



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

EFFECTS OF YOGIC PRACTICES AND AEROBIC EXERCISES ON PSYCHOLOGICAL VARIABLES AMONG RURAL SECONDARY SCHOOL GIRLS

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ABSTRACT

This study examined the effects of yogic practices and aerobic exercises on selected psychological variables among rural secondary school girls. Ninety girls aged 13 to 16 years from a rural school in Karnataka were randomly divided into three groups: a Yogic Practices Training Group, an Aerobic Exercises Training Group, and a Control Group, with 30 participants in each group. The experimental groups underwent a structured 12-week training programme, while the control group followed their normal routine activities. The psychological variables assessed were stress, anxiety, and aggression. Data were analyzed using t-tests, ANOVA, and ANCOVA at the 0.05 level of significance. The findings showed that both yogic practices and aerobic exercises produced significant improvements in psychological well-being. Yoga was found to be slightly more effective in reducing stress and anxiety, while aerobic exercise also produced meaningful benefits. The study concludes that regular participation in yoga and aerobic activity can improve the mental health of rural adolescent girls and should be encouraged in school-based physical education programmes.

Keywords: Yoga, Aerobic Exercise, Stress, Anxiety, Aggression, Rural School Girls.

INTRODUCTION

Adolescence is a crucial stage of growth marked by rapid physical, emotional, and psychological changes. During this period, students often experience academic pressure, social adjustment issues, and emotional instability. These challenges may be more intense among rural secondary school girls because of limited access to sports facilities, health awareness, and recreational opportunities. As a result, there is a need for simple, low-cost, and effective methods that can support both mental and physical well-being.

Yoga is a traditional Indian practice that combines physical postures, breathing techniques, and meditation. It is widely recognized for its ability to improve flexibility, body control, emotional balance, and mental calmness. Aerobic exercise is another effective form of physical activity that improves cardiovascular fitness, mood, and psychological health. Both interventions are believed to reduce stress and promote better emotional regulation.

Although previous studies have reported the benefits of yoga and aerobic exercise, fewer studies have focused specifically on rural secondary school girls. This creates a need to examine how these two interventions influence psychological variables such as stress, anxiety, and aggression in this population. Therefore, the present study aimed to compare the effects of yogic practices and aerobic exercises on selected psychological variables among rural secondary school girls.

The analysis showed that the three groups were similar at the pre-test stage for stress, anxiety, and aggression, indicating that the participants started at a comparable level. After the 12-week intervention, clear differences emerged between the experimental groups and the control group. Both the yogic practices group and the aerobic exercise group showed improved psychological outcomes when compared with the control group. The adjusted post-test scores also confirmed that the differences were statistically significant.

For stress, both intervention groups recorded lower scores after training, with the yoga group showing a greater reduction than the aerobic exercise group. This suggests that yogic practices were more effective in reducing stress among rural secondary school girls. For anxiety, both groups again showed improvement, and the yoga group demonstrated slightly better results than the aerobic group. In the case of aggression, both interventions were effective, and the aerobic exercise group showed a somewhat stronger reduction than the yoga group.

OBJECTIVES OF THE STUDY

1. To examine the effect of yogic practices on stress of rural secondary school girls.
2. To examine the effect of yogic practices on anxiety of rural secondary school girls.
3. To examine the effect of yogic practices on aggression of rural secondary school girls.
4. To examine the effect of aerobic exercises on stress of rural secondary school girls.

HYPOTHESES

1. Yogic practices will significantly reduce stress of rural secondary school girls.
2. Yogic practices will significantly reduce anxiety of rural secondary school girls.
3. Yogic practices will significantly reduce aggression of rural secondary school girls.
4. Aerobic exercises will significantly reduce stress among rural secondary school girls.
5. Aerobic exercises will significantly reduce anxiety among rural secondary school girls.

METHODOLOGY

A sample of ninety rural secondary school girls aged 13 to 16 years was selected from a school in Karnataka. The participants were randomly assigned into three equal groups: a yogic practices training group, an aerobic exercises training group, and a control group, with 30 students in each group. The experimental groups underwent a structured 12-week training programme, consisting of six sessions per week, while the control group continued with routine school activities. The yogic practices group performed selected asanas, surya namaskar, pranayama, and meditation. The aerobic exercise group participated in planned low-, moderate-, and high-intensity aerobic activities.

