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ORIGINAL RESEARCH

Investigation of nutrition knowledge levels of basketball coaches working in Karaman city center

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Abstract

Adequate and balanced nutrition is to advance success in a positive way. Adequate and balanced nutrition is necessary for the energy and mental well-being required during training and competition. Individuals with sufficient nutritional knowledge know-how, where, and how much they should get the nutrients they need while doing sports. The most important resource about nutrition education for athletes is known as trainers. The nutritional knowledge levels of trainers are important in this context. This study was carried out to determine the nutritional knowledge levels of basketball coaches working in the 2021/2022 basketball season in the city center of Karaman. The universe of the research consists of basketball coaches who have signed contracts for the 2021/2022 season in the clubs located in the city center of Karaman. In order to examine the nutrition knowledge level of the trainers, the questionnaire form, which included a socio-demographic information Question in the first part and a Question on the analysis of the nutrition knowledge level in the second part, was applied using. In the qualitative research method, it was applied with a face-to-face interview technique. Questionnaire the questions were created by making use of previous scientific studies and were examined by three experts working in the nutrition-dietetics department and the gastronomy and culinary arts department. At the end of the study, it was determined that the trainers should give correct information about nutrition to the athletes before, during, and after the training and competition, and therefore they should receive in-service training at certain intervals in order to improve their nutrition.

Keywords: Basketball, coach, sports nutrition, nutrition knowledge level.

Introduction

The word sport originated from the Latin words 'Disportere' or 'Deportere', which means to distinguish and disperse. The word, which has been used as 'Disport' by changing over time, has been used as 'Sport' since the 17th century and is also used as 'spor' in Turkish (Atasoy & Kuter, 2005). All body movements that usually lead to competition, have rules, are expected to be useful in the late period, and are performed individually or jointly are defined as sports. (Dündar, 1994). Sport is an act to train not only the body but also the integrity of the human body and ideas. Sport develops characteristics such as self-confidence, responsibility, being creative, health, fitness, and adaptation to society (Yazıcı, 2014). Conscious intake of nutrients into the body in an adequate and balanced way to protect and improve health is defined as nutrition (Ministry of Health, 2022). Nutrition, sports, and health are concepts that are closely related to each other (Onurlubaş, 2011). Individuals who do sports need regular nutrition as well as exercise, regular living, mental support, and medical help. The

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recovery of energy from the movements made for sporting success is only possible with diets where adequate and balanced nutrition is applied (Şirin, 2011). It is important for athletes and coaches to have knowledge about nutrition in athlete success. Young athletes are known to adopt their coaches as a source of information and take them as role models (Özmerdivenli & Karacabey, 2002).

Athletes need to make their diet a way of life and know that success will be achieved with regular nutrition. When not fed regularly, chronic diseases such as cardiovascular diseases, diabetes, cancer, hypertension, etc. are likely to occur (Şirin, 2011). When the relevant literature is examined, it is seen that there are various studies investigating the nutritional knowledge level of coaches (Çongar & Özdemir, 2004; Bayraktar & Yaman, 2004; Şirin, 2011; Canbolat & Çakıroğlu, 2016; Holden & Baghurst, 2018; Pretorius, 2019; Aydın, 2021; Boumosleh, et al., 2021; Carbone, 2021). The studies include information about the nutritional knowledge levels of the coaches and how they should transfer their nutritional information to the athletes. Research shows that people who are engaged in various sports branches suffer from diseases due to a lack of nutritional information. Basketball coaches are expected to support athletes in terms of tactics, exercise, injury, physical and psychological aspects, as well as guidance on nutrition.

In this context, this research conducted in Karaman province aimed to determine the nutritional knowledge levels of basketball coaches and to offer suggestions about the correct nutritional approaches for the deficiencies seen at the end of the research. It is thought that the recent study will also help new studies on the subject.

While a healthy and balanced diet is sufficient for individuals who exercise daily, food preference for athletes who compete in any sport is seen as an element of winning or losing the competition. Nutrition is shown among the elements that ensure success in sports. Adequate consumption of food and beverages determined before training and matches positively affects performance. The appropriate foods and drinks that the athlete receives in sufficient quantities after the match help the body to come to itself as well as accelerate the recovery (Ersoy, 2011; Mor et al., 2018; Baykara et al., 2019). The nutrition program should be planned according to the age, gender, health status, daily amount of energy needed and body mass index of the athlete according to the sports branch. While athletes who eat adequate and balanced nutrition gain an advantage in terms of the success they want, athletes who do not pay attention to their nutrition will not be able to achieve success and will also carry the risk of contracting various infectious diseases because the immune system is weakened. (Öztürk, 2017; Baykara et al., 2019). In athletes, optimal nutrition is important for muscle cell regeneration, protein formation, energy requirement, tissue repair, and achieving optimal fluid levels. Individual differences can be seen in the nutrition program as well as differences according to sports branches. (Mor et al., 2018).

