ISO 9001 - 2015

ISSN 2349 - 4891

Monthly

IJRRAS

IF
4.665

Volume 4,Issue 4, April 2017

International Journal of
Recent Research and Applied Studies

SURRAGH PUBLICATIONS

ISSN: 2349 - 4891

International
Journal of Recent Research and Applied Studies
(Multidisciplinary Open Access Refereed e-Journal)

Effects of Aerobic Dancing and Yogic Practice on Psychological Variables among College Women Students

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Received 10th March 2017, Accepted 1st April 2017

Abstract

The purpose of the study is to find out the effects of aerobic dancing and yogic practice on psychological variables among college women students. To achieve this purpose of the study, sixty college women students of Arulmigu Palani Andavar Arts College for Women, Palani, Tamilnadu, were selected as subjects, and their age was between eighteen to twenty five years. The selected sixty students were divided into three equal groups, the experimental group – 1 (n = 20 AD) underwent Aerobic Dancing, the experimental group – 2 (n = 20 YP) underwent Yogic Practice and group - 3 (n= 20, CP) served as control participants. In the study, two different training approaches were adopted as independent variables, i.e., Aerobic Dancing (AD) and Yogic Practices (YP). Psychological variables such as anxiety and self confidence were chosen as dependent variables. Anxiety and self confidence was measured by SCAT anxiety Questionnaire and Agnihotry Self confidence Inventory respectively, the unit of measurement was in points. The pre and post test random group design was used. Ancova was used to find out significant adjusted post test mean difference of three groups with respect to anxiety and Scheffe's post hoc test was used to find out pair-wise comparisons between groups with respect to anxiety and self confidence.

Keywords: Aerobic Dancing, Yogic Practice, Anxiety, Self confidence, Questionnaire, ANCOVA.

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Introduction

Aerobic dance is a popular mode of exercise for improving and maintaining cardio respiratory fitness. A typical aerobic dance workout consists of 8 to 10 minutes of stretching, calisthenics and low intensity exercise. This is followed by 15 to 45 minutes of either high or low impact aerobic dancing at the target training intensity, Vivian H. Hayward (1989). Aerobic dance is vigorous, oxygenated large muscle exercise which stimulates heart and lungs activity for a specific period of time to bring about beneficial changes in the cardiovascular system. The main objective of aerobic dance, like any other form of aerobics is to increase the maximum amount of oxygen that the body can process in a given amount of time. The aerobic effect depends on the body's ability to rapidly breathe large amounts of air, forcefully deliver large volumes of blood and effectively deliver oxygen to all parts of the body, Sharonkay Stoll and Jennifer Marie Beller (1999). Yogic exercises play an important role in the maintenance of the above systems. The practice of yoga not only develops the body but also produces the mental faculties. Moreover, the yogi acquires mastery over the involuntary muscles of his organism, A.M. Moorthy and J. David Manual Raju (1983). In this study an attempt is made to find out the Effects of Aerobic Dancing and Yogic Practice on Psychological variables among college women students.

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Methodology

The study involved a single dimensional design with three groups assigned. To facilitate the study, sixty college women students from APA Arts College for Women, Palani, Tamilnadu, were selected as subjects at random and their age was between eighteen to twenty five years. They were divided into three equal groups namely experimental Group 1, Aerobic Dancing, Experimental Group 2, Yogic Practices and Group 3 Control participants did not involve in any training. The pre test was taken from the subjects before administering the training. The subjects were involved with their respective training for a period of twelve weeks. At the end of the training, the post test was taken. Anxiety and self confidence was chosen as criterion variables. These were measured by Questionnaire standardized by Spielberger R. L. Gorsuch and R.E. Lushers, and Agnihotry Self confidence Inventorg the unit of measurement was in points.

Table 1
Analysis of co variance of pre test post test and adjusted post test on anxiety of different groups (Scores in points)

Test	G-1 AD	G-2 YP	G-3 CP	Source of Variance	Sum of Square	Df	Mean Square	Obtained 'F' ratio
Pre Test								
Mean	85.70	86.59	86.49	Between	9.51	2	4.75	0.28
SD	4.25	3.92	3.85	Within	966.06	57	16.95	
Post Test								
Mean	82.85	81.80	86.36	Between	227.57	2	113.79	6.98*
SD	3.55	3.92	4.30	Within	928.92	57	16.30	
Adjusted Post Test								
Mean	83.24	81.80	86.20	Between	219.41	2	109.71	13.03*
				Within	471.53	56	8.42	

* Significant at 0.05 level. (The table values required for significance at 0.05 level of confidence for 2 and 57 and 2 and 56 are 3.16.

Pre Test: The AM± SD pre test anxiety scores of G1, G2, and G3 are 85.70 ± 4.25, 86.59± 3.92, 86.49 ± 3.85 respectively. The obtained pre test F value of 0.28 was lesser than the required Table F value of 3.16. Hence the pre test means value of anxiety show insignificant at 0.05 level of confidence for the degrees of freedom 2 and 57. Thus this analysis confirms that the random assignment of subjects into three groups were successful. Post Test: The AM± SD post test anxiety scores of G1, G2, and G3 are 82.85 ± 3.55, 81.80 ± 3.92, 86.36 ± 4.30, respectively. The obtained pre test F value of 6.98 was greater than the required Table F value of 3.16. Hence the post test means value of anxiety shows significant at 0.05 level of confidence for the degrees of freedom 2 and 57. Thus the results obtained proved that the interventions namely Aerobic Dancing and Yogic Practice on anxiety produced significantly different improvements among the experimental groups. Adjusted Post Test: The AM± SD post test anxiety scores of G1, G2, and G3 are 83.24, 81.80 and 86.20 respectively. The obtained post test F value of 13.03 was greater than the required Table F value of 3.16. Hence the post test means value of anxiety show significant at 0.05 level of confidence for the degrees of freedom 2 and 56. Thus the results obtained proved that the interventions namely Aerobic Dancing and Yogic Practice on anxiety produced significantly different improvements among the experimental groups. Since the observed F value on adjusted post test mean among the groups such as Aerobic Dancing and Yogic Practice produced significantly different improvements among the experimental groups. In order to find out which training programme used in the present study was the source for the significance of adjusted means was tested by Scheffe's post hoc test. The results of the same are presented in the table I (a).