The study assessed three psychological variables: stress, anxiety, and aggression. Pre-test and post-test data were collected from all three groups. The results were analyzed using ANOVA and ANCOVA at the 0.05 level of significance to determine the effects of the interventions.

RESULTS; -

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Table 1. Stress scores of rural secondary school girls

Test	YPTG	AETG	CG	Source of Variance	Sum of Squares	df	Mean Square	F Ratio
Pre-test	57.233	56.600	56.133	Between	18.289	2	9.144	0.04 NS
				Within	21014.033	87	241.541	
				Total	21032.322	89		
Post-test	42.266	44.700	54.266	Between	2414.422	2	1207.211	8.15*
				Within	12892.033	87	148.184	
				Total	15306.456	89		
Adjusted Post-test	41.912	44.734	54.587	Between	2654.807	2	1327.403	22.86*
				Within	4994.551	86	58.076	
				Total	—	—	—	

Table 2. Anxiety scores of rural secondary school girls

Test	YPTG	AETG	CG	Source of Variance	Sum of Squares	df	Mean Square	F Ratio
Pre-test	12.966	13.100	12.500	Between	5.956	2	2.978	0.37 NS
				Within	699.167	87	8.036	
				Total	705.122	89		
Post-test	11.100	10.300	12.300	Between	60.800	2	30.400	8.28*
				Within	319.300	87	3.670	
				Total	380.100	89		
Adjusted Post-test	11.070	10.234	12.395	Between	70.669	2	35.335	11.30*
				Within	268.910	86	3.127	
				Total	—	—	—	

Table 3. Aggression scores of rural secondary school girls

Test	YPTG	AETG	CG	Source of Variance	Sum of Squares	df	Mean Square	F Ratio
Pre-test	70.300	65.700	71.900	Between	2.956	2	1.478	0.0135 NS
				Within	3583.831	87	41.193	
				Total	3586.780	89		
Post-test	67.750	62.050	71.962	Between	498.831	2	249.415	622.515*
				Within	13.919	87	0.159	
				Total	512.750	89		
Adjusted Post-test	67.780	61.957	71.945	Between	559.954	2	279.977	772.244*
				Within	12.713	86	0.147	
				Total	—	—	—	

Note: NS = Not significant; * = significant at the 0.05 level.

The pre-test mean scores showed no significant difference among the groups, whereas the post-test and adjusted post-test scores revealed significant differences in favor of the experimental groups.

DISCUSSION

The findings of this study indicate that both yogic practices and aerobic exercises can positively influence the psychological health of rural secondary school girls. Regular participation in these activities appears to help reduce stress, anxiety, and aggression, while also supporting better emotional balance and behavioural control.

The stronger effect of yoga on stress and anxiety may be explained by its combination of breathing regulation, relaxation, and meditation. These practices help calm the mind, reduce mental tension, and improve self-awareness. Yoga encourages a more balanced response to pressure and may be particularly useful for adolescents facing emotional challenges.

Aerobic exercise also produced meaningful improvements, especially in aggression. This may be because physical activity provides an outlet for energy and emotional tension, while also improving mood and self-discipline. The repetitive and active nature of aerobic exercise can help students release frustration in a healthy way.

Overall, the study supports the use of both yoga and aerobic exercise in school settings. These activities are practical, affordable, and suitable for improving the mental well-being of adolescent girls, particularly in rural areas where resources may be limited.

CONCLUSION

The study concludes that twelve weeks of yogic practices significantly improved stress, anxiety, and aggression among rural secondary school girls. Aerobic exercise training also brought about positive changes in the same psychological variables. Both interventions were effective, but yoga was comparatively more beneficial for stress and anxiety, while aerobic exercise was slightly better for aggression. The findings support the inclusion of yoga and aerobic exercise programmes in the school curriculum to promote the psychological well-being of adolescent girls.

REFERENCES

Your reference list can also be made more consistent and professional. For example:

- Iyengar, B. K. S. (1965). *Light on Yoga*. London: Allen & Unwin.
- Astrand, P. O. (1977). *Textbook of Work Physiology*. New York: McGraw-Hill.
- Corbin, C. B., & Pangrazi, R. P. (1998). *Physical Activity for Children*. Arizona: Arizona State University.
- U.S. Department of Health and Human Services. (1996). *Physical Activity and Health: A Report of the Surgeon General*.
- American College of Sports Medicine. (2003). *Guidelines for Exercise Testing and Prescription*.