Basketball, which is included in team sports; is a match between two teams with 5 players on the field in each team and 7 players waiting for a substitute. Basketball is a sport in which players must demonstrate their strength, balance, speed, cooperation, and ability to make quick decisions. Players must have enough energy to be able to demonstrate all these skills. Energy allows the player to move the ball into the opposing team's half court and score (Korkmaz, 2021). In basketball, both teams aim to move the basketball to the opponent's half court and score points by shooting baskets (Candan, 2020). In Basketball; game rules, teams, game regulations, violations, fouls, general conditions, referees, table officials, technical commissioner, court dimensions, ball size and basket height (TBF, 2022). It is determined by the International Federation but there are some differences in national and regional circumstances (NBA etc.) (National Basketball Association, 2019). Basketball was first invented in the United States by the physical education teacher Dr. James Naismith. Basketball in Turkey first started in 1904 at Robert College, then Galatasaray High School and then Fenerbahçe Sports Club invested in basketball. The Istanbul basketball championship was announced in 1927 and basketball spread throughout the country in 1933 with the participation of sports clubs Fenerbahçe, Galatasaray, Hilal, Beşiktaş and İstanbulspor (Tezcan, 2021). The ability to teach sports-specific skills is among the important elements of coaching (Cote & Gilbert, 2009). These qualities include communication and the ability to communicate their own philosophy of play to athletes. Coach is adopted by athletes as a role model, teacher, leader and guide (Onağ et al., 2013). When the literature is examined, the number of studies on trainers in sports nutrition is not sufficient. The importance of nutritional knowledge for trainers is known, and similar studies conducted in this context are important in terms

of athlete performance. In this context, this research conducted in Karaman province aimed to determine the nutritional knowledge levels of basketball coaches and to offer suggestions about the correct nutritional approaches for the deficiencies seen at the end of the research. It is thought that this study will also help different researchers on the subject.

Methods

This study was carried out by using the relational screening model, one of the general screening models included in the quantitative research method, in order to determine the nutritional knowledge level of basketball coaches who are actively working in basketball clubs in Karaman city center. The relational screening model aims to detect the presence and rate of variation between two or more variables. The relational screening model is made in the form of correlation and comparison. In the relational screening model, it is tried to determine whether the variables that are the subject of the research change together and if a change is observed, how this change occurs (Karasar, 2003). The quantitative research method used in the study was preferred with the thought that the sample group that participated in the research voluntarily in the selected universe would reveal their knowledge and thoughts about the research subject in an objective way.

Universe and Sample

The universe of the study, which is limited only to the city of Karaman, consists of basketball coaches who have signed a contract with any basketball club in the 2021-2022 basketball season in Karaman city centers. The sample group of the research consists of 49 basketball coaches who volunteered to participate in the study, who had knowledge about nutrition and were thought to convey this information to the athletes and were selected using the purposeful sampling method.

Data Collection Tool

In the research, the interview method was preferred for data collection and the interview form used in this method was applied by interviewing the participants face-to-face. The interview form was prepared on the basis of the thesis study on the examination of the nutrition knowledge levels of amateur football coaches working actively in Kahramanmaraş, which was reached as a result of the literature review (Şirin, 2011). The interview form consists of two parts. In the first part of the interview form, there are questions about the demographic information of the participants, and in the second part, questions about the nutritional knowledge level of the participants. Appointments were made for the appropriate dates and times for the face-to-face interviews with the participants, brief information about the research topic was given, and voluntary participation approval was obtained.

Analysis of the Data

The Question prepared to determine the demographic information, and nutrition information levels of the sample group participating in the research were calculated by using the SPSS 22.0 program, and the frequency and percentage distributions were calculated and interpreted by creating a table.

Results

The frequency and percentage distributions of the data obtained as a result of the face-to-face interview with the sample group participating in the research were revealed and presented in the form of tables and the information obtained under the tables was interpreted.

