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To study the impact of socioeconomic status on athletes' physical fitness, academic accomplishment, and athletic achievement

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Abstract

The focus is on strengthening youth capabilities so that they can expand their horizons. We can achieve youth development through promoting sports development and, as a result, contributing to the unification of the kids, resulting in their overall personality development, increased confidence, increased productivity, and familiarity with team skills. These discoveries will eventually aid the nation's progress. As a result, India's youth population will grow, while the rest of the developed world, including China, will continue to suffer the weight of the globe's aging population. This transition can only be sustained if we pay attention to our children's education and give them with the skills they need. The Prime Minister of India emphasized that, Regrettably, the statistics on university and college sports participation vary. Sports take a back seat to academics in any educational institution, such as a school, university, or college. This is a flagrant disregard for education's basic objective, which is to foster mental and physical development. Physical education and sports activities are implemented primarily for the purpose of obtaining a label in certain institutions. For the sake of having a name, physical education and sports are only taught in a few institutions. They lack the essential facilities and athletic coaches. According to one of AIU's investigations, most colleges lacked the necessary infrastructure to meet international standards.

Keywords: Youth capabilities, productivity, institutions, athletic coaches

1. Introduction

The sacred writing amount contains the history of Indian athletics. It is unclear when precisely athletics made its mark on Asian nations as a distinct activity, but it is known that the boundaries of Indian athletics were shaped by the beautifully expressed principles of Atharva holy writing.

In the era of the sacred writings, or even later in the Sanskrit literature and Mahabharata, athletics was a common type of sports. There was a strong emphasis on sports including chariot athletics, archery, skill, military tactics, wrestling, weightlifting, swimming, and looking. Historical evidence indicates that Indian sports took on a fascinating role once Buddhism spread throughout Asian nations. Sports including horseback riding, chariot racing, and sports were popular at the time. In addition to these activities, strolling, hiking, and 'gulli-danda' also had an impression on the ancient Asian nation later on. During that time, these games served as a setting for the Indian emperors' training exercises. As time went on in Asian nations, sports' nature

and structure started to change. Sports like sprinting, jumping, and throwing were competitive during the medieval era in Indian sports history. The majority of those games could be considered the forerunners of modern athletics foot races and field events. Since these sports were so effective in improving physical fitness, they spread throughout Asian nations.

Modern track and field competitions started to be established and compete often in the early years of Indian independence. There have been several different eras in Indian Athletics' history up to this point. Initially, games were played on clinker and grass tracks; later, artificial tracks were used. Athletics' status increased after technology was used because it greatly aided in keeping track of players' records.

Before Independence, Indian athletics was conducted in an unorganized manner; this changed in 1946 when the sport started to be run within an organized structure. The 1940s and 1950s are the most significant in the history of Indian

athletics since several athletics associations got their start in India during this time. In 1946, the Amateur Athletics Federation of Asia (AAFI) was founded to provide proper administration of Indian sports. Together with other athletics associations, it aimed to improve the overall state of Indian athletics. Indian athletes have so far produced a wide range of successful athletes competing at the international level, and they have made an impression at numerous international competitions. To name a few, Milkha Singh, T. C. Yohannan, Gurbachan Singh Randhawa, and Sriram Singh are among the most successful athletes in Indian history. Some well-known contemporary female athletes are P T Usha, the martyred Anju police officer. Athletics is the most frequent type of sport in India, where competition in sports is quite intense. India has produced notable athletes who have performed exceptionally well on the global stage. When India began competing in 1948 in London, there have been eight athletes from the United Nations that have participated. For the first time ever, Indian women took part in the Olympic Games and won medals together. Together, they won medals at Asian Games, world championships, etc.

Prominent figures in Indian athletic history include P.T. Usha, Jeev Milkha Singh, Anju police officer George, Abhinav Bindra, Rajyavardhan Singh, and others. The purest of all alternative sports, athletics, is entirely dependent on physical strength rather than any other kind of technical equipment. The body's strength is the main focus of the performance. Indian athletes strived to gain acceptance and love from society, and as a result, their accomplishments are regarded as admirable and elevated to the status of superhumans and exceptional individuals. Both indoor and outdoor sports are included in the word "athletics," yet some sports are considered to be historical while others are considered to be well-executed. Road running, race walking, and many other sports are examples of square measure sports. The track events range in length from one hundred to ten thousand meters, the hurdles from one hundred to five hundred meters, and the relay events from one hundred meters to four hundred meters. Sports like discus throwing, javelin throw, long jump, shot put, athletics, and high jump were included in the opposite events.

