

“A COMPARATIVE STUDY ON PHYSICAL FITNESS OF RURAL AND URBAN HIGH SCHOOL STUDENTS.”

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Abstract: The purpose of the study was “A Comparative Study in physical fitness of urban and rural high school boys”. Forty male students are considered as urban area student were selected for the study out of forty twenty students are sports man and twenty students are non sportsman. Selected the subjects from the 8th to 10th classes and the age of the subjects ranged 13-17 years. The students who came from rural areas and were studying in urban high school were eliminated from the study and visa-versa environmental conditions and socio-economic conditions were not considered for the selection of subjects for Statistical analysis ‘t’ test were used. The results of the study found that; Of the five Physical variables Speed, Endurance, Agility, Strength and Flexibility were found to be the sportsman boys of high school have higher strength and flexibility where as Non sportsman have higher in speed Endurance and Agility. Rural and Urban boys have similar in Speed, Endurance, Agility, Strength and Flexibility.

Keywords: Physical Fitness of Rural and Urban High School.

Introduction: The word “Physical Education”, Refers to various bodily characters such as physical strength physical development physical health and physical appearance. The objective of physical education concern with building up to physical power throw the growth and development of various systems like respiratory system digestive system in body participation in good programme of physical education promotion of bodily growth strength endurance structurally and functionally.

The term physical fitness is included in many familiar test batteries commonly uses in the schools in many cases the inclusion of fitness in such titles is most unfortunate error and one that logically could account at least in part for the current apathy of some people toward total personal fitness. This is not an indictment of physical fitness test batteries most of the batteries are excellent and include tests that do have some definite value but it is our feeling that many of tests in these batteries are not actually of physical fitness. Physical Fitness is the ability of an individual to live a full and balanced life. It involves physical mental social and spiritual factors and the capacity for their whole some expression. Primitive man recognized physical fitness as necessary to his survival but modern man. In this mechanical age tends to become compliment and forgets its importance not only to his efficiency and happiness. But also to the survival of his way of life. The right kind and right amount of physical exercise develops organic and muscular power stamina. Vigour and the activity skills related to his, development. There is a direct relationship between physical exercise and physical fitness (1955) 1956.

Methodology: Collection of data procedure for administrating test at the statistical technique used for analysis of data have been presented. 40 Male students from Shri Netaji Subhaschandra Bose, Govt. High School, Neeralkeri are considered as rural students and 40 male students from B.V.V.S High School, Bagalkot are considered as urban area student were selected for the study out of forty twenty students are sports man and twenty students are non sportsman. These high schools were selected because the heads teaching staff and students of these high schools showed keen interest and were willing to co-operate in carrying out in project. We selected the subjects from the 8th to 10th classes and the age of the subjects ranged 15-17 years. The students who came from rural areas and were studying in urban high school were eliminated from the study and vica-varsha environmental conditions and socio-economic conditions were not considered for the selection of subjects. The performance of the subjects (AAHPER) test 50 meter run shuttle run 10 x 4 m flexibility sit and rich standing broad jump 1500 mtr

run, endurance were taken as criterion measure for the study. The main purpose of the study was “A study on physical fitness of urban and rural high school boys”. Then the data were analyzed with reference to the objectives and hypotheses by using differential analysis with student unpaired t-test by using SPSS 11.0 statistical software and the results obtained there by have been interpreted.

Analysis of Data and Results of the Study:

Table-I: Results of t test between Sportsman and Non-Sportsman with Respect to Speed, Endurance, Agility, Strength and flexibility

Variables	Groups	Mean	SD	t-value	p-value	Signi.
Speed 50 meters run	Sportsman	7.0995	0.2385	-10.6247	0.0000	S
	Non-sportsman	7.8983	0.4113			
Endurance 1500 meters run	Sportsman	7.0490	0.4731	-8.1157	0.0000	S
	Non-sportsman	7.7877	0.3280			
Agility 4x10 meters shuttle run	Sportsman	9.0405	0.1247	-35.9808	0.0000	S
	Non-sportsman	10.8840	0.2991			
Strength broad jump standing	Sportsman	1.9678	0.1570	3.1999	0.0020	S
	Non-sportsman	1.8168	0.2538			
Flexibility sit and rich	Sportsman	11.7000	3.6459	5.5323	0.0000	S
	Non-sportsman	7.9000	2.3621			

