

Nutritional knowledge, attitude and practice among university level female football players

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■ **ABSTRACT** : Sixty university level female football players were selected for the present study from district Kurukshetra. The selected players represented different universities during Inter-University football tournaments held at Kurukshetra University. A well structured questionnaire was personally administered to the subjects. The questionnaire contained thirty two questions about nutrition knowledge, attitude and practice. The results were analyzed using arithmetic mean, standard deviation and percentages. The subjects exhibited average nutritional knowledge about hydration (55.55 per cent) followed by carbohydrates (46.29 per cent), protein (37.03 per cent), fat (37.03 per cent), vitamin and minerals (27.77 per cent). Knowledge and attitude have great influence on day to day practice in sports. Since our athletes rely heavily on peers, family and coaches for nutrition information effort is clearly needed both in counseling and imparting nutrition education to our athletes and coaches during training programmes.

■ **KEY WORDS** : Nutritional knowledge, Attitude, Dietary practice

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Although football is the world's most popular sport with over 120 million amateur players worldwide, scientific research concerning the nutritional needs of football players has been scant. Nutrition is an important aspect of an athlete's training programme in attaining high level of achievements (Beals and Mannore, 1998). Physical fitness and training are very much dependent on nutritional status of sports personnel (Preekhan and Srinivassan, 2010).

Participation of girls' in sports has increased significantly, about 600 per cent in last four decades (Messina *et al.*, Nattiv and Armsey, 1977). Unfortunately, increased participation in women's athletics came without an understanding of the specific needs of the female athlete. Physiologic differences in females, combined with internal demands and external pressures during sports activities, have led to health problems and injuries occurring uniquely in the female players. Female players' emphasis often is not only on skill and endurance but also on leanness and appearance (Ziegler *et al.*, 1988). Hence, these players are susceptible to what has become known as the female athlete triad of disordered eating, menstrual dysfunction, and osteoporosis

(Joy *et al.*, 1997). Optimal nutrition is essential for peak performance and preventing female-specific health problems.

Researches suggest that knowledge and attitude have an effect on eating habits (Laurie *et al.*, 2003). A study by Ruka *et al.*, (2005) described, that although 85.6 per cent of students were aware of the concept of nutritionally balanced food; but only seven per cent of them applied this when selecting food from menu. Nutrition is not only important to improve performance but also promote healthy dietary practices in the long term (Weber, 2004).

Therefore, the present study has been undertaken to assess the nutritional knowledge, attitude and practices among university level female football players. This study would help to develop educational material and programme to promote greater knowledge and healthy attitude among players, which would ensure their better health and performance.

■ RESEARCH METHODS

Subjects :

Sixty female football players were selected who were

representing different Universities during Inter University Football tournaments held at Kurukshetra University. Six students were dropped because they did not complete the required information. Only fifty four players co-operated and participated in the present investigation. Players were fully informed of the purpose and procedure of the investigation and provided consent at the outset.

Questionnaire development :

Questionnaire was developed to assess the players' demographic profile, nutritional knowledge, attitude and practices. The questionnaire included thirty two questions which were divided into three major sections namely, knowledge, attitude and practices. The knowledge section contained questions about different food groups and their role in sports. The attitude section included questions regarding the attitude of the female football players towards sports nutrition. The practice section addressed the questions to explore general practices of nutrition used by the players in their day to day sport.

Statistical analysis :

The results were analyzed using arithmetic mean, standard deviation and percentages.

Procedure :

Questionnaires were distributed to the selected athletes. A cover letter was included to explain the study to the participants and to indicate their rights as participants. The demographic questions, nutritional knowledge questionnaire were distributed to the athletes on an assigned day. The cover letter and directions were read aloud while the participants reached along. After the direction was read, time was allotted for the participants to complete the study. After completing questionnaires, the participants were asked to place them in a labeled envelop in front of the room. The primary investigator collected these envelops after the participants left the room.

■ RESEARCH FINDINGS AND DISCUSSION

The results obtained from the present investigation have been discussed under following heads:

Demographic information :

The results (Table 1) showed that fifty per cent of the players were studying for undergraduate degree courses. An exactly equal number of the players were enrolled for post graduate degree courses. An indepth investigation revealed that the selected players had mostly opted for Arts and Humanities and none for science. The main reason for this choice stated by subjects was that they found Humanities easier than science subjects and can conveniently devote much needed time for long, regular and rigorous practice

Table 1: Educational status of female football players

Educational status	No. of subject (n=54)	Percentage (%)
B.A.	20	37.03
B.Com.	1	1.85
BCA	1	1.85
B.Ped.	5	9.25
M.Ed.	10	18.51
M.A.	10	18.51
M.Phil.	7	12.96

sessions of games.

It is evident from Table 2 that the mean height of the players was 1.67 ± 0.08 m and their mean weight was 47.48 ± 12.65 kg. According to the present height and weight of the studied players their calculated mean BMI was 18 ± 2.46 kg/m². The height, weight and BMI were in accordance with standard of ICMR.