It was determined that the distribution of the research group according to age variable was 22.4% between the ages of 20-25, 24.5% between the ages of 26-31, 28.6% between the ages of 32-37, and 24.5% between the ages of 38 and the findings related to the age variable were very close to each other. It was determined that the distribution of the research group according to gender variable was 69.388% male and 30.612% female and as a result of the results, it was found that the male participants were higher than the women. It was determined that the distribution of the research group according to the Marital Status variable was 36.735% of the Singles and 63.265% of the married participants. It was found that the married participants were more than single participants.

Discussion

The nutritional knowledge levels of 49 basketball coaches working in Karaman city centers were investigated. The inclusion of only basketball coaches in Karaman province can be considered a limitation of the study.

Table 1
Descriptive information of the coaches.

	Groups	Frequency	%
Age	20-25 Age	11	22.4
	26-31 Age	12	24.5
	32-37 Age	14	28.6
	38 years and older	12	24.5
	Total	49	100.0
	Groups	Frequency	%
Gender	Male	34	69.4
	Female	15	30.6
	Total	49	100.0
	Groups	f	%
Your marital status	Single	18	36.7
	Married	31	63.3
	Total	49	100.0
	Groups	Frequency	%
Your education status	Secondary Education	16	32.7
	Undergraduate Degree	27	55.1
	Master's Degree	6	12.2
	Total	49	100.0
	Groups	Frequency	%
Your income status	2250 TL and lest	9	18.4
	2251-4250 TL	11	22.4
	4251- 6000 TL	13	26.5
	Over 6001 TL	16	32.7
	Total	49	100.0
	Groups	Frequency	%
How many years have you been coaching	1 Years and Less	14	28.6
	1-5 Years	13	26.5
	6-10 Years	15	30.6
	11 Years and More	7	14.3
	Total	49	100.0
	Groups	Frequency	%
How many years have you been working in your club	Less than 1 Year	2	4.1
	1-5 Years	47	95.9
	Total	49	100.0
	Groups	Frequency	%
How many years have you been working in your club	13-14 Age	13	26.5
	15-16 Age	26	53.1
	17-18 Age	6	12.2
	19 Age and more	4	8.2
	Total	49	100.0
	Groups	Frequency	%
How many years has your club been operating in the league	Less than 1 Year	2	4.1
	1-5 Year	2	4.1
	6-10 Year	45	91.8
	Total	49	100.0

Table 2
The answers of the basketball coaches to the questions about nutritional knowledge.

Question	Groups	Frequency	%
Do athletes have information about their nutritional needs?	Yes	18	36.7
	No	12	24.5
	Partly	19	38.8
	Total	49	100.0
Question	Groups	Frequency	%
Do you find your information about Sports Nutrition sufficient?	Yes	23	46.9
	No	26	53.1
	Total	49	100.0
Question	Groups	Frequency	%
Where did you get your information about Sports Nutrition?	The school where I studied	10	20.4
	Newspapers-Magazines-Internet	31	63.3
	Nutritionist	8	16.3
	Total	49	100.0
Question	Groups	Frequency	%
Do you find the information of your athletes about Sports Nutrition sufficient?	Yes	15	30.6
	No	16	32.7
	Partly	18	36.7
	Total	49	100.0
Question	Groups	Frequency	%
Do your athletes know what they should not eat before a match?	Yes	20	40.8
	No	12	24.5
	Partly	17	34.7
	Total	49	100.0
Question	Groups	Frequency	%
Do your athletes know what they should not eat before a match?	1 Hour	15	30.6
	2 Hour	17	34.7
	3 Hour	17	34.7
	Total	49	100.0
Question	Groups	Frequency	%
What kind of energy intake with high nutritional content should be done before the match?	Carbohydrate	25	51.0
	Protein	14	28.6
	Vitamin	10	20.4
	Total	49	100.0

Table 3
The answers of the basketball coaches to the questions about their nutritional knowledge

Question	Groups	Frequency	%
What kind of energy intake with high nutritional content should not be done before the match?	Karbonhidrat	17	34.7
	Fat	19	38.8
	Protein	6	12.2
	Vitamin	7	14.3
	Total	49	100.0
Question	Groups	Frequency	%
What kind of energy intake with high nutritional content should be done after the match?	Carbohydrate	32	65.3
	Protein	17	34.7
	Total	49	100.0
Question	Groups	Frequency	%
What type of energy should not be taken after the match?	Carbohydrate	20	40.8
	Fat	18	36.7
	Protein	10	20.4
	Vitamin	1	2.0
	Total	49	100.0

