

TO ASSESS HEALTH-RELATED PHYSICAL FITNESS COMPONENTS AND NUTRITIONAL STATUS AMONG SECONDARY-LEVEL STUDENTS OF DISSIMILAR SCHOOLS OF THE KUMAON REGION

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Health-related physical fitness refers to a type of physical fitness that consists of cardio-vascular endurance, muscular fitness (strength and endurance), flexibility, and body composition. Fitness is a key indicator of health in school children can predict the health status in the later phases of the student's life. The present study or investigation will analyze or assess health-related fitness components, nutritional status among secondary and senior secondary-level students between 14 to 18 years age group of dissimilar schools of the Kumaon region (Uttarakhand) through various variables of health-related fitness such as (1)-One mile walk/run test to measure Cardio-respiratory Endurance, (2)-Hand grip strength test to determine muscular Strength (3)- Mod-ified sit-ups test to assess muscular Endurance (4)- Sit and reach test to evaluate flexibility and Body Composition with the help of Body Mass Index test, Nutrition Status can be evaluated with Anthropometric measurements like Age, weight, Height. The study is carried out 900 (nine hundred) boys students of dissimilar schools of the Kumaon region. The present study is based on five category's schools for instance KVS, JNVs, GICs (Rajkiya Inter College), Government-Aided, and Private unaided schools.

Keywords: Health-Related Fitness, Nutritional Status, Dissimilar Schools of The Kumaon Region, Secondary Level Students, Body Mass Index.

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Introduction

The present study is based on Uttarakhand state, which is situated in northern India. Initially, Uttarakhand was a part of Uttar Pradesh state after post-independence of India in the years 1947. Uttarakhand was made into a separate state as Uttaranchal on 9 November 2000; it has divided into two divisions Garhwal and Kumaon. The main profession of Uttarakhand is tourism and agriculture.

Today's lifestyle of students is mostly depending on modernization and technology. They are running day-by-day behind British culture, customs and traditions, and depend on machinery and technology. Today is a time of technology. No doubt technology is our basic need in each sector and plays the most important role to enhance the sports performance of athletes and working capacity in daily life. The people of the whole world have become habitual and addicted to technology, especially mobile cell phones and most of the time they have to stay connected with social sites, now they cannot live without it because they want to progress, growth and development day by day, want to earn a lot of money. You have realised internet ruined our communication skills, reading skills, writing skills, relations of family members, and also affect the physical activities. So they have forgotten the real existence of life. Children are imitating, learning from their parents, elders at home, and in nearby societies, they also have adopted it and depended on advanced innovative technology, and machinery today, they do not want to do physical or manual work without the help of electronic devices. During covid-19 pandemic, online teaching and learning play a crucial role in the education sectors to provide online education to students at different levels at home by teachers with the help of new and advanced technologies, and through digital education, Children have become more addicted to cell phones since the time of covid-19 Pandemic, 2019 (**G.D.Verma, (2022)**).

Today most of the secondary and senior secondary students' age group between 14 to 18 years (especially classes 9th to 12th) are away from physical activities. They are under pressure of study, family issues and a lot of social barriers, which are affecting the lives of students today; while most parents want that their children devote most of their time to their studies. Because they think no other career options in games and sports

And are comparing their children to other children who live nearby societies, relatives and their friend's circles etc. Nowadays, most parents in society want their children to become engineers and doctors after getting study, and they are engaged in this competition with each other, most people do not want that their child becomes a good sports person, to participate or involve in games & sports, and physical activities. They think participation in games & sports, and physical activities are a waste of time and money, it is a leisure time activity, and the remaining work has been done through social media, social sites, advanced technology, modernization and industrialization. Today social sites and technology have become a part of our daily lives. In the 21st century, the physical fitness of students and human beings has been confined only to gym centres and fitness clubs. So the level of physical fitness and working capacity has become very low as compared to primal men due to physical inactivity.