The sports coaching centers are the best spot to look for promising athletes in India. The development of coaching centers was a response to the growing demand, and the primary duties were associated with sports design. Indian athletics has become the pinnacle of greatness; it is known as track and field since it encompasses all sports that are comparable to throwing, running, and leaping.

Track events are those that include sprint-style competitions held on a 400-meter track and similar to them. Events that range in length from 800 to 3000 meters are measured by the center distance events square. Tower chase is a type of competition that includes alternate obstacles and water jumps. The opposing typical events encompassed a large area of 5000–10,000 meters in length. Among the popular sports are hurdles and relays.

One of the popular events for ten to fifty kilometres is race walking. The throwing competitions in athletics, such as the javelin and hammer throws, comprise the other field events. The athlete's square measure consistently offered guidance

to engage in and excel in a variety of sports. Although Indians haven't had much success in sports thus far, smart outcomes could be anticipated in the long run.

2. Statement of the problem

International sports have a bright future for the Solapur district. Numerous international athletes, including Angha Deshpande, Vandana Shanbhg, Bhageshri Bille, Kashinath Aswale, and international cricketer Polly Umrigar, were developed in the district. The founding of Solapur University took place on August 1, 2004. The purpose of constructing Solapur University in Solapur is to serve the community of around 60,000 students. The university is about to undergo a brutal transformation. One poignant tale of National Judo player Nehal Shivshigvaletto was written in Daily Lokmat (Solapur Edition) on February 26, 2012. Where we learn that, due to his dire financial circumstances, such a promising player works in a kiln. Although he is talented and has potential, his financial situation prevents him from going to college. There are numerous instances of athletes going through similar challenges, albeit to varying degrees of severity. Therefore, it becomes necessary to research the actual facts and comprehend the socioeconomic situation and level of physical fitness of athletes from colleges connected to Solapur University Solapur.

3. Review of Literature

According to Phillips *et al.* (2007) ^[1], athletes must be cognizant of the amount of protein, carbohydrates, and several other micronutrients and minerals they consume in order to perform at their highest levels. Despite this, it seems that the new nutritional recommendations for protein fall between 1.2 and 1.6 grammes per kilogram of body weight. This quantity exceeds the recommended daily allowance (RDA), which is a protein consumption meant only to compensate for deficiencies. It appears that optimizing the accumulation of muscle proteins is also influenced by the quality of protein, thus athletes would do well to concentrate on consuming high-quality protein sources like dairy, eggs, and lean meat. In situations where athletes find it difficult to eat these kinds of protein sources, more portable protein sources-specifically, protein supplements-provide a useful substitute. But because protein bars and beverages vary widely in their composition, athletes should carefully examine the content of these supplements to ensure that they are high-quality. About 20–25 g of high-quality protein appears to be the optimal amount to stimulate muscle protein synthesis; beyond this, there is no further stimulation of protein synthesis, but there may be increases in urea synthesis and amino acid oxidation.

Every six months for three years, Aerenhouts (2011) ^[2] measured the height, weight, and body composition of sixty teenage sprint athletes in addition to their macronutrient intake. The Belgian and Dutch food databases were used as the basis for the analysis of seven-day food records. At the beginning of the three-year study, the average age of female athletes was 14.8 + 1.6 years, while the average age of male athletes was 14.7 + 1.9 years. Both boys and girls increased weight (5.6+3.5 kg and 8.7+5.5 kg, respectively) and height (3.4+4.6 cm and 5.9+6.6 cm, respectively), but their percentages of body fat (around 17.0 percent and 8.5

percent, respectively) stayed the same. For both sexes, the average protein intake of about 1.5 g -1 kg-1 body weight was within recommended limits each time. A moderately intense workout regimen can be supported by consuming 5 to 7 g of carbohydrates per kilogram of body weight. At the beginning of the trial, intakes of total and saturated fat were high (girls: 31.8+3.5% and 12.2+2.0% of energy intake; boys: 30.3+4.6% and 12.0+1.9% of energy intake), and it seemed challenging to reach and sustain reduced intakes. We saw consistent modest fluid intakes of about 40 ml kg-1 body weight. Only the consumption of wholegrain bread, veggies, and soft drinks significantly improved as a result of general, non-stringent dietary guidance. Teenage sprint athletes' dietary habits are generally steady and don't always follow recommendations, but they can improve somewhat with consistent guidance.