From the results of the above table, we had seen that,

- The sportsman and non-sportsman of high school boys differ statistically significant with respect to speed 50 meters run (t=-10.6247, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the non-sportsman boys of high schools have higher speed of 50 meters run as compared to sportsman boys of high schools.
- The sportsman and non-sportsman of high school boys differ statistically significant with respect to endurance 1500 meters run (t=-8.1157, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the non-sportsman boys of high schools have higher endurance of 1500 meters run as compared to sportsman boys of high schools.
- The sportsman and non-sportsman of high school boys differ statistically significant with respect to agility 4x10 meters shuttle run (t=-35.9808, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the non-sportsman boys of high schools have higher agility of 4x10 meters shuttle run as compared to sportsman boys of high schools.
- The sportsman and non-sportsman of high school boys differ statistically significant with respect to strength broad jump standing (t=3.1999, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the sportsman boys of high schools have higher strength broad jump standing as compared to non-sportsman boys of high schools.
- The sportsman and non-sportsman of high school boys differ statistically significant with respect to flexibility sit and rich (t=5.5323, p<0.05) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the sportsman boys of high schools have higher flexibility sit and rich as compared to non-sportsman boys of high schools.

Table-II: Results of T Test Between Rural and Urban (Sportsman and Non-Sportsman) of High School Boys With Respect to Speed, Endurance, Agility, Strength and Flexibility

Variables	Location	Mean	SD	t-value	p-value	Signi.
Speed 50 meters run	Urban	7.4583	0.5378	-0.6930	0.4904	NS
	Rural	7.5395	0.5105			
Endurance 1500 meters run	Urban	7.4452	0.6043	0.4351	0.6647	NS
	Rural	7.3915	0.4946			
Agility 4x10	Urban	9.9375	0.9461	-0.2304	0.8184	NS

meters shuttle run	Rural	9.9870	0.9754			
Strength broad jump standing	Urban	1.8938	0.2350	0.0598	0.9525	NS
	Rural	1.8908	0.2133			
Flexibility sit and rich	Urban	10.1500	3.5988	0.8678	0.3882	NS
	Rural	9.4500	3.6158			

From the results of the above table, we had seen that,

- The rural and urban (sportsman and non-sportsman) of high school boys do not differ statistically significant with respect to speed 50 meters run ($t=-0.6930$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban (sportsman and non-sportsman) of high school boys have similar speed of 50 meters run.
- The rural and urban (sportsman and non-sportsman) of high school boys do not differ statistically significant with respect to endurance 1500 meters run ($t=0.4351$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban (sportsman and non-sportsman) of high school boys have similar endurance of 1500 meters run.
- The rural and urban (sportsman and non-sportsman) of high school boys do not differ statistically significant with respect to agility 4x10 meters shuttle run ($t=-0.2304$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban (sportsman and non-sportsman) of high school boys have similar agility of 4x10 meters shuttle run.
- The rural and urban (sportsman and non-sportsman) of high school boys do not differ statistically significant with respect to strength broad jump standing ($t=0.0598$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban (sportsman and non-sportsman) of high school boys have similar strength broad jump standing.
- The rural and urban (sportsman and non-sportsman) of high school boys do not differ statistically significant with respect to flexibility sit and rich ($t=0.8678$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban (sportsman and non-sportsman) of high school boys have similar flexibility of sit and rich.

Table-III: Results of T Test between Urban and Rural Sportsman Boys of High Schools With Respect To Speed, Endurance, Agility, Strength and Flexibility

Variables	Location	Mean	SD	t-value	p-value	Signi.
Speed 50 meters run	Urban sportsman	7.0630	0.2486	-0.9671	0.3396	NS
	Rural sportsman	7.1360	0.2284			
Endurance 1500 meters run	Urban sportsman	7.1115	0.6545	0.8322	0.4105	NS
	Rural sportsman	6.9865	0.1513			
Agility 4x10 meters shuttle run	Urban sportsman	9.0270	0.1255	-0.6801	0.5006	NS
	Rural sportsman	9.0540	0.1255			
Strength broad jump standing	Urban sportsman	2.0015	0.0747	1.3747	0.1773	NS
	Rural sportsman	1.9340	0.2065			
Flexibility sit and rich	Urban sportsman	11.5500	4.1482	-0.2571	0.7985	NS
	Rural sportsman	11.8500	3.1669			

