KNOWLEDGE, ATTITUDE AND PRACTISES ABOUT HEALTHY EATING OF ASPIRING COACHES IN VARIOUS SPORT DISCIPLINES

Namratha Pramod¹
Nutritionist, Sports Authority of India, Netaji Subhas Southern Centre, Bangalore. India.

ABSTRACT

BACKGROUND: A coach is often considered as God by the athlete. A coach nurtures the athlete’s talent and helps them to develop their full ability. A coach has many roles to play in an athlete’s life like counsellor, mentor, nutrition advisor, facilitator etc. The right kind of knowledge is required to advise the athletes scientifically. Sports nutrition helps athletes to enhance performance and recover better. For better athletic output, nutrition and training should go hand in glove.

OBJECTIVE: To assess the Knowledge, Attitude and Practises of the Coaches about healthy eating and importance of nutrition in sports.

METHODS: The study was carried out at Sports Authority of India, Netaji Subhas Southern Centre, Bangalore. A total of 81 aspiring coaches were selected. Out of which 54 were male and 27 were female. A questionnaire method was used.

RESULTS: 52% of the subjects represented team sports like kabaddi, hockey whereas 39% of them were of individual events like badminton, swimming etc. The mean height of the subjects was 169cm and mean weight was 66.8Kg. The mean BMI was 23.29, which falls under the normal category as all these were sportsmen. About 38% of the subjects were in the particular sport for more than 15 years and majority of (about 46%) them were in the sports field between 10 – 15 years. About 91% from individual sport and 96% of team sports had right knowledge related to Carbohydrates. There was poor knowledge amongst the subjects in regard to protein. 98% of sportsmen has positive attitude about lack of iron causing fatigue. Awareness about carbohydrate loading was seen in 60% of the subjects.

CONCLUSION: The overall scores indicated that most sportsmen had satisfactory knowledge of healthy eating habits, except for protein consumption pattern and its requirement. Sports discipline did not have an influence on the nutritional knowledge of the sports men.

Introduction:

According to Wikipedia¹ in sports, a coach is a person involved in the direction, instruction and training of the operations of a sports team or of individual sports person. A coach may also be a teacher. A coach is often considered as God by the athlete. A coach nurtures the athlete’s talent, helps the athletes in developing their full ability. A coach has many roles to play in an athlete’s life like counsellor, mentor, nutrition advisor, facilitator etc. The right kind of
Knowledge, attitude and practise about healthy eating of aspiring coaches in various sport discipline

Knowledge is required by the coaches to advise the athletes scientifically. Sports nutrition helps athletes to enhance performance and recover better and faster. For better athletic output nutrition and training should go hand in glove. Nutrition plays an important role in sports performance because it helps an athlete to maintain ideal body weight, body composition specific to sports and faster recovery.\(^{(2)}\) In India, sports nutrition as a field evolved predominantly after the Common wealth games, 2010. A sports nutritionist advises the coaches and the athletes on the right nutrient practice and right nutrient timing of the foods to maximize the benefit from them. Athletes competing in team sports require to switch intermittently between maximal-effort and low-intensity exercise, potentially causing large losses of body water, therefore, hydration is an important but often overlooked aspect of proper training.\(^{(3)}\) The delay in production and accumulation of lactic acid in the athlete’s body can enhance his performance. Adequate nutrition enhances aerobic capacity or \(\text{Vo}_2\text{max}\)\(^{(4)}\). Athletes often choose supplements over adequate nutrition due to lack of knowledge or peer pressure. Most of the time they fall prey for the supplements, without realising if that does any good to them or not. Ever increasing pressure on athletes and bodybuilders to perform and do their best along with increasing competitiveness of sports pushes many athletes to add pharmacological agents and dietary supplements to their training and nutritional eating plans to improve their performance levels.\(^{(5)}\)

A sound and scientific basic knowledge is very essential for the coaches to advise their athletes better. The intermediate level of KAP (Knowledge, Attitude and Practice), organized and regular education courses are highly recommended along with paying more attention to the curriculum taught.\(^{(6)}\) A proper knowledge, attitude and practice (KAP) of sports nutrition is associated with many positive outcomes for athletes including optimal health and performance.\(^{(7)}\) However, only a few studies assessing nutritional knowledge, attitudes and practices (KAP) are available, which presents the need of the study.

**OBJECTIVE:**

1. To assess the Knowledge, Attitude and Practises of the aspiring coaches about healthy eating and importance of nutrition in sports.

**METHODS:** The study was carried out at Sports Authority of India, Netaji Subhas Southern Centre, Bangalore. A total of 81 aspiring coaches were selected through purposive selection. Out of which 54 were male and 27 were female. A questionnaire method was used.