Table 2 : Mean (\pm S.D.) anthropometric dimensions of the subjects (n= 54)

Anthropometric dimensions	Mean \pm S.D.
Height (meters)	1.67 ± 0.08
Weight (kg)	47.48 ± 12.65
BMI (kg/m ²)	18 ± 2.46

Nutritional knowledge :

Female footballers were generally knowledgeable with regard to nutrition (Table 3). According to the players, carbohydrate was the concentrated source of energy followed by protein and fat. Most of the players were aware of the role of protein in muscle building. But most of the athletes believe that vegetarian athletes require protein supplements to meet their protein needs, and that the body relies on protein for immediate energy.

Table 3: Nutritional knowledge of female football players

Nutritional aspects	Positive responses (%) (n=54)
Carbohydrate	46.29
Protein	37.03
Fat	37.03
Vitamins and minerals	27.77
Hydration	55.55

Similarly a study by Rosenbloom *et al.*, (2002) found that 46 per cent of athletes believed protein as the main energy source for the muscle and 34 per cent athletes rely on protein supplementation. The players also admitted the importance of hydration during the athletic period. But the awareness and knowledge of the players regarding vitamins and minerals

was very less among all nutrients. In the present study, majority of the athletes believed that athletes must take a multivitamin each day and believed vitamins and minerals supply energy. Other studies, as well, have reported many athletes believing vitamins and minerals can increase energy (Jonnalagadda *et al.*, 2001); Rosenbloom *et al.*, 2002).

Attitude towards sports nutrition :

Results (Table 4) revealed that 81.48 per cent of the female football players realize the importance of sports nutrition. Studies by Yueching and Yi-chia (1999), Jacobson *et al.* (2001), Ruka *et al.* (2005) have indicated that athletes appear to have positive attitude towards nutrition. Among the subjects, 74.07 per cent of the the subjects felt the beneficial effects of sports nutrition on performance. Overall 72.22 per cent of the subjects were affirmative that nutritional needs of athletes differ from normal population.

Table 4: Football players attitude towards sports nutrition

Question	Positive response (%) (n=54)
Importance of sports nutrition	81.48
Belief in sports nutrition to improve performance	74.07
Nutritional needs of athletes differ from normal population	72.22

Dietary practice of football players:

Present study indicates that neither nutrition knowledge nor attitude correlates with dietary intake. Knowledge was less predictive of dietary intake. Conflicting results have been reported for athletes regarding relationships between nutrition knowledge and dietary intake. The dietary practices of subjects in the present study were also variable. Among the

subjects, 68.51 per cent ate carbohydrate before events while 81.48 per cent of them were aware of the carbohydrate loading. Skipping of meal prior to competition was practiced by 72.2 per cent of selected subjects. Study made by Buerger and Bergman (2002) indicated that only 41 per cent of the players eat breakfast, while the remaining 59 per cent skip ped breakfast more than three times a week. Hickson *et al.*(1987) study indicated that only 19 per cent of his sportsmen ate breakfast and 81 per cent skipped breakfast almost daily. Among the studied subjects, 74.07 per cent were consuming sports drink every day before practice. Fat was reported to be an essential component of 74.07 per cent of the players and 70.37 per cent of the players took extra protein diet before an event. Complexed carbohydrates were preferred by 18.51 per cent of the subjects while 68.5 per cent of the subjects consumed sports drink after practice. Awareness about the importance of fibre in daily diet was seen in 25.9 per cent of the subjects. Among the selected subjects, 46.29 per cent indicated that they altered the meal pattern during sports events.

Conclusion :

The present study reveals that the nutritional knowledge possessed by female football players was not put to practice. Failure to consume right diet during competition due to false beliefs and constant fear of eating prohibited foods may hamper performance. Knowledge and attitude have great influence on day to day practice in sports. Since our athletes rely heavily on peers, family and coaches for nutrition information effort is clearly needed both in counseling and imparting nutrition education to our athletes and coaches during training programmes. Extensive counseling will ensure better selection and consumption of nutrients, thereby improving the health and performance of players.

Table 5: Dietary practices of football players (n=54)

Sr.No.	Questionnaire	Positive responses (%); (n=54)	Negative (%);(n=54)
1.	Eating carbohydrate before an event	37 (68.51)	17 (31.48)
2.	Skip meals prior to competition	39 (72.2)	15 (27.7)
3..	Consume sports drinks every day before practice	40 (74.07)	14 (25.9)
4.	Believe in carbohydrate loading prior to competition	44 (81.48)	10 (18.51)
5.	Fat an essential component of your diet.	40 (74.07)	14 (25.9)
6.	Extra protein diet before an event	38 (70.37)	16 (29.62)
7.	Prefer complex carbohydrates	10 (18.51)	40(74.07)
8.	Consumption of ergogenic sports drinks after practice.	37 (68.5)	17 (31.48)
9.	Fibre is very important in daily diet	14 (25.9)	40 (74.07)
10.	Alter the meal pattern during sports events	25 (46.29)	29 (53.70)

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