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Author Introduction

Sports Nutrition

ASSESSMENT OF THE NUTRITIONAL STATUS AMONG SELECTED MALE MG UNIVERSITY INTERCOLLEGIATE SPORTS PERSONS AND THE EFFECTS OF NUTRITION EDUCATION ON THEM

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An essential component of good health is proper nutrition. Both athletes and normal people alike need it for optimal performance and productivity. The nutritional state becomes increasingly crucial as an athlete's skill level and competition speed increase. Superb performance and proper nutrition can make the difference in the final fraction of a second or the final game. The purpose of this study was to find out the effect of Nutrition education on young sports persons. The purpose of this study was to increase participants' scientific awareness of the importance of nutrition in sports. 75 male sports persons (18-23 years) from Volleyball, Basketball, and Athletics were selected through the purposive random sampling method from three colleges in Mahatma Gandhi University, Kottayam, Kerala. Athletes' nutritional status was assessed by gathering information on Anthropometry, biochemical parameters, and dietary intake. All the selected samples completed their demographic details through the interview schedule and they completed the semi-structured pretested nutritional KAP questionnaire before and after the nutritional education program. The results of the anthropometric measurement showed that 95% of the selected sportspersons belonged to a normal category based on body mass index and the majority of the sample have a normal waist-hip ratio. Cent percent of the samples had normal hemoglobin levels. The intake of carbohydrates, Calcium, Vitamin, A and Vitamin C was above the recommended value for all three groups. Total calorie consumption, fat intake, and iron intake all showed deficit values. According to the study's results, the three colleges at Mahatma Gandhi University's selected sportsmen and women had rather good nutritional status. The chosen athlete's nutritional awareness has undoubtedly improved through nutritional education.

Keywords: Nutritional Status, Sports Performance and Sports Nutrition

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Introduction

Sports and health go hand in hand. Due to its importance in preserving a person's physical health, nutrition plays a crucial part in the world of sports. The primary prerequisite for good health, functional effectiveness, and productivity is a proper diet. When it comes to their nutritional needs, athletes should be treated as a particular category since they need to maintain an ideal level of nutrition to perform at their best. Youth athletes' nutritional requirements are greater due to their increased physical activity and growth. A mix of factors, including training, body composition, and nutrition, contribute to optimal athletic performance. (2013) Deneswar The best nutrition is necessary for an athlete who engages in muscular exercise in order to perform physically well. Athletes' performance during a competition may be improved if their nutritional demands are met, which may also help them maximise the benefits of their training and maintain good health. Food and nutrition have a significant impact on an athlete's performance. According to studies (Mahalakshmi 2012), athletes are generally uninformed about nutrition, healthy food options, the elements of a well-balanced diet, and how nutrition affects performance. As a result, nutrition has a big impact on an athlete's total performance. Long-term health and vitality are also benefited by dietary habits that enhance athletic performance. In order to maintain a healthy body composition and balance of essential nutrients, an athlete's optimum diet must be event-specific and personalised for each individual. Optimal nutrition is a critical requirement for peak athletic performance. It has been demonstrated that combining carbs with proteins or amino acids greatly speeds up recovery after strenuous exercise. Without eating the correct nutrients in the right amounts, endurance athletes wouldn't be able to put out the demanding and exhausting efforts they frequently do. The fuel and nutrients the body needs to perform at its peak are provided by the food and water athletes take before and after exercise.The main dietary goal for active individuals is to obtain adequate nutrition to optimize health and fitness or sports performance. [Berning 2000] This is not only important to help to improve performance but also to promote healthy dietary practices in the long term [Jonnalagadda 2001]There is no dispute that the most effective way of enhancing athletic performance is through systematic and consistent training. Nutrition makes its greatest impact by supporting the g training process to acquire improvements in strength, power, or endurance. The approach to arrive at the nutritional requirements of athletes must be different from the one used for normal subjects. Diet significantly influences athletics performance. An adequate diet in terms of quantity and quality before during and after training and competition will maximize performance.

The researcher was therefore inspired to conduct the study titled "Assessment of Nutritional Status Among Selected Male Intercollegiate Sports Persons of MG University and the Impacts of Nutrition Education on them " with the following objectives:

01. To find out the present nutritional status and performance of selected male adolescent athletes
02. To find out the nutrition awareness among the sports person
03. To provide selected sports persons with nutrition education
04. To analyze the impact of nutrition education on knowledge. Attitude and practice related to food and nutrition of sports person.

