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Knowledge On Sport Nutrition Among Athletes In Northeast India

[1]Dr Laribha Dohtdong, [2]Solan Raising, [3]Metoshan Suting

[1]Assistant Professor, [2]MSc Nutrition and Dietetics, [3]BSc Sport, Nutrition and Fitness
Department of Nutrition and Dietetics,
Martin Luther Christian University, Shillong, India

Abstract

Background: Nutrition has been acknowledged as a key role for sustaining good health, improving overall well-being, and enhancing athletic performance. Athletes' strength, training, performance, and recovery are impacted by their diet. When athletes understand how and what they consume and how to apply this knowledge to their daily demands and athletic accomplishments, they are seen as being better performers and the body's capacity to recovers is betters. To understand the nutritional knowledge and practices of athletes, this study was undertaken.

Materials and Methods: A cross-sectional research design was used for this study. A total of 145 athletes between the ages of 18 and 40 years participated in the study. The standardized Nutrition for Sport Knowledge Questionnaires (NSKQ 2019) and the 24-hour dietary recall of the athletes was used.

Results: The athletes were found to have an average nutritional knowledge and majority of the athletes do not follow or consume special diet as per their sport activity. There were no association between the nutritional knowledge of the athletes and the type of sport performed.

Conclusion: The athletes have mediocre understanding on sports nutrition and have poor dietary practices. Additionally, one of the biggest obstacles that may impede athletes from adopting healthy dietary habits could be due to the ignorance and lack of expert advice and support in regards to their food intake.

Key Word: Nutritional Knowledge; Dietary habits; Athlete and supplements.

I. Introduction

Sport nutrition is scientific and practical application of nutritional needs in relation to athletic performance. It is concerned with the type and quantity of food needed to be consumed, and the importance of maintaining hydration for an athlete. Athletes' performance will suffer if their bodies do not receive enough nourishment. There is an increased need of food intake and increased energy expenditure among athletes as they are subjected to a more intense physical work volume therefore, they have, as a way to compensate for the imbalance due to regular physical activity (Pendergast et al., (2011). Therefore, athletes must consume all of the necessary nutrients, and maintain a healthy balance of electrolytes through food and hydration. Callahan, A. et al., (2020). However, the need to succeed influences athletes' pursuit for a competitive edge where they employ ergogenic aids and nutritional supplements in the hopes of enhancing performance, Paul (2006). Athletes having nutritional knowledge will be able to make informed dietary decisions and develop healthy eating habits as per their athletic needs Vázquez-Espino, K. et al., (2022). By focusing on eating a balanced diet, athletes can improve their body composition, boost their immune systems, and develop strong physical and mental endurance, all of which will increase their performance and postpone the onset of weariness. To improve their short and long-term health, athletes needs to consume healthy diet eating habits Cotugna, N. et al (2005).

II. Material And Methods

A cross sectional design was adopted for this study. A total of 145 athletes with 85 males and 59 females who were visiting fitness center located in the urban areas of the study area were involved in the study. Out of the 145 athletes, 52 % athletes were athletes who visited the fitness centre and gym located in the Ukhrul District of Manipur, while the remaining 48% were those athletes who are from various fitness centre of East Khasi Hills district, Meghalaya.

Data collection: The background information of the athletes were gathered using a standardized Nutrition for Sport Knowledge Questionnaires (NSKQ 2019) to ascertain the nutritional knowledge of the athletes.

III. Result

A total of 145 athletes participated in this study with 75athletes from Manipur and 70 athletes from Meghalaya. The background information of the athletes is shown in Table 1.

Table 1: Background information of athletes based on gender

Characteristics	Male		Female	
	n	%	n	%
Age in years				
15-19	22	26	11	19
20-24	49	57	15	25
25-29	13	15	31	53
30-34	2	2	2	3
Total	86	59	59	41
Educational status				
Secondary school	14	16	14	24
Higher Secondary school	28	33	13	22
Undergraduate	36	42	27	46
Postgraduate	8	9	5	8
Duration in fitness centre				
Less than 6 months	27	31	11	19
6 to 12 months	18	21	32	54
More than 1 year	41	48	16	27

Table 1 shows that based on the gender distribution 41% are female and 59% were male. Majority (53%) of the female athletes were in the age group of 25-29 years while 57% of the male athletes were in the age of 20-24 years. In terms of the athletes educational status, a higher representation, accounting for 43% have completed or are currently pursuing their undergraduates (42% male, 46 % female), while 28% are with higher secondary, and fewer postgraduate athletes.