Table 1(a)
Scheffe's post hoc values of paired mean differences on anxiety (Scores in points)

G-1 AD	G-2 YP	G-3 CG	Mean Differences	Confidence Interval Value
83.24	81.80		1.44	2.69
83.24		86.20	2.96*	2.69
	81.80	86.20	4.40*	2.69

* Significant at 0.05 level.

From Table 1 (a) shows the significant difference of paired adjusted post test means of Aerobic Dancing group, Yogic Practices group and Control group on Anxiety. The obtained mean differences between Aerobic Dancing group and Control group, Yogic Practices group and Control group were 2.96 and 4.40 respectively. The required confidence interval value was 2.69. Since the obtained mean difference between Aerobic Dancing Group and Yogic Practices group 1.44 was lesser than the confidential interval value on anxiety, it was concluded that aerobic dancing group and yoga practice group decrease the level of anxiety better than the control group. Further it was concluded that both the training produced similar effect on Anxiety.

Table 2
Analysis of co variance of pre test post test and adjusted post test on self confidence of different groups (Scores in points)

Test	G-1 AD	G-2 YP	G-3 CP	Source of Variance	Sum of Square	Df	Mean Square	Obtained 'F' ratio
Pre Test								
Mean	64.15	64.48	64.89	Between	5.43	2	2.71	0.15
SD	5.79	3.53	2.63	Within	1057.63	57	18.55	
Post Test								
Mean	66.35	67.31	63.55	Between	152.78	2	76.39	4.02*
SD	5.97	3.09	3.00	Within	1083.95	57	19.02	
Adjusted Post Test								
Mean	66.61	67.31	63.27	Between	186.88	2	93.44	9.94*
				Within	526.66	56	9.40	

* Significant at 0.05 level. (The table values required for significance at 0.05 level of confidence for 2 and 57 and 2 and 56 are 3.16.

Pre Test: The AM± SD pre test self confidence scores of G1, G2, and G3 are 64.15 ± 5.79, 64.48 ± 3.53, 64.89 ± 2.63 respectively. The obtained pre test F value of 0.15 was lesser than the required Table F value of 3.16. Hence the pre test means value of self confidence show insignificant at 0.05 level of confidence for the degrees of freedom 2 and 57. Thus this analysis confirms that the random assignment of subjects into three groups were successful. Post Test: The AM± SD post test muscular strength scores of G1, G2, and G3 are 66.35 ± 5.97, 67.31 ± 3.09, 63.55 ± 3.00 respectively. The obtained pre test F value of 4.02 was greater than the required Table F value of 3.16. Hence the post test means value of self confidence shows significant at 0.05 level of confidence for the degrees of freedom 2 and 57. Thus the results obtained proved that the interventions namely Aerobic Dancing and Yogic Practice on self confidence produced significantly different improvements among the experimental groups. Adjusted Post Test : The AM± SD post test self confidence scores of G1, G2, and G3 are 66.61, 67.31 and 63.27 respectively. The obtained post test F value of 9.94 was greater than the required Table F value of 3.16. Hence the post test means value of self confidence show significant at 0.05 level of confidence for the degrees of freedom 2 and 56. Thus the results obtained proved that the interventions namely Aerobic Dancing and Yogic Practice on self confidence produced significantly different improvements among the experimental groups. Since the observed F value on adjusted post test mean among the groups such as Aerobic Dancing and Yogic Practice produced significantly different improvements among the experimental groups. In order to find out which training programme used in the present study was the source for the significance of adjusted means was tested by Scheffe's post hoc test. The results of the same are presented in the table 2 (a).

Table 2 (a)
Scheffe's post hoc values of paired mean differences on muscular strength (Scores in numbers)

G-1 AD	G-2 YP	G-3 CG	Mean Differences	Confidence Interval Value
66.61	67.31		0.70	2.84
66.61		63.27	3.34*	2.84
	67.31	63.27	4.04*	2.84

* Significant at 0.05 level.

From Table 2 (a) shows the significant difference of paired adjusted post test means of Aerobic Dancing group, Yogic Practices group and Control group on Self Confidence. The obtained mean differences between Aerobic Dancing group and Control group, Yogic Practices group and Control group were 3.34 and 4.04 respectively. The required confidence interval value was 2.84. Since the obtained mean difference between Aerobic Dancing Group and Yogic Practices group 0.70 was lesser than the confidential interval value on self confidence, it was concluded that aerobic dancing group and yoga practice group improve the self confidence level better than the control group. Further it was concluded that both the training produced similar effect on Self Confidence.

Conclusion

1. The result of the study indicates that anxiety and self confidence altered significantly over the twelve weeks training period for Aerobic dancing and yogic practice groups:
2. The Yogic practice group significantly decreased the level of anxiety than the aerobic dancing group and control group. The Aerobic dancing group produces less reduction on anxiety.
3. However aerobic dancing group and yoga practice group improve the self confidence level better than the control group.
4. Further it was concluded that both the training produced similar effect on anxiety and Self Confidence.
5. The control group did not produce any significant alteration on anxiety and Self Confidence.

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