A standardised well framed and validated questionnaire was developed which comprised of question related to the nutritional knowledge and attitude practices. A pilot study was run before all the data were collected. It was followed by an interview method. A similar study on nutritional knowledge of athletes by Mitchell Face\(^{(8)}\) was referred to develop the questionnaire.

**PROCEDURES:**

Questionnaires were distributed to the athletes with a covering letter mentioning the need of the study, the purpose of the study. A paragraph about confidentiality was also mentioned in the covering letter. A consent form in both English and regional language was taken from the aspiring
coaches after explaining about the study. The primary investigator collected the questionnaire there after. The study was conducted after the sports nutrition academic classes were conducted.

The Aspiring Coaches were taught basics of Sports nutrition to understand the right concepts of nutrition like carbohydrates, proteins fats, hydration etc. They were also given basic inputs of foods for each sport discipline, or foods pre competition, during competition and post competition during the academic classes.

RESULTS AND DISCUSSION

DEMOGRAPHIC INFORMATION:

A total of 81 aspiring coaches were selected. Out of which 66% (n=54) were male and 44% (n=27) were female (Table 1). The age group of the participants was between 23 years to 37 years. Among the subjects 64% (n=52) were unmarried and 46% (n=46) were married. Individual sport data was collected. A total of 9 sport disciplines were studied (Table 2). It was further divided into individual and team sports. About 52% (n=42) of the subjects represented team sports like kabaddi, hockey where as 39% (n=39) of them were of individual events like badminton, swimming etc. (Figure 1).

The mean height of the subjects was 169 cm and mean weight was 66.8Kg. The mean BMI was 23.29, which falls under the normal category as all these were sportsman. The duration of the participants practising in their particular sport was studied. Almost half of the participants 46% (n=46) were practising the sport since 10 – 15 years. Around 38% (n=31) of participants practiced that particular sport for more than 15 years (Figure 2).

NUTRITION KNOWLEDGE:

Enhancing nutrition knowledge and improving dietary intakes of the athletes is the main aim of nutrition education. (9)

The nutrition knowledge of the aspiring coaches was studied through a set of questions based on their knowledge in the questionnaire. The answers were scored with a help of a scoring system. The nutrition knowledge of the aspiring coaches was good. When the scores were compared, they showed poor knowledge about protein. Protein consumption is always believed to be the most important part of the diet by athletes especially the once who are looking at body building. Also when it comes to the quantity consumed by any individual, there are too many myths attached to it. They were also aware about the effects of dehydration.

About 91% from individual sport and 96% of team sports had right knowledge of Carbohydrates and its sources. The poor knowledge amongst the subjects was in regard to protein. 36% from individual sport and 26% from team sport had right knowledge on protein and its requirement. 100% from both sports knew the kind of
calories obtained by fat. 82% from individual sport and 87% of team sports had good knowledge on vitamins and minerals. 96% from individual sport and 97% of team sports had adequate knowledge on hydration, effects of dehydration and fluid balance (Figure3).

ATTITUDE RESPONSES:

Extreme eating behaviour and attitude in the athletes can lead to the feeling of loss of control by the athletes. 

About 100% from individual sport and 98% from team sports had positive attitude about lack of iron causing fatigue. However iron deficiency anaemia is one of the common nutritional problems seen by most of the athletes, especially girls. 92% from individual sport and 100% from team sports agreed that nutritional need of athletes is different from normal population. 23% from individual sport and 21% from team sports had positive attitude for vitamin supplementation. When asked about important foods for enhancing performances, 52% of participants in team sports had right attitude towards consuming them. Also 41% of participants from individual sports showed right response for these foods. 92% from individual sport and 100% from team sports had positive attitude about dietary changes required with change in climatic conditions and seasons (Figure 4).

FOOD CONSUMPTION PRACTISES:

Reviewing the diet of Olympic athletes as a concept existed in the past centuries. In support of lack of qualitative description of the diets only handful of data is present. 

Right eating practice of food was seen in both individual and team sports (Table 3). Both the sport group aspiring coaches had similar response to the questions asked.

About 87% from individual sport and 90% from team sports changed their dietary pattern during the time of competition. 67% from individual sport and 72% from team sports did not skip meals prior to competition. The aspiring coaches were not well informed on the good food choices to be consumed pre-competition but they managed to eat something before the competition. 41% from individual sport and 31% from team sports were practising the usage of sports drinks during training phase.