Apart from it, the diet of students is not appropriate and balanced as per the requirement of their bodies. Nutrition plays a significant role in the proper growth and development of the body, protecting from various diseases to remain healthy and physically fit, and regulating the activities of body's organs. It is well known that food is essential for survival on earth. Food refers to any substance that we can digest, absorb and utilize, for various physiological functions of the body including growth and development. From the time of conception in the mother's womb, the required food substance and nutrients play a significant role to build a healthy body, physical movements and performing physiological functions. Because of this, it is advised to the mother that after the birth of the new-born baby must be fed mother's milk for up to six months, which provides energy for our sustenance, and regulates activities of the body's organs; also repairing day-to-day wear and tear of the body, and remaining fit and healthy, improving the life status. The role of food is enormous. Food provides a lot of nutrients such as carbohydrates, fat, proteins, vitamins, minerals, fibres & roughage, and water to the body. Health-related fitness components, physical fitness and nutrition affect the sports performance of the secondary and senior secondary level students of the age group 14th to 18th years, especially classes 9th to 12th of the dis-similar schools.

Apart from it, various other factors affect the physical fitness and nutritional status of the students, which are:

01. Genetically factors
02. Psychological factors
03. Physiological factors
04. Socio-economic factors
05. Nutritional factors
06. Unavailability of playgrounds
07. Due to excess use of social sites and electronic devices
08. Due to unawareness of the merits of physical fitness and nutrition
09. Due to unemployment, poverty, and increasing population.
10. Due to study pressure and social barriers.
11. Due to unavailability of doctors, fitness experts and nutritional counsellors etc.

In the Modern age life of students is full of stress, tension, and anxiety, therefore complicated. Approx. 90% land of the Kumaon region is hills and mountains, so most students have a sedentary lifestyle, limited resources, and non-availability of playing facilities, sometimes lacking nutritional diet due to hilly areas.

The present study or investigation will analyse or assess health-related fitness components, nutritional status and sports performance among secondary and senior secondary level students age group between 14 to 18 years, especially classes 9th to 12th of dis-similar schools of the Kumaon region (Uttarakhand) through various variables of health-related fitness such as Cardio-respiratory Endurance, Muscular Strength, Muscular Endurance, Flexibility and Body Composition with the help of valid and reliable test.

To evaluate nutritional status with the help of the socio-economic status scale and lifestyle assessment inventory of students, assessors can use the measurement for body composition and development of Anthropometric measurements or measure of how well the body performs certain tasks (functional tests of nutrition status). Anthropometric measurements

And functional tests useful in nutritional assessment indicate that each measurement depends on adequate nutrition. Poor growth and development in children indicate malnutrition. Malnutrition is the impairment of health resulting from a deficiency of calories and/or more nutrients and usually of calories. All the variables of health-related fitness components and nutritional status affect directly or indirectly the level of sports performance of school-going children. In this present study sampling data will be collected from 06 different districts of the Kumaon region (Uttarakhand) in different games disciplines. The sample size will be 900 students of age group 14 to 18 years of KVS, JNVs, GICs (Rajkiya Inter College), Government-Aided, and Private unaided schools.

Related Literature

On the occasion of National Sports Day "Fit India Movement" was launched on 29th August, 2019 by Hon'ble Prime Minister under the Ministry of Youth Affairs & Sports with a view to make fitness an integral part of our daily lives and to develop physical, motor and health related fitness components of each and every citizen of the country. It will be very helpful to the school going children to maintain their life status, development of physical and health related fitness components in coming years (**Fit India Movement, 2019**).

(Albon et.al. 2010) The purpose of the Movement is to bring about behavioral changes and move towards a more physically active lifestyle. Towards achieving this purpose, Fit India proposes to undertake various initiatives and conduct events to achieve these objectives, to promote fitness as easy, fun and free, to spread awareness on fitness and various physical activities that promote level of fitness through focused campaigns such as "**Fitness Ka Dose Aadha Ghanta Roz**", and to encourage indigenous sports, to make fitness reach every school, college/university, panchayat/village, etc., to create a platform for citizens of India to share information, drive awareness and encourage sharing of personal fitness stories (**Fit India Movement, 2019**).

"Fitness is a measurable state or condition that is influenced by heredity to some extent" consistent with **Ralph S Paffer (1996)**. Health is a state as well, but it cannot be quantified or defined in the same way that fitness can. Health is more than just

The absence of sickness; it is a comprehensive condition of physical, mental, and social well-being that encompasses all levels of vitality from the highest to the lowest. However World Health Organization, defines the term fitness such as "the ability to perform work adequately, making the determination of who is fit and who is not somewhat based on personal preference and social interactions" (*Snowdan, 2002*)

Objectives of the Study

- To find out the current status of health related physical fitness among secondary and senior secondary level students of the Kumaon region (Uttarakhand).
- To motivate students, parents and schools administration through this study about the merits of Physical activities.
- To assess and evaluate the causes of physical inactivity, malnutrition in hilly areas and give them solutions of problems.
- To promote awareness of health-related physical fitness and role of nutrition to the body.
- To promote the wellness status of the students of hilly areas.

