

The relationship between emotional eating and general health among professional basketball players

Emin Suel

Faculty of Sport Science, Nigde Omer Halisdemir University, Nigde, Turkey

Abstract. *Study Objectives:* This study aimed to examine the relationship between professional basketball players' general health and emotional eating. *Methods:* 154 (59 female and 95 male) basketball players who played in different categories in the Turkish Basketball League participated in the study voluntarily. Personal information form, general health scale (GH) and emotional eating scale (EEQ) were used as data collection tools in the study. Independent samples t-test and Pearson correlation analysis test were used in data analysis. *Results:* According to the results of the study, a significant difference was found between the groups in terms of gender variable and nationality status. It was determined that female athletes had more emotional eating levels than male athletes and national athletes than non-national athletes. According to the scores obtained from the general health scale, there was no significant difference in terms of gender and nationality status variables. When the relationship between emotional eating, its sub-dimensions and general health was examined, it was determined that there was a weak positive relationship between Disinhibition ($r=.159$; $p<0.05$), the type of food ($r=.170$; $p<0.05$), and general health. Moreover, there was a weak positive correlation between Guilt ($r=.205$; $p<0.05$) and emotional eating ($r=.198$; $p<0.05$) and general health. *Conclusion:* It can be thought that emotional eating negatively affects the physical, psychological and mental health of the general health and this situation will create a negative situation in terms of gaming performance for the elite basketball players.

Keywords: Basketball, Emotional Eating, General Health

Introduction

It has known that nutrition is of great importance in maintaining physical and mental health (1,2). In fact, it plays a role in various conditions such as the stimulating effect of metabolic adaptation, body mass index, the fitness of the body against any strain, and sports injuries, where health is indirectly related to nutritional status (3-5). In addition to knowing the positive effect of nutrition on health, it is stated that different eating behaviours occur in some situations that cause physical and psychological negative results. In general, it is stated that many non-physiological factors such as amount and duration, eating habits, and food choices are affected by emotions in people's eating behaviour,

however, emotions may be the basis of problems such as obesity, eating disorders, and social appearance anxiety (6-8). For this reason, unhealthy eating behaviours have various negative psychological effects such as anxiety, negative mood and depression (9-11), and some researchers (12) show that these negative moods have been claimed to trigger eating disorder behaviour. Greeno et al., (13) and Lafay et al. (14) have stated that the desire to eat, which is called the eating problem, is an emotional need that activates people against a food rather than a physiological need. Therefore, the concept of emotional eating is defined as a response to these emotions (15). For those who do sports at a professional level, success comes together with physical, psychological, technical tactics and nutrition. In

basketball, which is among the most popular sports in the world (16), elite players need to develop body mass index and motor skills specific to that sport in order to increase physical performance (17). At the same time, the adequacy of physical and anthropometric (18) properties is required for the optimal realization of features such as advanced strength and speed (19). Therefore, the nutrition program should be designed according to the training period to increase physical capacity in the pre-competition preparation process and to show good performance during the competition (20-22). In sports where body weight has an effect on performance and requires regular nutrition due to higher energy consumption rather than feeling of hunger, eating behavior disorders may be more frequent (23,24). However, some researchers stated that by negatively affecting emotion regulation skills related to emotional eating, it may lead to psychological problems and weight problems (25,26). Emotional desire to eat may actually be caused by poor performance or a social problem among athletes. Researchers (27,28) generally state that people tend to eat emotionally in order to relieve different negative emotions such as anxiety, stress, and difficulty coping. It has been stated that there is a difference between different moods and eating meals (29). Aljadani et al. (30) have stated that in the case of emotional eating more preferred unhealthy foods such as sweets and fatty foods that will affect the physical performance and body composition of athletes rather than healthy food intake. Therefore, emotional eating desire, which negatively affects the physical performance of athletes, can cause effects such as physical weight problems. In this context, the aim of this study was to examine the relationship between the emotional eating levels of elite basketball players and their general health.

Material and Method

Participants

The study sample consisted of 154 (59 female and 95 male; 39 female and 11 male national) professional basketball players ($\bar{x}_{\text{BMI}} \pm \text{SD} = 23.04 \pm 2.80$; $\bar{x}_{\text{Age}} \pm \text{SD} = 22.32 \pm 6.24$; $\bar{x}_{\text{athlete experience}} \pm \text{SD} = 12.27 \pm 5.35$) who were

playing in the Turkey Basketball League in different league categories.

Data Collection

In the study, personal information form, general health scale and emotional eating scale were applied to define the demographic characteristics of the basketball players.