About 61% from individual sport and 60% from team sports practised carbohydrate loading prior competitions whereas nearly half of them did not practice carbohydrate loading either with lack of knowledge about it or due to the fear of weight gain. A nominal percentage of 36% from individual sport and 28% from team sports used to eat energy bars during the training. The concept of energy gels was very new to aspiring coaches. Though they were in the sport for so long they revealed that the concept was new to them. They were not aware of the right usage, timing and dosage of the energy gels. 18% from individual sport and 15% from team sports used energy gels occasionally. Eating banana for energy is believed as a practice from ages. Banana consumption as pre competition snack and
during the competition was a common practise. When the aspiring coaches were involved in competitive sports, they had a similar practise. About 72% from individual sport and 74% from team sports had banana regularly during training. The rest of the participants believed in weight gain on eating banana. Isotonic sports drinks are very commonly available. The commercial sports drinks are available in different brands and flavours. Though isotonic drink can also be considered as a supplement aspiring coaches were not aware. Nearly 54% from individual sport and 55% from team sports consumed isotonic drink. Only a few participants had the knowledge about it. Other participants consumed sports drinks because of influence of peer pressure as they believed it can enhance performance.

CONCLUSION:
Nutritional intake plays a very important role in enhancing athletic performance. Optimum dietary intake are often compromised due to travelling, lack of knowledge and demanding training.\(^{(12)}\)

The aspiring coaches were provided with academic knowledge on sports nutrition. The scores also indicated that they gained sufficient knowledge. The overall scores indicated that most aspiring coaches had satisfactory knowledge of healthy eating habits except for protein consumption, eating pattern and its requirement. The study also indicated the need for nutrition education as a primary area for the coaches to understand and help the athletes in enhancement of their performance. Right nutritional intervention at right time can help athletes achieve what they aim for. There were sport specific variation in eating practices and some had food faddism due to the influence of peers and coaches. Some of them believed in traditional practices of the sport itself. It is need of the hour to educate the aspiring coaches, as they carry the legacy forward of scientific training and appropriate nutrient timing. In India each region has its own regional foods. Athletes need to be introduced to staple diets of the other states, as they might travel to different places for the competition. The aspiring coaches’ knowledge on different regional foods makes it easy for them to guide their athletes during travel and competition. Food faddism like prohibited foods can have an impact on the performance of the athletes. Hence it is important to educate the aspiring coaches on right practice. Basic nutrition education for the aspiring coaches are most important. It helps to improve the Knowledge, Attitude and Practice regarding healthy eating.
LIST OF TABLES AND FIGURES

Table 1: Gender distribution of the participants (n, %)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of subjects (n)</th>
<th>Total percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>54</td>
<td>66%</td>
</tr>
<tr>
<td>Female</td>
<td>27</td>
<td>44%</td>
</tr>
</tbody>
</table>

Table 2: Number of participants from each sports discipline (n, %)

<table>
<thead>
<tr>
<th>Sport Discipline</th>
<th>Number of Subjects (n)</th>
<th>Number in percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletics</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>Badminton</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Hockey</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Kabaddi</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>Kho-Kho</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Softball</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Swimming</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Taekwondo</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Volleyball</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
Table 3: Food practise pattern of subjects (%)

<table>
<thead>
<tr>
<th>SI No</th>
<th>Questions related to Practise</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Individual Sport</td>
<td>Team Sport</td>
</tr>
<tr>
<td>1</td>
<td>Does your dietary pattern change at the time of competition?</td>
<td>87</td>
<td>90</td>
</tr>
<tr>
<td>2</td>
<td>Do you skipping meals prior to competition?</td>
<td>33</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>Do you consuming sports drinks during practice?</td>
<td>41</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>Do you practice carbohydrate loading prior to competition?</td>
<td>61</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>Are you having the habit of taking energy bar during training?</td>
<td>36</td>
<td>28</td>
</tr>
<tr>
<td>6</td>
<td>Do you consume energy gel during training?</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Will you practice of eating bananas during training?</td>
<td>72</td>
<td>74</td>
</tr>
<tr>
<td>8</td>
<td>Do you consume isotonic sports drink (6g/100ml) during training?</td>
<td>54</td>
<td>55</td>
</tr>
</tbody>
</table>

Figure 1: Participants of team sports and individual sports (%)
Knowledge, attitude and practise about healthy eating of aspiring coaches in various sport discipline

Figure 2: Experience of subjects in sports (%)

![Experience of subjects in sports](image)

Figure 3: Knowledge of nutrients among subjects (%)

![Knowledge of nutrients among subjects](image)
Knowledge, attitude and practise about healthy eating of aspiring coaches in various sport discipline

**Figure 4: Attitude of subjects towards food (%)**

![Attitude Of Foods](chart)

- **Nutritional need differ due to climate**
  - Team Sport: 0%
  - Individual Sport: 100%

- **Enhanced Performance**
  - Team Sport: 21%
  - Individual Sport: 52%

- **Vitamin Supplementation**
  - Team Sport: 23%
  - Individual Sport: 41%

- **Athletes Nutritional Needs**
  - Team Sport: 92%
  - Individual Sport: 92%

- **Iron Deficiency**
  - Team Sport: 98%
  - Individual Sport: 100%
References

4. 