Importance of Study

A good and properly planned diet, physical work out can provide following benefits to the secondary and senior secondary level students of dissimilar schools of the Kumaon region.

- Proper enhancement of sports performance.
- Quick pace of recovery during training as well as competition and post training.
- Mentally, physically prepared for participation in competition.
- Consolidation and stabilization of peak level competition performance.
- Reduction in diseases and sports injuries during and post events.
- Satisfaction, enjoyment and free from anxiety and stressful lives.
- Improve the way of life and working efficiency.
- Awareness about merits of nutrition for growth and development.

Methodology and Results

The desirable outcomes of investigation are depends on well-designed research projects, reliable and truthful facts, such types of information are gathered through a methodical process. So before starting the study researcher must be make a good plan to obtain real and actual facts. In this chapter, research methodology will be discussed like study design, subject and variable selection, administration of various tests, tool scoring, and statistical methods used in analyzing the data.

This study will be designed on the bases comparative cross-sectional study to establish the relationship, variation and sports performance in different sports disciplines such as Football, Volleyball, Badminton, Cricket, Athletics, And Kabaddi among secondary and senior secondary level boys students of Kendriya Vidyalaya (KVs), Jawahar Navodaya Vidyalaya (JNVs), Government Inter Colleges (GICs)/ Rajkiya Inter Colleges, Government-Aided, and Private unaided schools of the Kumaon region (Uttarakhand).

The study will be carried out by using a descriptive analysis and correlation methodology, in which Socio-economic Status and Life Style Assessment data will be collected by using Kuppuswamy's socio-economic scale questionnaire and Life Style Assessment Inventory by Anspaugh Davids, Michael, H. Hamrich and Frank D. Rosato, questionnaire will be used as the tool. The researcher will collect the information through questionnaires from the students and youth athletes at the school with permission of concerned/competent authority.

Selection of tools

- All the related contents of Kuppuswamy's socio-economic status scale and life style assessment inventory (LSAI) will be assessed by using Anspaugh et al., 2011. The questionnaire used in this study for the collection of data are selected because these are most reliable and valid, and have been widely used very often in the profession of physical education and sports throughout the world.
- Height will be measured with a standard Stadiometer to the nearest 1/10 of a centimeter.
- Body weight will be recorded to the fraction of 1/10 of a kilogram with a standard weighing machine.
- Cardio respiratory Fitness/Endurance

- will be assessed by the time taken in seconds for the 1.5 mile walk/run or one-mile walk/run.
- Body composition will be assessed by Weight/Height (Body Mass Index) in centimeter, kilogram.
- Muscular strength will be measured by handgrip dynamometer, recorded grip strength data in kilograms.
- Muscular Endurance will be further assessed by the number of correctly Bent Knees/Modified timed sit-ups (Timed Flexed Knees Sit-ups) performed in sixty seconds.
- Flexibility will be determined by sit and reach test and recorded in centimeters.
- Nutritional status will be measured through anthropometric measurements. Via. Age, Height, Weight, recorded in centimeters, kilograms.
- Sports performance level of the students will be recorded with the help of games experts in each discipline by appropriate demography.

Findings & Discussion

Kumaon region comes under a remote, hilly and mountains area so there are some issues/challenges can be realised related physical fitness and nutrition. It was found that in this region there are so many problems can be seen such as lacking of appropriate playgrounds, nutritional diet, and unaware about the merits of physical activities and the role of nutrition in our body etc. The study will highlight the physical inactivity, the level of physical fitness as well as nutritional problems faced by students, parents, school administration of each district in the Kumaon region. Test results of the study will be used to motivate, stimulate student interest in health related fitness topics, about nutritional awareness, and help in motivating and encouraging the dissimilar school's students, and give some useful basic knowledge to the research scholar and other educationist to conduct the further research work in this field.

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