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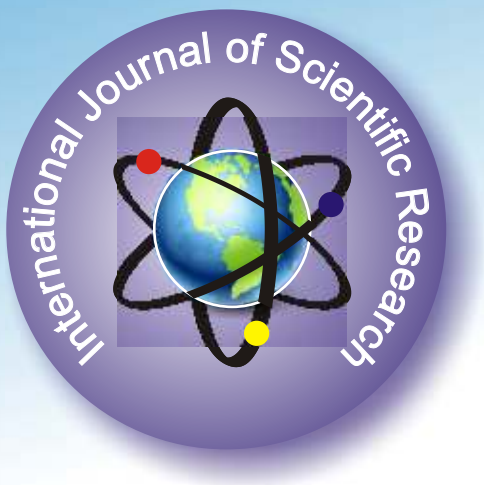

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Impact Of Nutrition Education On Nutritional Knowledge, Dietary Practices And Physical Endurance Of Amateur Badminton Players

* Dr. Anjali A. Rajwade

Abstract

Sporting activity combines exercise with recreation. Nutrition plays an important role in any exercise by supplying the necessary energy as well as enhancing the endurance. The study was therefore, aimed at assessing nutritional knowledge, dietary practices and physical endurance of 30 amateur women badminton players from Akola city; before and after imparting nutrition education to them. 70% of the respondents had low knowledge level about general nutrition at pre education stage. The education helped 53.33% respondents to achieve high knowledge level while medium level was achieved by another 36.67% players. Nutritional education related to endurance resulted in a shift from 93.33% respondents at low level pre education to 86.67% of them at high level post education, showing significant (0.1096) improvement at 0.01 level of significance. None of the players practiced consumption of carbohydrate rich diet, instead a high percentage 73.33% consumed fat rich diet while 26.67% fat & protein rich diet. Nutritional education induced 70.00% respondents to shift to carbohydrate rich diet. The dietary practices improved significantly due to knowledge gained through the nutrition education. At post education stage good sport endurance was observed in 66.67% respondents, 80.00% had good general stamina, good weight correction was achieved by 60.00% respondents, 63.33% had good skin health while 70.00% of the players had good level of psychological well being. Nutrition education, appropriate for the sports women enabled them in improving their nutrition resulting in improvement in their nutritional knowledge, dietary practices and health parameters related to physical endurance, thereby improving their sports activity.

Keywords : amateur badminton players, nutrition education, nutritional knowledge

Introduction

Sports combine exercise and recreation, especially for amateur sports person. Physical exercise and nutrition are essential components of any planed sports activity.1 Urban women are, increasingly, taking up badminton as a sporting activity to achieve good health and figure in addition to the recreation. Nutrition, not only enables a player to carry out physical activity but it also gradually builds up the endurance, if properly implemented. The specific needs vary with age, gender, type of sports, climate etc. Different nutritional agents in the body, perform the function of generating caloric energy at different time phases of a sporting activity. Carbohydrates play a vital role in production of caloric energy while fats are utilized to a much lesser extent and at a much later stage of such activity2. Proteins are usually spared3. Knowledge of sports nutrition and implementation of appropriate dietary practices are essential for optimum sports performance.

Women, as amateur badminton players, usually intend to gradually increase their stamina/endurance so that they can play for a longer duration. They are, usually, unaware of a rational approach to sporting activity. They follow what they perceive as routine & implement suggestions of untrained colleagues or relatives. Consequently they do not attain / achieve their goals related to the game, stamina, health & weight management. The study was therefore aimed at assessing the impact of nutrition education on amateur badminton players.

Objectives

1. To assess nutritional knowledge, dietary practices and physical endurance of the respondent players.
2. To impart relevant nutrition education
3. To assess impact of the nutrition education.

Methodology

From a larger pool of amateur players in Akola city, 30 women badminton players in age group of 25-35 years were studied. A schedule was prepared to elicit initial information about the level of their nutritional knowledge, their dietary practices & physical endurance related to sports. Nutritional knowledge level was assessed with the help of 20 questions each on general nutrition, and role of carbohydrates in sports nutrition and 10 questions on nutrition for sports endurance. The respondents were divided in three groups of knowledge level on the basis of percent score obtained.

S.NO.	PERCENT SCORE	LEVEL
1.	< 33	Low
2.	33 – 66	Medium
3.	> 66	High

Nutritional knowledge, generally, has direct effect on a person's dietary practices which in turn are related to his / her physical endurance4. Endurance depends on nutritive support to the muscle by glycogen stored in it. A person on high carbohydrate diet stores far more glycogen in muscles than a person on either a mix diet, or a high fat diet5.

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The rate of muscle glycogen replenishment after exercise depends on type of diet6. Recovery from exhaustive muscle glycogen depletion often requires days rather than hours in time7. The nutritional education to be imparted was therefore prepared to include mainly basic nutrition information, sports nutritional knowledge, physiology of metabolism, nutritional physiology of muscular activity, dietary practices and endurance enhancing nutrition. The education was imparted through lectures, seminars, group discussions, and power point presentation etc. over a period of 15 days. It was refreshed after a fortnight over a period of 5 days. Personal queries were answered. Reassessment of the players' characteristics under study was done at the end of 4 months from initiation of the study.