From the results of the above table, we had seen that,

- The rural and urban sportsman boys of high schools do not differ statistically significant with respect to speed 50 meters run ($t=-0.9671$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban sportsman boys of high schools have similar speed of 50 meters run.
- The rural and urban sportsman boys of high schools do not differ statistically significant with respect to endurance 1500 meters run ($t=0.8322$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban sportsman boys of high schools have similar endurance of 1500 meters run.
- The rural and urban sportsman boys of high schools do not differ statistically significant with respect to agility 4x10 meters shuttle run ($t=0.6801$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban sportsman boys of high schools have similar agility of 4x10 meters shuttle run.
- The rural and urban sportsman boys of high schools do not differ statistically significant with respect to strength broad jump standing ($t=1.3747$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban sportsman boys of high schools have similar strength broad jump standing.
- The rural and urban sportsman boys of high schools do not differ statistically significant with respect to flexibility sit and rich ($t=-0.2571$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban sportsman boys of high schools have similar flexibility of sit and rich.

Table-IV: Results of T Test between Urban and Rural Non-Sportsman Boys of High Schools With Respect To Speed, Endurance, Agility, Strength and Flexibility

Variables	Location	Mean	SD	t-value	p-value	Signi.
Speed 50 meters run	Urban non-sportsman	7.8535	0.4506	-0.6834	0.4985	NS
	Rural non-sportsman	7.9430	0.3742			
Endurance 1500 meters run	Urban non-sportsman	7.7790	0.2944	-0.1671	0.8682	NS
	Rural non-sportsman	7.7965	0.3661			
Agility 4x10 meters shuttle run	Urban non-sportsman	10.8480	0.2762	-0.7571	0.4537	NS
	Rural non-sportsman	10.9200	0.3234			
Strength broad jump standing	Urban non-sportsman	1.7860	0.2887	-0.7622	0.4507	NS
	Rural non-sportsman	1.8475	0.2165			
Flexibility sit and rich	Urban non-sportsman	8.7500	2.2913	2.4124	0.0208	S
	Rural non-sportsman	7.0500	2.1637			

From the results of the above table, we had seen that,

- The rural and urban non-sportsman boys of high schools do not differ statistically significant with respect to speed 50 meters run ($t=-0.6834$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban non-sportsman boys of high schools have similar speed of 50 meters run.
- The rural and urban non-sportsman boys of high schools do not differ statistically significant with respect to endurance 1500 meters run ($t=-0.1671$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban non-sportsman boys of high schools have similar endurance of 1500 meters run.

hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban non-sportsman boys of high schools have similar endurance of 1500 meters run.

- The rural and urban non-sportsman boys of high schools do not differ statistically significant with respect to agility 4x10 meters shuttle run ($t=-0.7571$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban non-sportsman boys of high schools have similar agility of 4x10 meters shuttle run.
- The rural and urban non-sportsman boys of high schools do not differ statistically significant with respect to strength broad jump standing ($t=-0.7622$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural and urban non-sportsman boys of high schools have similar strength broad jump standing.
- The rural and urban non-sportsman boys of high schools differ statistically significant with respect to flexibility sit and rich ($t=2.4124$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the rural and urban non-sportsman boys of high schools have different flexibility of sit and rich.

Table-V: Results of T Test between Urban Sportsman and Urban Non-Sportsman With Respect To Speed, Endurance, Agility, Strength and Flexibility

Variables	Location	Mean	SD	t-value	p-value	Signi.
speed 50 meters run	Urban sportsman	7.0630	0.2486	-6.8698	0.0000	S
	Urban non-sportsman	7.8535	0.4506			
endurance 1500 meters run	Urban sportsman	7.1115	0.6545	-4.1594	0.0002	S
	Urban non-sportsman	7.7790	0.2944			
agility 4x10 meters shuttle run	Urban sportsman	9.0270	0.1255	-26.8389	0.0000	S
	Urban non-sportsman	10.8480	0.2762			
strength broad jump standing	Urban sportsman	2.0015	0.0747	3.2313	0.0025	S
	Urban non-sportsman	1.7860	0.2887			
flexibility sit and rich	Urban sportsman	11.5500	4.1482	2.6423	0.0119	S
	Urban non-sportsman	8.7500	2.2913			

