Abstract

This study is an attempt to find out whether aerobic exercise with and without music has any effect on the emotional intelligence of teacher trainees. For the purpose of this study 120 students from the Kerala University College of Teacher Education were selected as subjects. These students were randomly divided into experimental and control groups of forty each. After taking the pre test for the selected variable, a sixteen week training programme was given to the experimental groups. The control group did not involve in any type of training. After the training programme, a post test was conducted for both groups. The data were analysed by using t test and analysis of co variance. The result reveals a significant improvement in emotional intelligence of teacher trainees due to aerobic exercise with and without music.

I. INTRODUCTION

Regular physical exercise is the basis for good health and fitness. Exercise is also beneficial for maintaining mental and emotional health. We all know that exercise promotes healthier body and better sense of well-being. Aerobic exercise helps to improve physical and psychological traits of people. Many researchers believe that the music accompaniment to exercise provides an important beneficial effect to the exercise experience. Also health and fitness instructors regard the addition of music to exercise similarly to an ergogenic aid, with the removal of music or an inappropriate selection of music as a sure bet to an unsuccessful class. Maintaining emotional intelligence of teacher trainees will allow them to develop healthy relationship with their students who will become leaders of tomorrow. Studies on aerobic exercise in association with...
emotional intelligence of teacher trainees are scarce. This study aimed to evaluate how aerobic exercise with and without music is effected on the emotional intelligence of teacher trainees.

II. OBJECTIVES, DELIMITATIONS & LIMITATIONS OF THE STUDY

1. Objectives
   - To find out the effect of aerobic exercise with and without music on the emotional intelligence of teacher trainees.
   - To compare the effect of aerobic exercise with and without music on the selected variable.

2. Delimitations
   - The study was delimited to the female teacher trainees between 20 to 25 years of age from the Kerala University College of Teacher Education.
   - The study was further delimited to emotional intelligence.

3. Limitations
   - No motivational techniques used to motivate the subjects were considered as a limitation of the study.
   - The life style, habits, heredity and nutritional intake and other personal behaviour styles were beyond the control of the investigator were also considered as the limitations of the study.

III. HYPOTHESES

i) It is hypothesised that there would be significant improvement in emotional intelligence as a result of training programmes in aerobic exercise with music and aerobic exercise without music.

ii) It is hypothesised that there would be significant differences between aerobic exercise-with-music and aerobic exercise-without-music groups in the improvement of emotional intelligence.

iii) It is also hypothesised that aerobic exercise-with-music group would show significantly better improvement in emotional intelligence than the aerobic exercise-without-music group.

IV. SIGNIFICANCE OF THE STUDY

i.) The results of the study may help the people to know the effect of aerobic exercise on emotional intelligence.

ii.) The result of the study may probably make an impact on the public to follow aerobic exercise in the form of body exercises to maintain good health and fitness.

iii.) The results and findings of this study may also enable youths of schools and colleges to be involved in one or other form of exercise voluntarily with or without music along with their academic pursuits.
IV. PROCEDURE

1. Selection of Subjects: For the purpose of this study, 120 female teacher trainees from Kerala University College of Teacher Education were selected as subjects. The average age of the subjects was 23 years.

2. Design of the Study: Randomly selected 120 subjects were divided into three equal groups as ‘A’, ‘B’, and ‘C’. After taking the pre-test for the selected variable, the training programme was given to the experimental groups ‘A’, and ‘B’, where group ‘C’ was the control group. The experimental group ‘A’ had undergone the training programme in aerobic exercise with music and group ‘B’ had undergone the training programme in aerobic exercise without music thrice a week (ie, on Mondays, Wednesdays and Fridays) for 16 weeks. After sixteen weeks of training as per the schedule, a post-test was conducted for the same variable to all the groups.

3. Administration of Training Programme: The experimental groups were given an organised training programme by the experts for 16 weeks. The programme was of 45 minutes duration for three days in a week. This was monitored and controlled by the investigator. The control group did not involve in any session of training.

VI. ANALYSIS OF DATA AND DISCUSSION OF FINDINGS

The t-test was employed to analyse the significant difference between pre-test and post-test on the selected variables. The analysis of covariance was employed to compare the significant difference between pre-test and post-test among the experimental and control groups. The Scheffe’s post hoc test was applied wherever the F-value was found significant. The level of significance chosen was 0.05.