Results And Discussion

Nutritional Knowledge

Nutritional knowledge of the respondents pre and post nutrtition education sessions is shown in Table 1.

Table 1

Nutritional Knowledge	Level											
	Low				Medium				High			
	Pre		Post		Pre		Post		Pre		Post	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
General Nutrition	21	70	03	10	07	23.33	11	36.67	02	6.67	16	53.33
Role of Carbohydrate	30	100	01	3.33	00	00	05	16.67	00	00	24	80.00
Nutrition for endurance	28	93.33	01	3.33	02	6.67	03	10.00	00	00	26	86.67

Table 1 reveals that a large majority (70%) of the respondents had low knowledge level about general nutrition at pre education stage. The education helped 53.33% respondents to achieve high knowledge level while medium level was achieved by another 36.67% players. The improvement in general nutrition knowledge level was significant (0.1175) at 0.01 level of significance.

The importance of role of carbohydrates in sports nutrition was known to none (0.00%) of the respondents at pre education level, which improved to 80.00% respondents achieving high knowledge level and 16.67% achieving medium knowledge level post education. The improvement was significant (0.1099) at 0.01 level of significance.

Nutritional education related to endurance resulted in a shift from 93.33% respondents at low level pre education to 86.67% of them at high level post education, showing significant (0.1096) improvement at 0.01 level of significance.

Dietary Practices

Dietary practices were assessed in terms of consumption of carbohydrate rich diet, fat rich diet or fat + protein rich diet. The results are depicted in Fig. 1

Fig. 1 : Distribution of respondents according to dietary practices

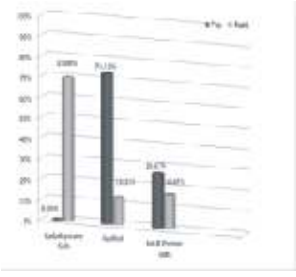

Fig. 1 reveals that none (0.00%) of the players practiced consumption of carbohydrate rich diet, instead a high percentage 73.33% consumed fat rich diet while 26.67% fat & protein rich diet. Nutritional education induced 70.00% respondents to shift to carbohydrate rich diet. The dietary practices improved significantly due to knowledge gained through the nutrition education.

Health Parameters

Physical endurance of the players is likely to be affected by different health parameters. The respondents were assessed for physical endurance based on 5 health parameters namely sports endurance, general stamina, body weight correction, skin health and feeling of psychological well being. The results are presented in Table 2.

Table 2 : Distribution of respondents according to health parameters

Parameter	Poor				Good			
	Pre		Post		Pre		Post	
	No.	%	No.	%	No.	%	No.	%
Sports endurance	28	93.33	08	26.67	02	6.67	20	66.67
General Stamina	25	83.33	06	20.00	05	16.67	24	80.00
Weight Correction	27	90.00	12	40.00	03	10.00	18	60.00
Skin Health	21	70.00	11	36.67	09	30.00	19	63.33
Psychological well being	22	73.33	09	30.00	08	26.67	21	70.00

Table 2 reveals that at pre education stage, majority of the respondents had poor sports endurance (93.33%), poor general stamina (83.33%), poor weight correction (90.00%), poor skin health (70.00%) and poor level of sense of well being (73.33%). At post education stage good sport endurance was observed in 66.67% respondents, 80.00% had good general stamina, good weight correction was achieved by 60.00% respondents, 63.33% had good skin health while 70.00% of the players had good level of psychological well being.

The amateur women badminton players involved in the study had wished to achieve good level of health parameters when they started playing badminton. Majority of them achieved their major objectives when appropriate sports nutrition education was combined with the sporting activity itself.

Conclusions And Implications

Amateur women badminton players do not follow dietary practices appropriate for their sports activity because they lack necessary nutritional knowledge. Consequently they fail to achieve their targets related to sports endurance. Nutrition education, appropriate for the sports women enabled them in improving their nutrition resulting in improvement in the health parameters related to physical endurance.

Sports persons need nutritional guidance along with sports training to achieve improvement in their sports performance.

Nutrition education should be imparted to sports persons.

References

Kracmer WJ, Adams K, Cafarelli E, et al. American College of sports medicine position stand. Progression models in resistance training for healthy adults, Med. Science sports Exercise 34 : 364, 2002. | Watt MJ, Heigenhouser GJ, Spriet LL: Intramuscular triacyglycerol utilization in human skeletal muscle during exercise. J Appl Physiol 93:1185 | Myburgh KH: what makes an endurance athelet world class? Not simply a physicological conundrum. Comp Biochem physiol A MOl integr physiol 136:171:2003 | Johnson NA, Stannard SR, Thompson MW; Muscle triglyceride and Glycogen in endurance exercise: Implications for performance. Sports Med. 34:51, 2004. | Blair SN, LaMonte MJ, Nichaman MZ: The evolution of physical activity recommendations. How much is enough? AM J.Clin. Nutr.79:9135, 2004. | Delp MD, Laughlin MH: Regulation of skeletal muscle perfusion during exercise. Acta Physio Scand 162:411, 1998 | Gandeviase : Spinal and supra-spinal factors in human muscle fatigue. Physiol. Rev. 81:7125,2006.

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