Among the male athletes, 48% stated to have visited and get their physical training in the centre for more than a year, 31% not more than 6 months and 21% for 6 to 12months. While majority (54%) of the female athletes had been in the fitness centre for 6 to 12 months, with only 27% more than a year and only 19% not more than 6 months.

Type of sport

The athletes were into different form of sports and games, of which ten were recorded and shown in table 2.

Table 2: Type of sport athletes based on region

Type of sport	Meghalaya		Manipur	
	n	%	n	%
Football	12	17	7	9
Basketball	7	10	6	8
Calisthenics	4	6	7	9
Mixed Martial Arts	8	11	8	11
Running / Sprints	4	6	7	9
Mountain biking	5	7	1	1
Swimming	10	14	6	8
Walking road cycling	9	13	8	11
Weightlifting	4	6	15	20
Cricket	7	10	10	13

The major sport category among the athletes from Meghalaya was football (17%), 14% were into swimming and 13% cycling. Mixed martial arts was practices by 11%, basketball and cricket were played by 10 % of the athletes; while calisthenic, running and weightlifting were practiced by 6% of the athletes. Among the Manipur athletes, 20% were engaged in weightlifting, 13% played cricket, and 11% were practicing mixed martial arts and cycling. Few athletes were engaged in football, running and calisthenics while swimming, basketball and mountain biking was the least sports practiced by them.

Nutritional knowledge of athletes

With the help of the NKSQ the nutritional knowledge score was developed to determine the knowledge of athletes on nutrition (Table 3). If an athlete score marks between 100 to 75 they are graded as good, 74 to 49 as moderate and 48 to 23 as poor knowledge.

Table 3: Nutritional knowledge level of athletes

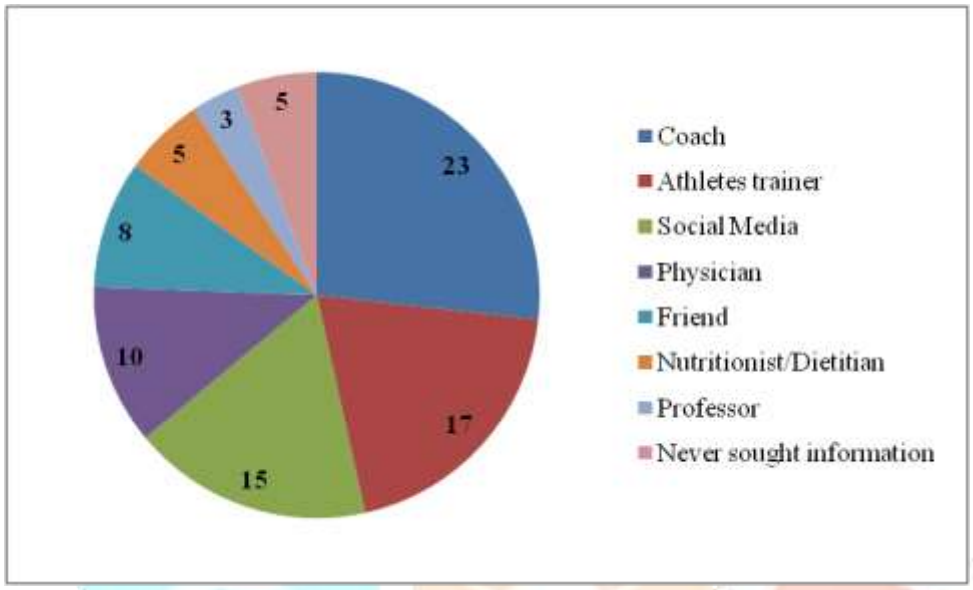
Knowledge level	Male (86)		Female (59)	
	n	%	n	%
Good	27	31	18	31
Moderate	49	57	32	54
Poor	10	12	9	15

Majority of the athletes have moderate knowledge on nutrition (57% male, 54% female), while an equal representation of good knowledge was seen in both male and female athletes (31% each). Only few had poor nutritional knowledge. It can be observed that both male and female athletes have basic knowledge on nutrition.