For athletes, supplying energy is the most important aspect of nutrition. Maintaining lean tissue mass, immunological and reproductive health, and peak athletic performance all depend on achieving energy balance. According to Swinburn and Ravussin (1993) [3], energy balance occurs when the total energy ingested from food, liquids, and supplement items is equal to the total energy dissipated from basal metabolism, food's thermic action, and any voluntarily engaged in physical activity. Performance and the benefits of training are compromised by an inadequate calorie intake compared to energy expenditure. The body will use its lean tissue mass and fat reserves as fuel when calorie intake is restricted. Loss of strength and endurance is the outcome of muscle loss. Furthermore, a persistently low calorie consumption frequently leads to a poor nutrient intake, especially for micronutrients.

According to Motonaga *et al.* (2006) [5], the endurance athletes' total energy expenditure was higher than anticipated and was influenced significantly by their exercise energy expenditure. This suggests that when considering nutritional support for athletes, it is important to carefully assess their total energy expenditure (TEE). According to Hunter *et al.* (2000) [6], TEE increased by a decrease in the respiratory exchange ratio (RER) following physical training. Increases in physical activity and resting energy expenditure (REE) lead to an increase in TEE. This finding suggests that by enhancing their metabolic profile, resistance training may be beneficial in helping older adults increase their energy expenditure and lactate oxidation rate. According to Venkatramana (2010) [7], depending on the sport and training period, all athletic events require the same level of strenuous muscle training. As a result, nutritional requirements-particularly energy requirements-vary significantly amongst athletes. Athletes' energy requirements are influenced not only by their sport, but also by their age, gender, and body composition, as well as by different training phases and non-training activities. Pritzlaff (2000) [8] came to the conclusion that there is a positive correlation between the amount of fat burned during recovery and the amount of carbohydrates burned during exercise. Regular exercise may decrease energy balance through an increase in energy expenditure or an increase in fat oxidation. Higher exercise intensities are associated with an increase in fat expenditure recovery that is connected to the growth harmonic. By adjusting nutrient intake, it could also aid with weight loss.

4. Objectives of the study

1. To look at the athletes' levels of physical fitness, academic accomplishment, and athletic achievement in the research area.
2. In the research field, investigate the impact of socioeconomic status on athletes' physical fitness, academic accomplishment, and athletic achievement.

5. Research Methodology

For data collection on the athlete's socioeconomic status, the researcher used the survey approach. Various tests were undertaken in order to acquire data on the athletes' physical fitness. A comprehensive questionnaire containing information on athletes' socioeconomic background, athletic achievement, and academic achievement has been devised. The questionnaire was created using the Socio-Economic Status Scale produced by National Psychological Corporation, Agra's Rajbir Singh, Radhey Shyam, and Satish Kumar. The researcher examined the players' socioeconomic condition, level of physical fitness, athletic and academic accomplishments, and affiliation with colleges connected to Solapur University in Solapur, Maharashtra. For this investigation, the stratified random sampling approach was employed.

The goal of the study was to create norms for Solapur University, Solapur athletics students between the ages of 19 and 28. For this study, round off 150 male athletes and 50 female athletes from 20 colleges associated with Solapur University in Solapur were chosen. In this Final Selection sample is 120 male athletes and 40 female athletes for this study.

6. Results and Data Interpretation

6.1 Bend and reach flexibility test

The Bend and Reach Flexibility test results for the sample respondent are displayed in Table. This test is helpful in determining how adaptable the sample response is. There are 160 sample respondents in total; 120 of the respondents are men and 40 are women.

Table 1: Bend and reach flexibility test of respondents.

Bend & Rich Flexibility Test			
Sr. No	Particular	Male	Female
1	Highest Performance	25cm	20cm
2	Lowest Performance	2cm	4cm
3	Mean	9.05	9.15
4	S.D.	5.73	4.07

Male sample respondents' Bend & Rich Flexibility Test results range from 2 to 25 cm, while female sample respondents' results range from 4 to 20 cm.