Methodology

The study area included St. Berchmans College in Changnacherry, St. Thomas College in St. Thomas, Pala MA College in Kothamangalam, and St. Thomas College in Changanacherry. The well-established sports departments at the chosen colleges offered sufficient samples. For the study, 75 young male athletes in the age range of 18 to 23 who compete in a variety of sports were chosen by a purposive random sampling. Basketball players were 20 of the samples that were chosen. Forty-five samples were athletes, with 15 samples participating in volleyball. A pre-structured questionnaire was used to collect data on the demographic characteristics, dietary preferences, health status, and physical activity of the chosen samples. Information on dietary habit includes specifics on how much food is consumed, the frequency of meals, and snacking and skipping behaviours. Under the heading "health condition of the sample," information was also provided regarding the prevalence of sickness and the use of health supplements, medications, and energy drinks. The full-day activity pattern, different types of sicknesses experienced during practise, and other factors were employed to elicit the samples' physical activity behaviour.

Bench press, front squat, standing wide jump, and the hundred-meter test were used as physical endurance indicators to evaluate each respondent's performance. BMI was calculated based on anthropometric measurements, which are a trustworthy indicator of growth and development and for identifying mild to severe malnutrition in each patient. Moreover, the waist-to-hip ratio was determined. The cyanmethaemoglobin technique was used to estimate the haemoglobin content of all the samples. In order to learn more about dietary consumption patterns, specific foods eaten, and inferred nutrient intake, all of the samples were processed using the 24-hour dietary recall survey approach. Using a straightforward questionnaire, the samples' nutritional knowledge, attitudes, and practises were evaluated. The major goal of the study was to determine the effectiveness of nutrition education. Attitude was expanded to cover the roles of numerous nutrients and their deficiencies. Aspects of practise elicit information about various sportsperson practises, such as nutrient, fluid, and drug use. By establishing the score for each question, the subjects' responses were assessed using a key for all the questions. Each question received a provisional score with equal weighting. To all samples, nutrition education sessions were provided.

RESULT AND DISCUSSION

The study's key findings are as follows:

Table – 1

Details of mean score obtained before receiving nutrition education

Category	Mean Score			Mean Total
	Volleyball	Basketball	Athletes	
Knowledge	3.6 ±	3.2±	4.7±	3.8
Attitude	4.66±	3.3±	3.7±	3.8
Practice	3.4±	4.25±	6.1±	4.5

Table – II

Details of mean score obtained after receiving nutrition education

Category	Mean Score			Mean Total
	Volleyball	Basketball	Athletes	
Knowledge	7.4 ±	8.15±	8.15±	7.9
Attitude	6.8±	5.8±	5.5±	6.0
Practice	7.86±	6.95±	6.75±	7.18

Table – III

Paired Comparison level of significance knowledge

t-test: paired two samples for means	Mean value of Knowledge before	Mean value of Knowledge after
Mean	4.146666667	7.93333333
Variance	3.018738739	2.684684685
Observation	75	75
Pearson Correlation	0.819945577	
Hypothesized Mean Difference		
Tstat		
P(T<=t)one – tail	1.31609E-45	
T Critical one – tail	1,665706893	
P(T<=t) two tail	2,63218E-45	
t Critical two – tail	1.992543466	

To determine whether there is asignificant difference between the mean knowledge score before and after nutrition education, a paired T-test is used. We reject the hypothesis that the mean score prior to and following the nutrition education are the same since the computed value of T statistics (-32.33) falls within the critical region. Hence we conclude that there is significant difference between score before and after education.

Table IV

Paired Comparison level of significance of attitude

t-test: paired two sample for means	Attitude values	
	Before	After
	Variable 1	Variable 2
Mean	3.8	6.08
Variance	1.378378378	1.48
Observations	75	75
Person Correlation	0.683109609	
Hypothesized Mean Difference	0	
Df	74	
T Stat	-20.732E-33	
P(T<=t) one tails	7.49832E-33	
tCritical one tail	1.665706893	
P(T<=t) two tail	1.49966E-32	
T Critical two – tail	1.992543466	

Table V

Paired Comparison level of significance of practice

t-test: paired two sample for means	Practice values	
	Before	After
	Variable 1	Variable 2
Mean	4.28	7.18
Variance	2.501621622	1.033513514
Observations	75	75
Person Correlation	0.876059881	
Hypothesized Mean Difference	0	
Df	74	
tStat	-33.52673812	
P(T<=t) one tails	8.63778E-47	
tCritical one tail	1.665706893	
P(T<=t) two tail	1.72756E-46	
t Critical two – tail	1.992543466	

To determine whether there is a significant difference in the mean practice-value score before and after nutrition education, a paired T test is used. We reject the hypothesis that the mean score prior to and after the nutrition education are the same since the calculated value of T- Statistics (-33.52) falls within the critical region. Hence we conclude that there is significant difference between the practice score before and after education.