Source of nutrition information

The athletes were informed to rate the top three sources where they seek nutritional help and information and the data is shown in figure 1 and 2.

Figure 1: Source of information among male athletes



From the figure 1, it can be stated that the top three help that they seek for nutritional guidance are from their coach, trainers and through social media. Very few seek professional nutritional help and information from the Physician, Nutritionist and Professor.

Figure 2: Source of information among female athletes

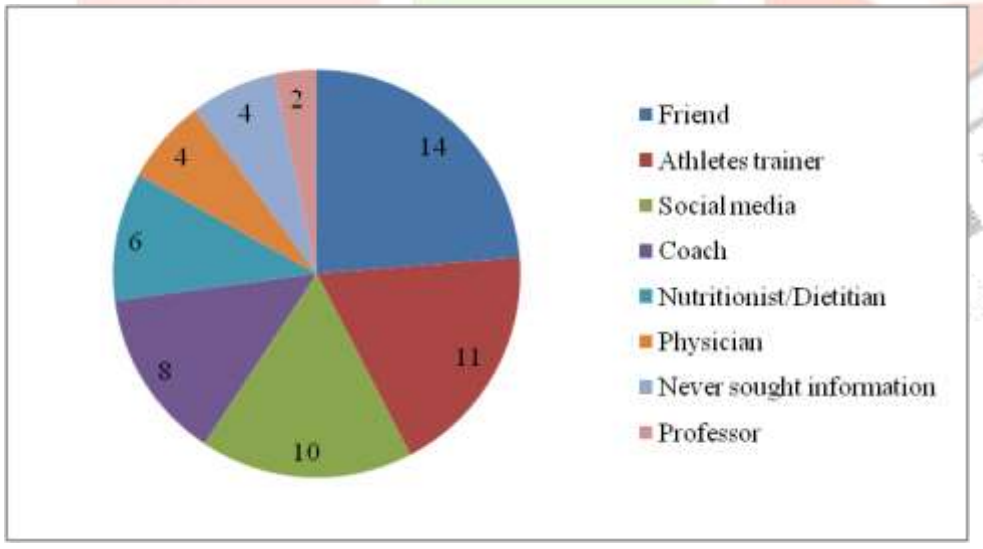


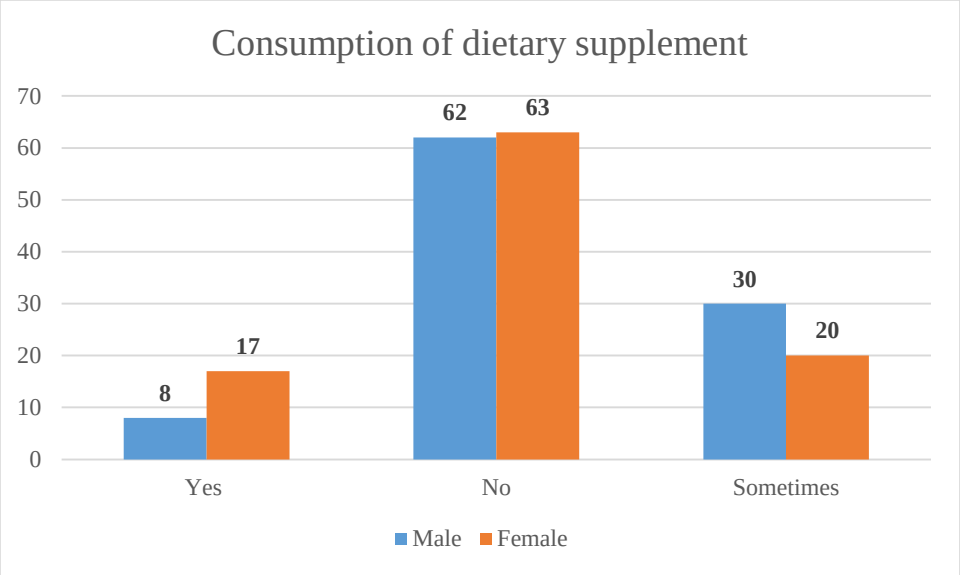
Figure 2 depicts that the top three help that female athletes would seek for nutritional guidance are from their friend, athletic trainers and use of social media platform. The professional nutritional guidance were rarely obtained from their coach. Few meet the Physician or get any nutritional counseling from the Nutritionist and Professor.