General Health Questionnaire Scale-12 (GHS-12): It was stated that the scale can be used safely in determining the psychopathology level, mental states, psychiatric disorders, non-psychotic depression and anxiety symptoms. The scale was developed by Goldberg and Hiller, (31) and the scale had 12, 28, 30 and 60 question forms. Turkish validity and reliability study of 12 and 28 question forms was conducted by Kılıc (32). The internal consistency coefficient of the scale was determined as .78. While each question asked the symptoms of the last 4 weeks, the items consisted of four options (never, as usual, more often than ever, more often). Two types of methods were used in the evaluation of the scale. In the first method, each item (0-1-2-3) was given a score. In the second method, a scoring type (0-0-1-1), which was called GHS type scoring, was used. Scoring 2 points or more in the GHS type scoring was considered to be psychologically risky. It was accepted that the higher score from the scale, the higher risk of the disease. In this study, GHS type scoring was preferred.

Emotional Eating Scale (EEQ): It was developed by Garaulet et al., (2012) to determine the emotional eating levels of athletes and the eating behaviours of overweight and obese people (33), and the scale's Turkish adaptation was made by Arslantas et al. (34). The scale consisted of 10 Questions and three sub-dimensions (Disinhibition 5 items, type of food 3 items, and guilt 2 items) had a scoring type, which has four options (Never-0, Sometimes-1, Generally-2, and Always-3). The highest score obtained from the scale indicated that emotional eating behaviour was also high. The internal consistency coefficient of the scale was found to be .77 for Disinhibition, .66 for the type of food, .66 for Guilt. In this study, the internal consistency coefficient of the scale was found to be .87.

Statistical analysis

SPSS 20 statistics program was used in analysing the data. Whether or not the variables had normal distribution or not was analysed with Kolmogorov-Smirnov and Shapiro Wilk tests the variables had normal distribution ($p > 0,05$). Comparisons among the groups were performed using an independent samples t-test for two groups. A Pearson correlation analysis was used to determine the relationship between variables. Significance was set at $p < 0.05$ and $p < 0.01$, respectively.

Results

In this part of the study, the general health and emotional eating scales' differences between basketball players' gender, national status variables and statistical information on the relationship between the general health scale and emotional eating sub-dimensions will be included.

Table 1 showed the results of the t-test table depending on the gender variable. According to the gender variable, there was a statistically significant difference between the groups in the sub-dimensions of Disinhibition, the type of food, Guilt, and the general mean of the emotional eating scale ($p < 0.05$). It was

found that female athletes had higher emotional eating levels than male athletes in the Disinhibition, the type of food, Guilt sub-dimensions, and the emotional eating scale in general. It was determined that there was no statistically significant difference between the groups in the general health scale ($p > 0.05$).

Table 2 showed the results of the t-test table depending on the national status variable. According to the national status variable, there was a statistically significant difference between the groups in terms of the type of food, Guilt sub-dimensions and the general mean of the emotional eating scale ($p < 0.05$). It was determined that national athletes had higher mean levels of food type, guilt and emotional eating compared to non-national athletes. It was determined that there was no statistically significant difference between the groups in the emotional eating sub-dimension of Disinhibition and the general health scale ($p > 0.05$).

When the relationship between general health, emotional eating sub-dimensions (Disinhibition, the type of food, guilt) and emotional eating scale were examined in Table 3, it was found that the Disinhibition and the general health ($r = .159$; $p < 0.05$), and the type of food and the general health ($r = .170$; $p < 0.05$) had a very weak positive correlation. Moreover, it was found that there was a weak positive correlation between Guilt and general health

Table 1. T-test Results of General Health and Emotional Eating Scales According to Gender Variable

Variables	Gender	n	$\bar{x} \pm SD$	t	p
Disinhibition	Female	59	1.11 \pm .69	3.217	0.003*
	Male	95	.80 \pm .51		
Type of Food	Female	59	1.72 \pm .76	4.332	0.000*
	Male	95	1.22 \pm .67		
Guilt	Female	59	1.27 \pm .94	2.928	0.004*
	Male	95	.84 \pm .84		
Emotional Eating	Female	59	1.27 \pm .70	3.867	0.001*
	Male	95	.89 \pm .49		
General Health	Female	59	.43 \pm .19	.240	0.810
	Male	95	.42 \pm .18		

* $p < 0.05$

Table 2. T-test Results of General Health and Emotional Eating Scales According to the National Status Variable

Variables	National Status	n	$\bar{X}\pm SD$	t	p
Disinhibition	Yes	50	1.01±.54	1.377	0.171
	No	104	.87±.63		
Type of Food	Yes	50	1.60±.80	2.149	0.030*
	No	104	1.32±.71		
Guilt	Yes	50	1.25±.93	2.347	0.020*
	No	104	.89±.87		
EEQ	Yes	50	1.18±.59	2.051	0.042*
	No	104	.97±.61		
GH	Yes	50	.41±.18	-.414	0.680
	No	104	.43±.18		

* $p < 0.05$

($r = .205$; $p < 0.05$), and a very weak positive significant correlation between emotional eating and general health ($r = .198$; $p < 0.05$).