Findings

An athlete's sporting performance is influenced By their sports nutrition. To perform at their best, athletes push their physical and mental limits. Athletes need to optimise their nutritional intake in order to meet their needs for training, recovery, and the adaptations that follow. As a result, the study "Assessment of nutritional status among chosen male sports persons of MG University and the affects of nutrition education on them" was carried out with the aim of assessing and disseminating the diet and information of athletes. The following are the study's key findings:

- Parents' educational backgrounds revealed that 53.4 percent of volleyball players' mother's and 45 percent of basketball players' mothers only had an SSLC level of education.
- The majority of players' fathers worked in the agricultural industry, and their mothers were unemployed.
- Information on food intake revealed that the majority of the samples weren't vegetarians.
- All of the respondents reported eating cereals, more vegetables, milk and milk products, as well as fats and oils, every day. 80% of athletes ate meaty items three or more times each week.
- The majority of responders (93.3%) ate four meals per day.
- It is evident that 100% of the samples from the three categories had a nibbling behaviour. Almost half of the samples were consumed with chips.
- Every single respondent from the three categories had a practise of eating outside of the hostel.
- Sportspeople's health status revealed that 60% of athletes have a tendency of using multivitamin tablets as health supplements.
- Most basketball (85%) and volleyball (80%) players have a habit of using energy beverages, primarily in the form of Horlicks and protein supplements.
- Throughout the training, 80% of the participant's body weight remained constant during training and all the samples experienced fatigue while practicing.
- Athletes drink more than 10 glasses of water a day in 90% of cases.

- Half of the athletes and 65% of basketball players in the samples hold positions at the state level, and 100% of the samples practiced for 4 hours per day.
- The majority of athletes favoured ice treatment and hydrotherapy as treatments for their skin wounds, which affect 70% of athletes.
- All volleyball, basketball, and other athletes warm up, cool down properly, and practice stretching to avoid injuries.
- According to the performance index of the samples, the majority (52%) could bench press between 30 and 40 kg, 58.6% could clear 2-3 meters in the standing broad jump, 30.66% could lift between 40 and 50 kg for front and equal position (34.66%), and the majority (34.66%) could complete the 10 meter race in 12 to 13 and 14 to 16 seconds, respectively. The aggregate statistics indicated that the samples barely performed at an average level.
- According to anthropometric data, the majority (95%) of respondents fit into the normal category for Body Mass Index because they had a diet that was well-balanced. 15% of athletes were overweight, while 5% were underweight.
- The athletes, who make up 10.6% of the population, are only 2.66 percent underweight and 10.6 percent overweight.
- While the majority of the samples had a normal waist-hip ratio, 10% of the athletes had a value that was above average and correlated with the Body Mass Index values.
- Even though the samples' iron consumption was lower, 100% of them had normal haemoglobin levels.
- For all three groups, the intake of carbohydrates, calcium, vitamin A, and vitamin c exceeded the recommended levels. Iron, fat, and total energy intake all displayed deficiency values. Whereas athletics and volleyball players showed an increased protein consumption (+13.6) while the protein intake was deficient for basketball players (-6)The total mean score on knowledge, attitude and practice of the respondents showed an increase from below average to above average level after education.

Conclusion

The findings showed that the energy, fat, and iron Levels are below average for sports. The taste of a common illness that is becoming more and more popular is used to alter the tasty room and ice therapy. Education about malnutrition has improved the nutrition of the responses. Sports and other forms of physical activity are crucial components of a healthy lifestyle because they guard against the onset of aging, especially cardiac diseases. The more people who pursue life goals to pursue life goals that lead to the functioning of their activities may grow as a result of increased exercise, better diet, and weight loss. Dietiously expedites marketing initiatives aimed at dieters, collaborates with sports trainers, offers the greatest nutritional advice, and caters to a wide range of stupidity. It is advised that sporting nutrition be applied to enhance athletes' diets and attain peak athletic performance because it will likely remain the most well-liked and expanding market in the future.

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