

Comparative Study of Stress Levels and Physical Performance among Rural and Urban School Girls in Andhra Pradesh

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Abstract: The purpose of the present study was to conduct a comparative analysis of stress levels and physical performance among rural and urban school girls in Andhra Pradesh. In the modern educational environment, school students are often exposed to various academic and social pressures that may influence their psychological well-being as well as their physical performance. Therefore, it is important to examine the relationship between stress and physical fitness among adolescent girls studying in different environmental settings. For the purpose of this study, a total of 120 school girls aged between 14 and 17 years were selected from different government and private schools in Andhra Pradesh. The subjects were equally divided into two groups, consisting of 60 rural school girls and 60 urban school girls. The level of stress among the subjects was assessed through a standardized stress questionnaire, while physical performance was evaluated using selected fitness tests, namely, a 50-meter run for speed and a 600-meter run for endurance. The collected data were analyzed using appropriate statistical techniques such as Mean, Standard Deviation, and the independent t-test to identify the differences between the two groups. The results of the study revealed that urban school girls showed comparatively higher stress levels, whereas rural school girls demonstrated better performance in endurance activities. The findings indicate that environmental and lifestyle factors may influence both psychological stress and physical fitness among school girls. The study concludes that regular participation in physical activities and effective stress management strategies should be encouraged in schools to improve both mental health and physical performance among adolescent girls.

Keywords: Stress, Physical Performance, Speed, Endurance, Rural and Urban School Girls, Andhra Pradesh.

I. INTRODUCTION

Stress has become a common phenomenon in the lives of school students due to increasing academic demands, competitive environments, and social pressures. Adolescence is a critical stage of physical and psychological development, especially for school girls who often experience emotional, academic, and environmental challenges. These stress factors can significantly influence both mental well-being and physical performance. Understanding how stress affects physical fitness is essential for promoting healthy lifestyles among students.

Physical performance is an important component of overall health and fitness. It includes various aspects such as speed, endurance, strength, and agility, which contribute to the efficient functioning of the body. Regular participation in physical activities not only improves physical fitness but also helps in reducing psychological stress. Research studies have shown that physical exercise and sports participation can play a vital role in maintaining mental balance and improving academic performance among school students.

Environmental factors also play a significant role in shaping the physical and psychological development of students. Rural and urban environments differ in lifestyle patterns, availability of sports facilities, academic pressures, and daily physical activity levels. Rural school girls often engage in more natural physical activities and outdoor tasks, which may enhance their endurance and overall fitness. On the other hand, urban school girls may experience higher levels of academic pressure and a more sedentary

lifestyle, which could influence their stress levels and physical performance.

In the state of Andhra Pradesh, school education has been undergoing significant development, and attention is increasingly being given to the physical and mental well-being of students. However, limited research has been conducted to compare stress levels and physical performance between rural and urban school girls in this region. Such comparative studies are important for identifying differences in lifestyle, health, and fitness patterns among students from different backgrounds.

Therefore, the present study aims to examine and compare the stress levels and selected physical performance variables among rural and urban school girls in Andhra Pradesh. The findings of the study may provide useful insights for educators, physical education teachers, and policymakers to develop appropriate programs that promote both psychological well-being and physical fitness among school girls.

Statement of the Problem:

Therefore, the problem of the present study is stated as follows: “A Comparative Study of Stress Levels and Physical Performance among Rural and Urban School Girls in Andhra Pradesh.”

II. OBJECTIVES OF THE STUDY

1. To determine the level of stress among rural school girls in Andhra Pradesh.
2. To determine the level of stress among urban school girls in Andhra Pradesh.
3. To assess the physical performance (speed and endurance) of rural school girls in Andhra Pradesh.
4. To assess the physical performance (speed and endurance) of urban school girls in Andhra Pradesh.
5. To compare the stress levels between rural and urban school girls in Andhra Pradesh.
6. To compare the physical performance (speed and endurance) between rural and urban school girls in Andhra Pradesh.
7. To examine the relationship between stress levels and physical performance among rural and urban school girls in Andhra Pradesh.