From the results of the above table, we had seen that,

- The urban sportsman and urban non-sportsman of high school boys differ statistically significant with respect to speed 50 meters run ($t=-6.8698$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the urban non-sportsman boys of high schools have higher speed of 50 meters run as compared to urban sportsman boys of high schools.
- The urban sportsman and urban non-sportsman of high school boys differ statistically significant with respect to endurance 1500 meters run ($t=-4.1594$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the urban non-sportsman boys of high schools have higher endurance of 1500 meters run as compared to urban sportsman boys of high schools.
- The urban sportsman and urban non-sportsman of high school boys differ statistically significant with respect to agility 4x10 meters shuttle run ($t=-26.8389$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the

urban non-sportsman boys of high schools have higher agility of 4x10 meters shuttle run as compared to urban sportsman boys of high schools.

- The urban sportsman and urban non-sportsman of high school boys differ statistically significant with respect to strength broad jump standing ($t=3.2313$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the urban sportsman boys of high schools have higher strength broad jump standing as compared to urban non-sportsman boys of high schools.
- The urban sportsman and urban non-sportsman of high school boys differ statistically significant with respect to flexibility sit and rich ($t=2.6423$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the urban sportsman boys of high schools have higher flexibility sit and rich as compared to urban non-sportsman boys of high schools.

Table-VI: Results of T Test between Rural Sportsman and Rural Non-Sportsman With Respect To Speed, Endurance, Agility, Strength and Flexibility

Variables	Location	Mean	SD	t-value	p-value	Signi.
speed 50 meters run	Rural sportsman	7.1360	0.2284	-8.2320	0.0000	S
	Rural non-sportsman	7.9430	0.3742			
endurance 1500 meters run	Rural sportsman	6.9865	0.1513	-9.1451	0.0000	S
	Rural non-sportsman	7.7965	0.3661			
agility 4x10 meters shuttle run	Rural sportsman	9.0540	0.1255	-24.0547	0.0000	S
	Rural non-sportsman	10.9200	0.3234			
strength broad jump standing	Rural sportsman	1.9340	0.2065	1.2932	0.2038	NS
	Rural non-sportsman	1.8475	0.2165			
flexibility sit and rich	Rural sportsman	11.8500	3.1669	5.5968	0.0000	S
	Rural non-sportsman	7.0500	2.1637			

From the results of the above table, we had seen that,

- The rural sportsman and rural non-sportsman of high school boys differ statistically significant with respect to speed 50 meters run ($t=-8.2320$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the rural non-sportsman boys of high schools have higher speed of 50 meters run as compared to rural sportsman boys of high schools.
- The rural sportsman and rural non-sportsman of high school boys differ statistically significant with respect to endurance 1500 meters run ($t=-9.1451$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the rural non-sportsman boys of high schools have higher endurance of 1500 meters run as compared to rural sportsman boys of high schools.
- The rural sportsman and rural non-sportsman of high school boys differ statistically significant with respect to agility 4x10 meters shuttle run ($t=-24.0547$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the rural non-sportsman boys of high schools have higher agility of 4x10 meters shuttle run as compared to rural sportsman boys of high schools.

- The rural sportsman and rural non-sportsman of high school boys do not differ statistically significant with respect to strength broad jump standing ($t=1.2932$, $p>0.05$) at 5% level of significance. Hence, the null hypothesis is accepted and alternative hypothesis is rejected. It means that, the rural sportsman and rural non-sportsman of high school boys have similar strength broad jump standing.
- The rural sportsman and rural non-sportsman of high school boys differ statistically significant with respect to flexibility sit and rich ($t=5.5968$, $p<0.05$) at 5% level of significance. Hence, the null hypothesis is rejected and alternative hypothesis is accepted. It means that, the rural sportsman boys of high schools have higher flexibility sit and rich as compared to rural non-sportsman boys of high schools.

Conclusion: Of the five Physical variables Speed, Endurance, Agility, Strength and Flexibility were found to be the sportsman boys of high school have higher strength and flexibility where as Non sportsman have higher in speed Endurance and Agility.

Rural and Urban boys have similar in Speed, Endurance, Agility, Strength and Flexibility.

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