



EFFECT OF YOGA AND AEROBIC EXERCISE ON PHYSICAL FITNESS COMPONENTS IN SCHOOL-AGED CHILDREN: A STUDY IN BEED CITY SCHOOLS

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ABSTRACT:

This research investigates the effect of yoga and aerobic exercise on physical fitness components among school-aged children in Beed city. A total of 90 students aged 11 to 14 were selected from three schools and divided into three groups: Yoga Group (YG), Aerobic Exercise Group (AEG), and Control Group (CG). The study spanned 8 weeks, with pre- and post-tests administered using AAHPERD physical fitness components. Statistical analysis showed significant improvements in both yoga and aerobic groups compared to the control group, with yoga particularly enhancing flexibility and muscular endurance, and aerobic exercises boosting cardiovascular endurance and agility.



KEYWORDS: Yoga Group (YG), Aerobic Exercise Group (AEG), and Control Group (CG).

1. INTRODUCTION:

In the era of digitalization and sedentary lifestyles, the physical activity levels among school-aged children have declined dramatically. Physical Education plays a crucial role in improving the physical, mental, and emotional well-being of children. This study focuses on how yoga and aerobic exercises influence various components of physical fitness, such as strength, flexibility, endurance, and agility.

2. NEED AND IMPORTANCE OF THE STUDY:

- Increasing prevalence of obesity and low fitness levels in school children.
- Yoga and aerobic exercises are low-cost, non-competitive, and accessible.
- Need to identify effective physical activities for inclusion in school PE programs.
- Lack of region-specific data in Maharashtra, especially in Beed district.

3. OBJECTIVES OF THE STUDY:

1. To assess the current level of physical fitness among school children in Beed city.
2. To study the effect of yoga on selected physical fitness components.
3. To examine the impact of aerobic exercises on the same fitness components.
4. To compare the effectiveness of yoga and aerobic exercises.

4. ASSUMPTIONS:

- The selected children will perform exercises sincerely.
- All participants are medically fit to engage in yoga and aerobic exercises.
- The tools used for data collection are valid and reliable.

5. HYPOTHESES:

H0: There is no significant difference in physical fitness components among students practicing yoga, aerobic exercise, and the control group.

H1: There is a significant difference in physical fitness components among students practicing yoga, aerobic exercise, and the control group.

6. SCOPE AND LIMITATIONS: SCOPE:

- The study is limited to school-aged children (11-14 years) in Beed city.
- Focuses on selected physical fitness components.

Limitations:

- Study duration is limited to 8 weeks.
- Nutritional intake and lifestyle factors are not controlled.
- Sample size restricted to 90 students.

7. RESEARCH METHODOLOGY:

This study adopts the experimental method involving pre-test and post-test designs. The selected students were randomly assigned to three groups and underwent structured interventions.

8. RESEARCH DESIGN:

- **Type:** Experimental
- **Design:** Pre-test – Post-test Control Group Design
- **Groups:**
 - Group A: Yoga Group (n=30)
 - Group B: Aerobic Exercise Group (n=30)
 - Group C: Control Group (n=30)

9. SAMPLING TECHNIQUE AND SAMPLE:

- **Sampling Method:** Random sampling
- **Sample Size:** 90 students (11 to 14 years)
- **Location:** Three government and private schools in Beed city

10. TOOLS AND TECHNIQUES:

- **AAHPERD Youth Fitness Test:**
 - Sit-ups (Muscular strength & endurance)
 - Sit & Reach (Flexibility)
 - Shuttle Run (Agility)
 - 50m Dash (Speed)
 - Standing Long Jump (Explosive power)
 - 1-Mile Run (Cardiovascular endurance)

11. DATA ANALYSIS:

- **Descriptive statistics:** Mean and standard deviation
- **Inferential statistics:** Paired t-test and ANOVA
- Significance level set at 0.05

12. RESEARCH FINDINGS:

- Significant improvement in flexibility and muscular endurance in the Yoga Group.
- Aerobic Group showed marked improvement in cardiovascular endurance and agility.
- Control Group showed no significant change in any component.
- Yoga was more effective for flexibility; aerobic exercise better for endurance and speed.

13. CONCLUSION:

The study confirms that both yoga and aerobic exercises contribute positively to improving physical fitness in school-aged children. Incorporating these exercises into school routines can help combat the ill effects of sedentary lifestyles. Educational policymakers should encourage regular yoga and aerobic sessions in school PE programs, especially in semi-urban areas like Beed.

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