Limitations of the Study:

1. The study was limited to 120 school girls only, which may not represent all school girls in Andhra Pradesh.
2. The study considered only two physical performance variables, namely speed and endurance, while other fitness components such as strength, agility, and flexibility were not included.
3. The level of stress was measured using a questionnaire, and the responses depended on the honesty and understanding of the participants.
4. The study was limited to school girls aged between 14 and 17 years, therefore the results cannot be generalized to other age groups.
5. Environmental and personal factors such as diet, family background, health status, and lifestyle habits were not controlled during the study.

Delimitations of the Study:

1. The study was delimited to school girls studying in selected schools of Andhra Pradesh.
2. Only 120 subjects were selected for the study, consisting of 60 rural and 60 urban school girls.
3. The age of the subjects was restricted to 14–17 years.
4. The study focused only on stress levels and selected physical performance variables (speed and endurance).
5. The physical performance tests used in the study were a 50-meter run for speed and a 600-meter run for endurance.
6. The duration of the study was limited to the data collected during the testing period only.

III. METHODOLOGY

The present study was conducted to compare the stress levels and physical performance among rural and urban school girls in Andhra Pradesh. The methodology adopted for the study is described under the following subheadings.

Selection of Subjects : For the purpose of the study, a total of 120 school girls were selected from various schools in Andhra Pradesh. The age of the subjects ranged between 14 and 17 years. The selected subjects were divided into two groups, consisting of 60 rural school girls and 60 urban school girls. The subjects were selected using a random sampling method.

Selection of Variables : In this study, the following variables were selected:

- Stress Level (Psychological Variable)
- Speed (Physical Performance Variable)
- Endurance (Physical Performance Variable)

Criterion Measures: The following tests were used to measure the selected variables:

- Stress Level: Measured through a standardized stress questionnaire.
- Speed: Measured by 50-meter run test and recorded in seconds.
- Endurance: Measured by 600-meter run test and recorded in minutes.

Testing Procedure: Before the testing, the purpose and procedure of the tests were clearly explained to the subjects. The tests were conducted on the school playground under the supervision of the researcher. Adequate rest was provided between the tests to avoid fatigue. The 50-meter run test was conducted to measure speed, and the time taken by each subject was recorded in seconds. The 600-meter run test was conducted to measure endurance, and the time taken to complete the distance was recorded in minutes. Stress levels were assessed by administering a standardized questionnaire to the subjects.

Table 1: Comparison of Stress Levels and Physical Performance among Rural and Urban School Girls in Andhra Pradesh (N = 120)

Variables	Group	N	Mean	Standard Deviation	't' value
Stress Level	Rural School Girls	60	18.45	3.12	2.48
	Urban School Girls	60	20.1	3.45	
Speed (50m Run in sec)	Rural School Girls	60	8.21	0.65	2.15
	Urban School Girls	60	8.46	0.72	
Endurance (600m Run in min)	Rural School Girls	60	2.45	0.28	2.36
	Urban School Girls	60	2.63	0.31	

Level of Significance: 0.05**

The table above compares stress levels, speed, and endurance between rural and urban schoolgirls in Andhra Pradesh. The calculated mean values indicate that urban school girls have slightly higher stress levels, while rural school girls perform better in speed

and endurance tests. The obtained 't' values suggest that there is a significant difference between rural and urban school girls in the selected variables at the 0.05 level of significance.