In both the gender, some had also stated that they hardly seek any help from any person or individual as they are self-taught.

Consumption of dietary supplements

The athletes were interview if they have the habits of consuming any dietary supplement for enhancing their performances (figure 3).

Figure 3: Consumption of dietary supplement



From the study, it is observed that most of the athletes do not take dietary supplements, which is similar to the study Qureshi and Battalwar (2022) where the athletes mostly do not used any form of supplements. Though few studies have reported the consumption of protein and other forms of dietary supplement by athletes (Jovanov, P. et al., 2019); De Silva A., et al., 2010).

IV. Discussion

Intake of nutritious and adequate diet is important for athletes as it will optimize their athletic performances, and build their recovery rate (Alaunyte. I., Perry. J.L & Aubrey. T., 2015; Dickson. S. M & Sierrist. M., 2011). In this study, it was discovered that overall, athletes have moderate to good nutritional knowledge. Results from the current study support for providing nutrition program for athletes which will not only enhance their knowledge on the nutritional needs according to their sport types, but can also influence on their dietary practices, thus achieving good performances. Similar studies have recommended on the inclusion of nutrition education as this will increase their nutrition knowledge and improved dietary choices and enhance their health and wellbeing (Khan. M., Khan. S & Sengupta. R., 2021; Janiczak A, Devlin BL, Forsyth et. al., 2021).

If athletes have an understanding, information and adequate knowledge on their nutritional needs, it becomes easier for them to follow a healthy eating pattern based on the needs of their sport activity and the need for supplements through proper prescription (Karla. V. E., Gil. R.F., & Andreu. F. C., 2022; Wardle, J., Parmenter, K., & Waller, J., 2000). The intake of dietary supplement were not seen by the athletes in this study. This, could be due to improper information on the type and usage of supplement and the availability of the supplements.

Proper nutritional knowledge enable athletes to make informed decision that will enhance their athletic performance, optimizing the recovery stage and help in maintaining their overall health. However, lack of nutritional knowledge can lead to faulty food behaviors leading to nutritional deficiency, decrease performance and availing of unreliable nutrition information (Vazquez-Espino. K, Rodas-Font. G. & Farran-Codina. A, 2022; Bakhtiar. M. et al., 2021). As seen in the study, coach and friends were the top person of contact for information pertaining to their dietary choices. While guidance from personal trainers and through social media platform were the second and third point of contact for addressing their nutritional needs and demand. These findings is in coherent with other studies where the primary source of

information were the coach, trainer and the online digital platform (Dylan J. Klein et al., 2021; Kimmel et al.. 2020; Trakman et al., 2019; Torres-McGehee et al., 2012). Through the study, a handful of the athletes would seek professional help from a Nutritionist or Dietitian. Possible reason for not seeking assistance could be due to the unavailability of Nutrition expertise in the area and the lack of information on the role and profession of the expertise by the athletes. Thus, there is a need to have competent professionals such as Dietitian, Nutritionist and certified sport nutritionist who are knowledgeable and are expert in providing needed nutritional guidance for athletes to enhance their performances and body recovery. As observed in the study, coach and athletes are the most trusted person where athletes would confine their need for athletics performance. Thus, they can enroll for short nutritional education session/ course so that they can have a basic foundation on sport nutrition and the least provide with quality diet planning as per the athletic needs and requirement.

V. Conclusion

Through this study, the athletes recognize the importance of nutrition as their knowledge level vary from moderate to good. However, the need to support and provision for accurate nutrition guidance from certified Dietitian, Nutritionist, sport nutritionist needs to be emphasized in the arena of sports so that athletes can achieved their goals, be aware of their nutritional demands, correct their dietary practices for achieving better performances and maintain their recovery period. It can be concluded that nutrition education in the form of educational program can be provided for sport person since, most of them rely on various sources which could have influence on their nutritional choices.

VI. References

[1]. Alaunyte. I., Perry. J.L., and Aubrey. T., (2015). Nutritional knowledge and eating habits of professional rugby league players: Does knowledge translate into practice? J. Int. Soc. Sport. Nutrient, 12,18. doi: 10.1186/s12970-015-0082-y.