Table 3
(Continued)

Question	Groups	Frequency	%
Is fluid intake important during the match?	Yes	43	87.8
	No	6	12.2
	Total	49	100.0
Question	Groups	Frequency	%
At least how many meals should athletes eat per day?	3 meals	25	51.0
	4 meals	14	28.6
	5 or more meals	10	20.4
	Total	49	100.0
Question	Groups	Frequency	%
Do you have enough information about the diet of athletes?	Yes	7	14.3
	No	18	36.7
	Partly	24	49.0
	Total	49	100.0
Question	Groups	Frequency	%
Does your club have a Nutritionist?	Yes	7	14.3
	No	42	85.7
	Total	49	100.0
Question	Groups	Frequency	%
Do your athletes eat regularly and without skipping meals?	Yes	20	40.8
	No	29	59.2
	Total	49	100.0

Trainers play an important role in the success of the athlete, the training and athlete history, and nutritional levels of the athlete. In the event that the factors affecting the sports performance of the athletes are equal, it is important for the coaches to know that the nutritional status of the athletes is a determining factor in the sportive performance, and it is important to convey the importance of training. Considering the findings of the study, it was seen that there were differences in the nutritional knowledge levels of the coaches. Considering that there is no difficulty in accessing information in today's technology, it is thought that the coaches should focus on this situation by making self-criticism.

It has been concluded that trainers should give correct information to their athletes before training and rest intervals. In addition, conscious eating patterns should be emphasized by the coaches before and after the competition, and this habit should be gained. Sports; can be grouped into three groups endurance sports, power/strength sports, and team sports. Although the basic nutrition rules are similar between sports branches, there may be some differences in terms of the energy systems used and accordingly the energy and nutrient requirements (Eskici, 2015).

A carefully planned nutrition program has significant positive effects on athletic performance (Trakman et al., 2016). Athletes should have an adequate and balanced diet in order to maintain their health and show optimum performance (Bar-Or, 2000). Proper nutrition is very important to achieve top performance. In line with the needs of the sports branch, a targeted, individualized nutrition program is suitable for the training of the athlete; It helps to adapt to training, increase performance, accelerate recovery, and reduce the risk of injury (Toktaş & Demirörs, 2020).

In a study, they found that university-educated coaches have a higher level of nutritional knowledge than others (Couture et al., 2015). When the literature is examined, it is seen that most of the studies are aimed at measuring the nutritional knowledge of athletes (Bilgiç et al., 2015; Göral et al., 2010; Uzlu et al., 2021; Yılmaz et al., 2021; Çakır & Coşkuntürk, 2022; Klein et al., 2021).

Energy expenditure in endurance athletes; It may vary depending on the duration and severity of the activity, the gender, age and weight of the athlete. In some situations, such as the necessity of exercise and mental concentration (cycling, driving) and unsuitable environments (swimming, etc.), the energy needs of the athlete may not be met. Trying to meet energy demands during activity can cause nausea and cramps in some athletes, making it difficult to eat. Because; Practical and easily digestible foods (such as sports drinks, sports gels) that meet the sodium, liquid and carbohydrate needs of the athlete should be preferred (Fink et al., 2017).

As a result, training seminars should be given more comprehensively by reducing the topics of the training

seminars to improve the nutrition knowledge level of the trainers, it would be appropriate to increase the number of seminars given during the year in parallel, it would be appropriate.

Encouraging people with a sports background to be coaches, would contribute to the coaching profession, besides the trainers, the athletes should be informed about nutrition information. On the other hand, studies to be conducted should focus on measuring the nutritional information of trainers for athletes, because it is thought that besides the branch-specific technical information, the relationship between the athlete and the trainer is important in increasing sportive performance.

Author Contributions

Study Design: SA, MA; Data Collection: SA, MA; Statistical Analysis: SA; Manuscript Preparation: SA, MA.

Ethical Approval

Ethics committee approval of the study was obtained by the decision of the ethics committee of Karamanoğlu Mehmetbey University, dated 18.04.2022 and numbered 03-2022/49. The study was carried out in accordance with the Declaration of Helsinki.

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Conflict of Interest

The authors hereby declare that there was no conflict of interest in conducting this research.

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