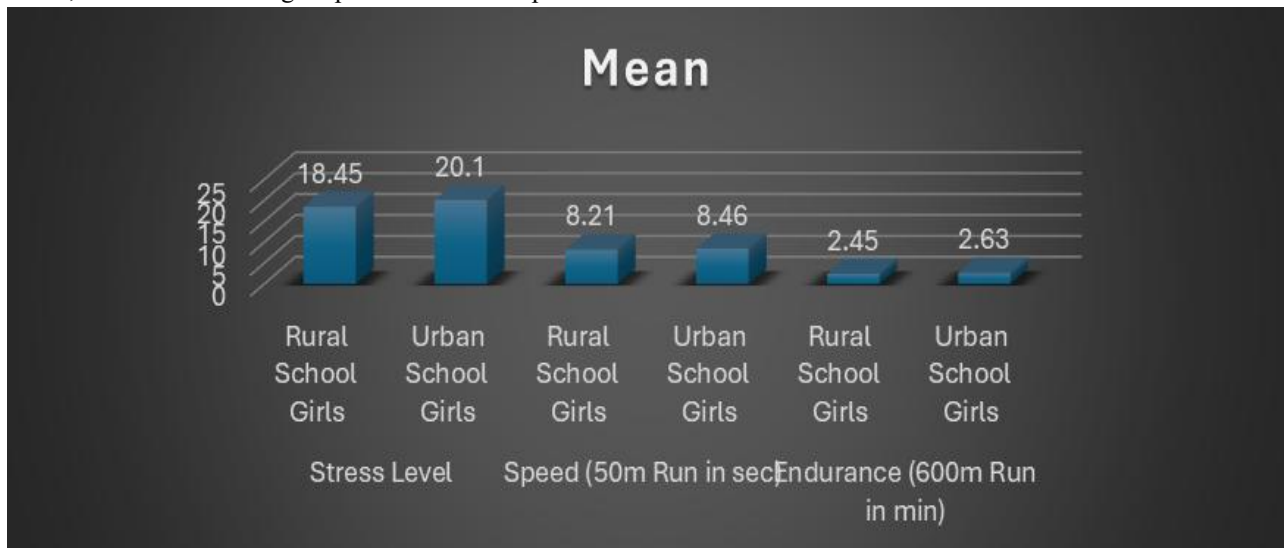


Fig 1: Mean value Comparison of Stress Levels and Physical Performance among Rural and Urban School Girls in Andhra Pradesh.

IV. RESULT AND DISCUSSION

The results of the study presented in Table 1 show the comparison of stress levels and physical performance variables (speed and endurance) between rural and urban school girls in Andhra Pradesh.

With regard to stress level, the mean score of rural school girls was 18.45 with a standard deviation of 3.12, whereas the mean score of urban school girls was 20.10 with a standard deviation of 3.45. The obtained t value was 2.48, which indicates that there is a noticeable difference in stress levels between the two groups. The results show that urban school girls experience higher stress levels compared to rural school girls. This may be due to increased academic pressure, competitive environments, and lifestyle factors commonly found in urban areas.

In the case of speed performance (50-meter run), the rural school girls obtained a mean value of 8.21 seconds with a standard deviation of 0.65, while urban school girls recorded a mean value of 8.46 seconds with a standard deviation of 0.72. The obtained t value of 2.15 indicates a difference between the two groups. The results suggest that rural school girls performed slightly better in speed compared to urban school girls. This may be attributed to greater involvement in outdoor activities and a more active lifestyle in rural environments.

Regarding endurance performance (600-meter run), rural school girls recorded a mean value of 2.45 minutes with a standard deviation of 0.28, whereas urban school girls recorded a mean value of 2.63 minutes with a standard deviation of 0.31. The calculated t value was 2.36, which also indicates a difference between the two groups. The results reveal that rural school girls demonstrated better endurance performance than urban school girls. This improvement may be due to regular physical activity and daily routines that require more physical effort in rural settings.

Overall, the findings of the study indicate that urban school girls tend to experience higher stress levels, while rural school girls show better physical performance in terms of speed and endurance. These differences highlight the influence of environmental conditions, lifestyle patterns, and opportunities for physical activity on both psychological and physical

aspects of adolescent girls. The results emphasize the importance of promoting physical education activities and stress management programs in schools to enhance the overall well-being of students.

V. CONCLUSION

Based on the findings of the study, the following conclusions were drawn:

1. **Stress Levels:** Urban school girls in Andhra Pradesh exhibited higher stress levels compared to rural school girls. This may be attributed to greater academic pressure, competitive environments, and lifestyle factors prevalent in urban areas.
2. **Speed Performance:** Rural school girls performed better in the 50-meter run test, indicating slightly superior speed compared to urban school girls. This could be due to increased involvement in outdoor activities and physically active routines in rural settings.
3. **Endurance Performance:** Rural school girls demonstrated better endurance in the 600-meter run compared to urban school girls, likely as a result of more regular physical activity and daily physical tasks in rural life.
4. **Overall Observation:** The study highlights a clear relationship between environmental factors, lifestyle, and both psychological and physical development among school girls. Rural school girls tend to have better physical performance, whereas urban school girls face higher levels of stress.
5. **Implications:** The findings suggest the need for regular physical activity programs, sports participation, and stress management interventions in schools, especially in urban areas, to improve the mental and physical well-being of school girls.

The study emphasizes the importance of creating a balanced educational and physical activity environment to promote both psychological health and physical fitness among adolescents in Andhra Pradesh.

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