[2]. Bakhtiar. M., Masud-Ur-Rahman. M., Kamruzzaman. M., Sultana. N., and Rahman. S.S., (2021). Determinants of nutrition knowledge, attitude and practices of adolescent sports trainee: a cross-sectional study in Bangladesh. Heliyon, 7(4),e06637. https://doi.org/10.1016/j.heliyon.2021.e06637.

[3]. Citarella. R.C., Itani. L.I., and Intini. V.I., (2019). Nutritional knowledge and dietary practice in elite 24- hour ultramarathon runners: a brief report. Sports, 7 (2), 44.

[4]. Dickson-Spillmann. M., and Siegrist. M., (2011). Consumers' knowledge of healthy diets and its correlation with dietary behaviour. J. Hum. Nutr. Diet, 24:54–60. doi: 10.1111/j.1365-277X.2010.01124.x.

[5]. De-Silva. A., Samarasinghe. Y., Senanayake. D., and Lanerolle. P., (2010). Dietary supplement intake in national-level Sri Lankan athletes. International journal of sport nutrition and exercise metabolism, 20(1), 15-20. https://doi.org/10.1123/ijsnem.20.1.15

[6]. Dylan. J., K., Kaitlyn. M. Eck., Alan. J. W,r., Joseph. K. P., Daniel. J., and Freidenreich.,(2021). Assessment of Sport Nutrition Knowledge, Dietary Practices, and Sources of Nutrition Information in NCAA Division III Collegiate Athletes. Nutrients, 13: 2962. https://doi.org/10.3390/nu13092962

[7]. Huda. M. I.. Q., and Battalwar. R., (2022). A study on knowledge, attitude and practices of nutrition education in athletes International Journal of Physiology, Nutrition and Physical Education, 7(2), 24-28.

[8]. Janiczak. A., Devlin. B.L., and Forsyth., (2021). A systematic review updates of athletes nutrition knowledge and association with dietary intake. The British Journal of Nutrition, 1-14.

[9]. Jovanov. P, Dordic. V., Obradovic. B., Barak. O., Pezo. L., Maric. A., and Sakac. M., (2019). Prevalence, knowledge and attitudes towards using sports supplements among young athletes. J Int Soc Sports Nutr, 16,27. https://doi.org/10.1186/s12970-019-0294-7

[10]. Karla. V. E., Gil. R.F., and Andreu. F. C., (2022). Sport Nutrition Knowledge, Attitudes, Sources of Information, and Dietary Habits of Sport-Team Athletes. Nutrients, 4(7), 1345.

[11]. Khan. M., Khan. S. and Sengupta. R. (2012). Assessment of Nutritional Knowledge Among Athletes. Journal of Emerging Technologies and Innovative Research, 8 (6), 189-197.

[12]. Kimmel. K., Pike. K., Lee. K., and Friesen. C., (2020). Sports Nutrition Knowledge, Sources of Nutrition Information, and Desired Sports Nutrition Advice of Collegiate Student-Athletes at a Division I Institution. Ann. Sports Med. Res, 7,1146.

[13]. Torres-McGehee. T.M., Pritchett. K.L., Zippel, D., Minton. D.M., Cellamare. A., and Sibilia. M., (2012). Sports nutrition knowledge among collegiate athletes, coaches, athletic trainers, and strength and conditioning specialists. J. Athl. Train, 47, 205–211.

[14]. Trakman. G.L., Forsyth. A., Hoye. R., and Belski. R., (2019).Australian team sports athletes prefer dietitians, the internet and nutritionists for sports nutrition information. Nutr. Diet, 76, 428–437

[15]. Vazquez-Espino. K, Rodas-Font. G., and Farran-Codina. A, (2022). Sport nutrition knowledge, attitudes, sources of information, and dietary habits of sport-team athletes. Nutrients, 14(7), 1345. https://doi.org/10.3390/nu14071345.

[16]. Walsh. M.W., Cartwrigh.t L.C., and Coris.h C.C., (2011). The body composition, nutritional knowledge, attitudes, behaviors, and future education needs of senior schoolboy rugby players in Ireland. International journal of sport nutrition and exercise metabolism, 21 (5), 365-376.

[17]. Wardle. J., Parmenter. K., and Waller. J, (2000).Nutrition knowledge and food intake. Appetite. 34, 269–275. doi: 10.1006/appe.1999.0311.