Discussion

Basketball players were required to get the energy, which was needed by the muscles, at the maximum level to increase and maintain physical performance. Since eating style also affects physical and mental performance, the importance of correct energy intake and consumption was gained more for athletes (35,36). Therefore, eating disorders and irregularities in the nutrition program of the athletes were caused a serious concern for athletes' performance and trainers,

and nutritionists (37,38). According to the results of the present study, a statistically significant difference was found between gender and emotional eating ($p < 0.05$). Female basketball players had more desire to eat than male basketball players in the general mean of the Disinhibition, the type of food, Guilt, and the emotional eating scale. In a study van Strien et al. (38) which was conducted to examine the moderate effect between emotional eating, BMI and depression, it was seen that females had a higher mediator effect than males. Michou and Costarelli (39) stated that the increase in eating disorders in female basketball players was related to physical appearance and anxiety levels. When the effects of eating disorders on health were investigated, it was stated that eating disorder causes serious health problems (40), and also female athletes

Table 3. Correlation Table of the General Health Scale and the Emotional Eating Scale

n=154	Disinhibition	Type of Food	Guilt	EEQ	GH
Disinhibition	1	.611**	.669**	.946**	.159*
Type of Food		1	.532**	.769**	.170*
Guilt			1	.828**	.205*
EEQ				1	.198*
GH					1

* $p < 0.05$ ** $p < 0.01$

had a higher risk of getting caught (41). Sundgot-Borgen and Torstveit, (24) was noted that eating disorders caused a critical risk, especially on female athletes and their athletic performance (Studies on female athletes and non-athletes found that female athletes had more eating disorders than non-athletes (42-44). If irregular eating and exercise behaviours were not controlled, they might turn into a clinical eating disorder (20). Besides, Tayne et al. (45) stated that the continuation of long-term eating and exercise behaviour by athletes emerged as a pathological and psychological condition. Goleman (46) stated that women experience emotional situations more intensely than men. For this reason, it can be said that the emotional experiences of female athletes lead them to the desire to eat. It was determined that there was no statistically significant difference between the groups in the general health scale.

According to the results of this study, it was seen that basketball players training in national teams had higher emotional eating levels than non-national basketball players in general mean and all sub-dimensions of emotional eating ($p < 0.05$). Due to the fact that the mood of elite athletes affects their performance (47) it was stated that emotional processes, not the hunger impulse, affect the nutrition program of athletes (15,25). In order to achieve optimal performance, athletes should not consume fat and sugar-containing foods that were not included in nutrition programs Singh (48), but sugary and fatty foods reduce the level of cortisol and decrease the stress Konttinen et al. (49), and this increased the desire for athletes to eat such foods. According to this result of the study, it can be said that the negative psychological processes such as stress and anxiety, which occurs with a tough training period or high-performance level in the competitions, affect the mental and physical health of elite athletes with intense energy consumption, and this situation increases the desire to eat in athletes. Another result of the study was that when the relationship between emotional eating, its sub-dimensions and general health was examined, it was determined that there was a weak positive relationship between Disinhibition ($r = .159$; $p < 0.05$), the type of food ($r = .170$; $p < 0.05$), and general health. Moreover, there was

a weak positive correlation between Guilt ($r = .205$; $p < 0.05$) and emotional eating ($r = .198$; $p < 0.05$) and general health. According to this, it was observed that while the corruptions in general health level occurred, the level of emotional eating also increased. Although the problems caused by irregular eating and excessive eating are important for human health (50), it was emphasized that depressive mood and physical activity were also related. Although eating disorder caused an unhealthy body image in people who were athletes, it also emerged conditions that affect mental health such as low self-esteem and high anxiety (51). Similarly, Konttinen et al. (49) found a positive relationship between emotional eating and body mass index, increased body fat, and waist circumference.

Conclusion

It was observed that the increase in emotional eating desire has a negative effect on physical and psychological health, and this situation had a negative effect on athletes both in their sports life and their social lives. It was thought that this negative effect might also affect the athlete's ability to reach and maintain high performance. For this reason, it was thought that doing exercises on emotion regulation strategies that would enable athletes to manage negative processes in their mood, and also preparing the restrictions in nutritional programs in a way that would not lead the athletes to eat emotionally, would be important in terms of reducing the desire to eat emotionally and in terms of general health.

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- Correspondence:
Emin SÜEL
Faculty of Sport Science, Nigde Omer Halisdemir University,
Nigde, Turkey
E-mail: eminsuel51@yahoo.com.tr