Table 1: The Significance of Differences between the Pre-Test and Post-Test Means of Emotional Intelligence Scores of the Aerobic Exercise-with-Music and Control Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Means</th>
<th>MD</th>
<th>SD</th>
<th>SE</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerobic exercise-with-music group (N=40)</td>
<td>67.95</td>
<td>74.18</td>
<td>6.23</td>
<td>1.69</td>
<td>0.267</td>
</tr>
<tr>
<td>Control group (N=40)</td>
<td>58.25</td>
<td>57.70</td>
<td>0.55</td>
<td>1.84</td>
<td>0.291</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level 't' value required at 0.05 level = 2.03 (df 39)

The above table indicates that the aerobic exercise-with-music group exhibits significant improvement in the emotional intelligence with pre-test mean score being 67.95 and the post-test mean score being 74.18. Further, it shows that the obtained ‘t’ value (23.339) is much higher than the tabulated ‘t’ value (2.03) at 39 degrees of freedom. Hence the obtained ‘t’ value is found to be highly significant at 0.05 level. On the contrary, the pre-test mean value (58.25) and the post-test mean value (57.70) of the control group shows negligible difference. Further the obtained ‘t’ value (1.891) is less than the required ‘t’ value (2.03) at 0.05 level. Hence it shows that there is no significant difference exists in the emotional intelligence of the control group.
Table 2: The Significance of Differences between the Pre-Test and Post-Test Means of Emotional Intelligence Scores of the Aerobic Exercise-without-Music and Control Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>MD</th>
<th>SD</th>
<th>SE</th>
<th>'t' value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerobic exercise-without-music group (N=40)</td>
<td>65.65</td>
<td>69.95</td>
<td>4.30</td>
<td>1.29</td>
<td>0.203</td>
<td>21.164*</td>
</tr>
<tr>
<td>Control group (N=40)</td>
<td>58.25</td>
<td>57.70</td>
<td>0.55</td>
<td>1.84</td>
<td>0.291</td>
<td>1.891</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level 't' value required at 0.05 level = 2.03 (df 39)

The table 2 indicates that the aerobic exercise-without-music group exhibits significant improvement in emotional intelligence, with pre-test mean score being 65.65 and the post-test mean score being 69.95. Further, it shows that the obtained 't' value (21.164) is much higher than the tabulated 't' value (2.03) at 39 degrees of freedom. Hence the obtained 't' value is found to be highly significant at 0.05 level. On the contrary, the pre-test value (58.25) and the post-test mean value (57.70) of the control group show negligible difference. Further, the obtained 't' value (1.891) is less than the required 't' value (2.03), at 0.05 level. Hence it shows that there is no significant difference in the emotional intelligence of the control group.

Table 3: Analysis of Covariance of Emotional Intelligence among Experimental and Control Groups

<table>
<thead>
<tr>
<th></th>
<th>Aerobic exercise-with-music group</th>
<th>Aerobic exercise-without-music group</th>
<th>Control group</th>
<th>SV</th>
<th>df</th>
<th>SS</th>
<th>MSS</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted post-test means</td>
<td>74.18</td>
<td>69.95</td>
<td>57.70</td>
<td>B</td>
<td>2</td>
<td>772.582</td>
<td>386.291</td>
<td>151.283*</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level  F 0.05 (2, 116) = 3.09

The statistical results in table 3 indicate that the F-value of the adjusted post-test means is 151.283. As the obtained F-value (151.283) is greater than the tabulated F-value (3.09) at 0.05 level of significance, significant difference exists in the adjusted post-test means of emotional intelligence among the experimental and control groups. The Scheffe’s post hoc test is applied as significant difference exists and the results obtained are presented in table 4.

Table 4: Scheffe’s Test for Differences in Paired Adjusted Post-Test Means of Emotional Intelligence among Experimental and Control Groups

<table>
<thead>
<tr>
<th></th>
<th>Aerobic exercise-with-music group</th>
<th>Aerobic exercise-without-music group</th>
<th>Control group</th>
<th>Mean differences</th>
<th>Confidence interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>74.18</td>
<td>69.95</td>
<td>57.70</td>
<td>4.23*</td>
<td>0.511</td>
<td></td>
</tr>
<tr>
<td>74.18</td>
<td>69.95</td>
<td>57.70</td>
<td>16.48*</td>
<td>0.511</td>
<td></td>
</tr>
<tr>
<td>74.18</td>
<td>69.95</td>
<td>57.70</td>
<td>12.25*</td>
<td>0.511</td>
<td></td>
</tr>
</tbody>
</table>

* Significant at 0.05 level

The table 4 indicates that the differences in paired adjusted post-test means between aerobic exercise-with-music and aerobic exercise-without-music is the value...
4.23 and 16.48 between aerobic exercise-with-music and control group, 12.25 between aerobic exercise-without-music and control group. All of them are significant as the obtained values are greater than the confidence interval value (0.511) required for significance. This indicates that there is significant difference exists among these groups.

VII. CONCLUSION

The analysis of data seemed to have permitted to the following results.
1. Aerobic exercise-with-music and aerobic exercise-without-music groups showed significant improvement in emotional intelligence.
2. The analysis of emotional intelligence also proved that significant difference found between the experimental groups and the control group. Better improvement was shown by aerobic exercise-with-music group than aerobic exercise-without-music and control groups. Aerobic exercise-with-music group also showed significantly better improvement in emotional intelligence than the other groups.

VIII. REFERENCES


TO CITE THIS PAPER