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A survey study on speed and endurance of rural and urban kho-kho players of Nagpur district

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Abstract

The aim of the present study was to compare the speed and endurance of the rural and urban secondary school boy's Kho-Kho players of Nagpur district of Maharashtra State. A total of 100 Kho-Kho players (50 each) of 14–17 years age were randomly selected from different rural and urban schools in Nagpur district. Selected variables, that is, the speed and endurance were measured using respective techniques and equipment. The between-group differences were taken into assessment for study. The analysis of obtained data was made by "t" ratio at 0.05 level of significance. On the basis of the results, it was concluded that there were significant differences in speed and endurance. The study revealed that the rural Kho-Kho players were significantly higher in speed and endurance than the urban Kho-Kho players of Nagpur district.

Keywords: Endurance, physical fitness, rural, speed, urban and kho-kho players

Introduction

Sedentary lifestyle is the most important problem for individual health growth. Low level of physical activity and sedentary lifestyle among students develops some diseases such as cardiorespiratory disease, obesity, high blood pressure, and diabetes. Many efforts are accomplished to emphasis on physical fitness, importance, physical activity, and health index. There are many researches on this subject; hence, there is an increased prevalence of sedentary lifestyles in the population. Regular physical activity is an effective function of physiological system, body weight preservation, and reduces risk of disease and overall better quality of life.

The signs of a sedentary lifestyle can be both physical and mental, and sometimes they're so small you may not even recognize they're happening to you. It's important to understand and acknowledge the signs so you can make adjustments to improve your health and quality of life. Signals that you might be leading a sedentary lifestyle can include:

- **Sleeplessness:** If you're not moving much during the day, your body doesn't feel like it needs to rest and recharge at night, which can lead to sleep problems. A good dose of exercise will help make you tired in a good way, which can lead to better sleep.
- **Fatigue:** If you're not sleeping at night, that would explain some of your fatigue, but being sedentary is a big factor, too. When you're active, your body releases endorphins – bursts of energy that are mood boosters and pain relievers, too. When you're not moving, you're not releasing endorphins, which could cause fatigue.
- **Difficulty concentrating:** Have you found your brain seems a little foggy, or you can't concentrate on tasks as well as you used to? Without enough physical activity, your alertness, attention and motivation can take a big hit.
- **Aches and pains:** If sitting at your desk is more of a pain in the neck or back than it used to be, you probably need to move more.
- **Weight gain:** With working from home becoming much more common, you may be finding your clothes are a little snug when you do venture into the office. That's because when you're sedentary, you're not burning as many calories, likely resulting in a little extra weight.

Health Risks of a Sedentary Lifestyle

Sedentary behavior can lead to serious health conditions that can have major long-term impacts on your physical and mental well-being.

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Some Diseases Caused by Sedentary Behavior?

Vein-related problems

When you don't move enough, your blood flows more slowly, which can result in vein-related problems. These include varicose veins and spider veins, and deep vein thrombosis (DVT) or superficial vein thrombosis (SVT), where blood clots form in your body's veins. DVT can become life-threatening if a blood clot travels to your lungs and blocks your blood flow. SVT isn't as likely to cause serious complications as DVT but can still cause pain. Being physically active gives you the best chance to keep your blood moving and avoid any vein-related problems.

Heart Disease

If you're not getting enough physical activity, it may result in heart disease. This can include cardiomyopathy, which affects how your heart pumps blood; and coronary artery disease, where the flow of oxygen-rich blood to the heart is reduced. There are several things that can cause these diseases, but a big contributing factor can be lack of movement.

High Cholesterol

Cholesterol, a fat-like substance that your body needs to build healthy cells, can be affected by sedentary behavior. High-density lipoprotein (HDL) is considered a "good cholesterol" that helps to remove low-density lipoprotein (LDL), or "bad cholesterol" from your bloodstream. If you're not moving enough, you may have high cholesterol, where you have too much LDL and not enough HDL – potentially causing hardened arteries, vascular issues and more.

High Blood Pressure (hypertension)

High blood pressure is when your blood is pushing too strongly through your body, making your heart work too hard. When your heart works too hard, that can lead to weakened blood vessels. Being more active may be an easy way to keep your blood pressure where it should be.

Diabetes

Insulin regulates your body's blood sugar levels and metabolism, helping your body use the sugar it needs for energy. Engaging in sedentary behavior for long periods of time can cause changes to your body, and that may result in insulin resistance and potentially Type 2 diabetes. Type 2 diabetes is more common in older adults, but children can be diagnosed with it too. There isn't a cure for it, but physical activity, weight loss and a good diet can help you manage it.

