental Research and Public Health*, 16(24), 4986.
4. Choi, S.M., Russell, K., Shah, K., Van Winkle, B., & Lee, S. (2020). Comparison of the effect of Zumba and aerobic training on body composition and balance in young obese women. *International Journal of Human Movement Science*, 14(1), 69–79.
5. Cugusi, L., Manca, A., Bergamin, M., Di Blasio, A., Yeo, T. J., Crisafulli, A., & Mercuro, G. (2019). Zumba fitness and women's cardiovascular health: A systematic review. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 39(3), 153–160..
6. Kurinji, C., Babu, K. J., Gladina, I. D., Edwin, A. P., & Mahalakshmi, G. (2026). Jallikattu as a symbol of physical courage and cultural identity. *International Journal of Multidisciplinary Research and Modern Education, 12*.
7. Malathy, C. (2022). Impact of yogic practices on selected physiological variables among college women students. *Madhya Bharti, 82*(2), 55–58.
8. Malathy, C. (2022). Influence of explosive strength training on strength parameters among physical education students. *Dogo Rangsang Research Journal. 2,2,98-100.*
9. Malathy, C., & Alexandar, C. R. (2015). A study of physical fitness and influence of physical exercise, circuit training and yogic practice on speed among college girls in Tamilnadu State. *International Journal of Physical Education, Sports and Health, 2*(1), 131–133.
10. Malathy, C., & Alexandar, D. C. R. (2016). A study of the influence of physical exercise, circuit training and yogic practice on strength among college girls in Tamilnadu State. *International Journal of Physical Education, Sports and Health, 3*(1), 129–132.
11. Malathy, C., Karuppaiah, M., & Babu, K. J. (2026). Effects of a structured yogic training

programme on selected physiological health indicators among middle-aged women. *International Research Journal of Education and Technology.* 9,9,552-557.

12. Malathy, C., Karuppaiah, M., Jagathis Babu, K., & Suresh Kumar, M. (2026). The influence of sports participation on psychological well-being among students. *International Research Journal of Education and Technology*, 9(10), 216.
13. Badave, M. B., Bathia, K., Kanase, S., & Jadhav, A. (2020). Effect of dance therapy on stress and anxiety in working women. *Indian Journal of Public Health Research & Development*, 11(1), 157–161.
14. Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385–396.
15. Teychenne, M., Sousa, G. M., Baker, T., Liddelow, C., Babic, M., Chauntry, A. J., France-Ratcliffe, M., Guagliano, J., Christie, H. E., Tremaine, E. M., Booker, B., Gargioli, D., Bannell, D. J., Bao, R., Brooks, C., Lubans, D. R., Swann, C., & Vella, S. A. (2026). Domain-specific physical activity and mental health: An updated systematic review and multilevel meta-analysis in a combined sample of 3.3 million people. *British Journal of Sports Medicine*, 60(4), 267–285.