It is calculated to find the Bend & Rich Flexibility Test mean. The mean score for respondents in the male sample is 9.05, while the female group has a score of 9.15. The standard deviation for respondents in the male and female samples, respectively, is 5.73 and 4.07, respectively.

In general, men are less flexible than women; nevertheless, it has been found that female sample respondents are less flexible than male sample respondents. Less flexibility among female respondents can be attributed to a variety of factors, including injury, heavy weight, lack of stretching exercises, stiff muscles, etc.

6.2 Medicine ball throw test

The sample respondent's Medicine Ball Throw test results are displayed in Table. This test is helpful in determining the sample respondent's upper body (arm) strength and explosive capacity. There are 160 sample respondents in total; 120 of the respondents are men and 40 are women. A rating system of outstanding, decent, mediocre, and terrible is used to assess the medicine ball throw.

Table 2: Medicine ball throw test of respondents.

Medicine Ball Throw			
Sr. No	Particular	Male	Female
1	Highest Performance	5.1 Mts.	4.00 Mts.
2	Lowest Performance	1.1 Mts.	1.00 Mts.
3	Mean	4.2	3.55
4	S.D.	0.92	0.85

The male sample respondent's best score on the medicine ball throw test is 5.1 meters. The lowest female sample respondent is 1.00 Mts, while the highest is 4.00 Mts. correspondingly.

The male sample respondent's mean score on the medicine ball throw test is 4.2, while the female sample respondent's score is 3.55. The performance of the female sample respondent was found to be lower than that of the male sample respondent; the standard deviation for the male sample respondent was 0.92, while the standard deviation for the female sample respondent was 0.88, indicating a significant relationship in the test.

It is discovered that women respondents had less upper body strength than male respondents. The lack of access to gym training and the respondent's lack of explosive power are the causes of her low upper body strength.

6.2 800metersrun Test

The test results of the 800-meter run of the sample respondent are shown in Table. This test is helpful in determining the sample respondent's endurance. There are 160 sample respondents in total; 120 of the respondents are men and 40 are women.

Table 3: 800metersrun Test of respondents.

800 Min. Run Test			
Sr. No	Particular	Male	Female
1	Highest Performance	2.6sec	3.40sec
2	Lowest Performance	6.15sec	4.35sec
3	Mean	3.52	3.95
4	S.D.	0.68	0.34

Male sample respondents' 800-minute run times range from 2.6 to 6.15 minutes, while female sample respondents' times range from 3.40 to 4.35 minutes. The 800 Min. Run Test mean is computed. The average response from the male and female samples is 3.52 and 3.95, respectively. There is a significant relationship in the test between the male sample respondent's standard deviation of 0.68 and the female sample respondent's standard deviation of 0.34.

7. Conclusion

The majority of respondents, both male and female, identify as followers of the Buddhist and Hindu religions. In conclusion, Solapur is one of the districts in Maharashtra

where we find a multireligious population, with the majority being Maratha Hindus and Buddhists. This illustrates that one of the barriers preventing young people from developing good sportsmanship is religion.

The majority of responders, both male and female, are determined to belong to the reserved category. It is determined that the Solapur district in Maharashtra, and more especially the city of Solapur, have a higher concentration of industrial workers, whose families do not often encourage their kids to play sports and, as a result, do not often get their kids involved in collegiate athletics.

Additionally, it is discovered that Marathi is the mother tongue of the majority of respondents, both male and female. In summary, Solapur is a district in Maharashtra with a mixed-religion population, however the majority is Maratha Hindu. Consequently, Marathi is spoken as a regional language and influences other languages.

It is discovered that responders, both male and female, are equivalent with regard to region. It is found that respondents from both urban and rural areas are equally represented in the sample, both male and female.

According to a central government regulation, the majority of respondents, both male and female, fall into the APL (Above Poverty Line) group if their annual income exceeds \$20,000.

The majority of respondents, both male and female, are found to be part of nuclear families. It is believed that a large number of individuals moved to Solapur from other regions of Maharashtra. The majority of responders, both male and female, are either in the arts or commerce stream. It is found that students in the scientific and professional streams place less value on sports and are more involved in various practical academic activities.

Due to the custom of early weddings in villages, the majority of male and female respondents are single since they are students. However, some of the respondents who are from rural areas are married.

It is discovered that the majority of respondent males and females work as farmers. In summary, Solapur is a district in Maharashtra where the primary industries are farming and other related fields.

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