Obesity

Sedentary behavior means less movement, so less calories burned. It's recommended that adults and teens do at least 2.5 hours of physical activity per week to lessen the chance for heart disease. But recent studies show that only one in five people get the exercise they should – this can result in unintended weight gain and potentially obesity.

Certain Types of Cancer

Sedentary behavior may increase the risk of developing endometrial, ovarian and other cancers. Becoming more active and even potentially changing your diet may help you reduce cancer risks.

Mental health risks of a sedentary lifestyle

Stress, anxiety and depression– When physically active, your brain releases serotonin, which is a moodboosting chemical in your brain. Without physical activity, less serotonin is released, so you may have fewer positive feelings and less motivation. When you have less motivation, managing your mental health may become more difficult. While this can be a challenging cycle to navigate, there are steps you can take to improve your mental health and well-being.

All the activities of life are done with help of body. Nature has created humans to perform various activities efficiently. Today, modernization has made human life easier, as most of the work is performed by machines. The sedentary lifestyle of man has reduced the efficiency of humans. The less working capacity of humans has caused many problems such as weakness, illness, and chronic diseases. In the past, our ancestors were quite healthy and fit. The big reason was that they had to perform a lot of hard physical activity, such as running, walking, and jumping.

Statement of the problem

The problem is entitled as "A Survey Study on Speed and Endurance of Rural and Urban Kho-Kho Players of Nagpur District."

Objectives of the study

The following objectives were formulated:

1. To compare the speed between rural and urban male Kho-Kho players of Nagpur district.
2. To compare the endurance between rural and urban male Kho-Kho players of Nagpur district.

Methodology

For the purpose of this study, 50 boys students were studying in rural secondary schools and 50 boys students were studying in urban secondary schools were selected randomly as subjects from Nagpur district of Maharashtra State. The age group was between 14 and 17 years. The study was delimited to the male students only. Speed was measured by 50 Yard Run in seconds, and endurance was measured by Cooper Test (12 min run/walk) in covered distance in meters. To find out the comparison of speed and endurance status of rural and urban secondary school boys of Nagpur district for analysis of data, "t" test was applied.

Table 1: Comparison of Speed (50 m Dash) among Rural and Urban Secondary School (Boys) KhoKho Players

Group	n	Mean	SD	"t" ratio
Rural secondary school boys	50	6.97	0.39	1.33
Urban secondary school boys	50	6.94	0.58	

Significance at 0.05 level, "t"=1.96

Results

The speed and endurance among rural and urban Kho-Kho players were concluded using "t" test for the testing the hypothesis. The level of significance was at 0.05 levels. Table 1 explains about the comparison between rural and urban secondary school boys Kho-Kho players of Nagpur district on speed. The mean score 6.97 of the speed of rural Kho-Kho players is higher than the mean score of urban Kho-Kho players which shows a non-significant difference between the mean score of both groups. Here, the table value (1.33) is less than the calculated value (1.96).

Hence, it can be concluded that rural Kho-Kho players were better in speed than urban Kho-Kho players in Nagpur district.

Table 2 states the comparison between rural and urban secondary school boys Kho-Kho players of Nagpur district on endurance. The mean score 6.49 of the endurance of Kho-Kho rural players was higher than the mean score 6.05 of the urban Kho-Kho players of Nagpur district. This shows the significant difference between the mean score of both the groups. Here, the Table value (4.51) is greater than the calculated value (1.96). The magnitude of mean difference being higher in Kho-Kho rural players of Nagpur district.

Table 2: Comparison of Endurance (12 min walk/run) among Rural and Urban Secondary School (Boys) Kho-Kho Players

Group	n	Mean	SD	“t” ratio
Rural secondary school boys	50	6.49	0.64	4.51
Urban secondary school boys	50	6.05	0.26	

Significance at 0.05 level, “t”=1.96

Hence, it can be concluded that the rural Kho-Kho players were better in endurance than the urban Kho-Kho players in Nagpur district.

Conclusion of the study

On the basis of the finding of the present study, the following conclusion has been drawn:

The above analysis shows that there was a significant difference in the selected physical variables such as speed and endurance among Kho-Kho players of Nagpur district. Rural Kho-Kho players were better in speed than the urban Kho-Kho players of Nagpur district and rural Kho-Kho players were better in endurance than the urban Kho-Kho players of Nagpur district.

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