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EVALUATION OF EATING ATTITUDES IN PATIENTS ATTENDING MULTIPLE SCLEROSIS PATIENT CAMP

Multipl Skleroz Hasta Kampına Katılan Hastaların Yeme Tutumunun Değerlendirilmesi

Zeynep UZDİL[1], Seda KAYA[2], Pınar SÖKÜLMEZ KAYA[3], Murat TERZİ[4]

ABSTRACT

Aim: *The patient camp is an activity that allows MS patients to socialize and reduce their problems related to their diseases. For this reason, this study was carried out to determine how the camping environment affects the eating attitudes that will affect the nutrition of MS patients.*

Methods: *In this cross-sectional study, 40 patients who attending in the 6th MS patient camp were included. Demographic characteristics and eating behaviour of the patients were questioned with a questionnaire form. Anthropometric measurements were taken. Eating attitudes were evaluated with 26-item Eating Attitude Test (EAT-26). SPSS 21.0 statistics program was used to analyze the data and p <0.05 was considered statistically significant.*

Results: *In this study 22 women (55.0%), 18 men (45.0%) were included. 72.5% of patients were married and 32.5% were working. 50.0% of them were overweight / obesity. The mean age of patients was 1.67 ± 1.21 year. Mean EAT-26 score of the patients attending the camp was 14.65 ± 10.53 and the eating attitude of 77.5% was normal. According to the characteristics of eating, 65.0% of the patients do not like to eat alone, 97.5% of them like to eat together with the patients in the camp and 87.5% of them like the taste of the meals in the camp.*

Conclusions: *It was determined that half of the patients attending the camp were overweight / obesity and 22.5% of them had an eating disorder. It is thought that holding and increasing the number of camp and providing support in these camps on nutrition, will contribute positively to the multiple sclerosis patients.*

Keywords: *Multiple Sclerosis; Camp; Eating Attitude; Nutrition*

ÖZET

Amaç: *Hasta kampı MS hastalarının sosyalleşmeleri ve hastalıkları ile ilgili sorunlarını azaltmak için gerçekleştirilen bir etkinliktir. Bu gerekçe ile kamp ortamının MS hastalarının beslenmelerini etkileyebilecek yeme tutumlarının nasıl etkilendiğini belirlemek amacıyla bu çalışma gerçekleştirilmiştir.*

Yöntem: *Kesitsel tipteki bu çalışmaya, 6. MS hasta kampına katılan 40 hasta dahil edildi. Hastaların demografik özellikleri ve yeme davranışları anket formu ile sorgulandı. Antropometrik ölçümleri alındı. Yeme tutumları 26 maddelik Yeme Tutumu Testi (YTT-26) kullanılarak değerlendirildi. Verilerin istatistiksel analizinde SPSS 21.0 programı kullanıldı ve p <0.05 istatistiksel olarak anlamlı kabul edildi.*

Bulgular: *Bu çalışmaya 22 kadın (%55,0), 18 erkek (%45,0) dahil edildi. Hastaların %72,5'i evli ve %32,5'i çalışmaktadır. Hastaların % 50,0'si fazla kilolu/obezdir. Hastalar ortalama 1,67±1,21 yıldır hasta kampına katılmaktadır. Kampa katılan hastaların ortalama YTT-26 skoru 14,65±10,53 ve %77,5'inin yeme tutumu normaldir. Hastaların %65,0'ı yalnız yemeyi sevmediğini, %97,5'i kamptaki hastalarla birlikte yemek yemeyi sevdiğini ve %87,5'i kamptaki yemeklerin tadını beğendiğini ifade etmiştir.*

Sonuç: *Kampa katılan hastaların yarısının fazla kilolu/obez olduğu ve hastalardan %22,5'inde yeme bozukluğu olduğu saptanmıştır. Multiple skleroz hasta kamplarının yaygınlaştırılması ve kamp sayısının artırılması ayrıca kamplarda beslenme ile ilgili destek verilmesi multipl skleroz hastalarına olumlu katkı sağlayacağı düşünülmektedir.*

Anahtar kelimeler: *Multipl Skleroz; Kamp; Yeme Tutumu; Beslenme*

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[1]Ondokuz Mayıs University, Faculty of Health Sciences, Department of Nutrition and Dietetics, Samsun-Turkey, ORCİD: 0000-0002-8152-5858, e- posta: zuzdil1010@hotmail.com
[2]Ankara University, Faculty of Health Sciences, Department of Nutrition and Dietetics, Ankara-Turkey, ORCİD: 0000-0001-7918-3142, e- posta: dyt.seda06@outlook.com
[3]Ondokuz Mayıs University, Faculty of Health Sciences, Department of Nutrition and Dietetics, Samsun-Turkey, ORCİD: 0000-0003-4865-4268, e- posta: sokulmezpinar@gmail.com
[4]Ondokuz Mayıs University, Faculty of Medicine, Department of Neurology Samsun-Turkey, ORCİD: 0000-0002-3586-9115, e-posta: mterzi@omu.edu.tr
Sorumlu Yazar: Zeynep UZDİL

INTRODUCTION

In MS, disease has a progressive demyelinating, autoimmune, inflammatory, neurodegenerative process and it is a chronic disease. Lesions occur in the protective layer around the nerves in the brain or/and spinal cord in MS (Reich, Lucchinetti & Calabresi, 2018). This disease usually occurs in female sex and between 20 and 50 years old (Ascherio & Munger, 2016; Brownlee, Hardy, Fazekas & Miller, 2017). Although its etiology is not known clearly, the effects of two basic factors, genetic factors and environmental factors are known. Nutrition, which is one of the environmental factors, plays an important role in both etiology and comorbid diseases (Olsson, Barcellos & Alfredsson, 2017). There is no treatment method that stops the disease, the aim of the treatment is to reduce the progression of disability and the frequency of relapses and control the attacks until today (Mark et al., 2016). In addition, psychological dimensions of problems occur in multiple sclerosis patients. These patients could have physical, psychological and social problems. These include depression, anxiety, fatigue, insomnia, and pain (Fiest et al., 2016; Hind et al., 2014).

It has been shown that patient camps for non-MS chronic diseases provide positive contributions to patients and increase compliance with the disease and treatment (Bahalı, Yolga Tahiroğlu, Fırat, Avcı & Yüksel, 2006; Gökmen Özel, 2009). As a result of the type 1 diabetes patient camp, it was determined that the knowledge of the patients about the disease significantly increased (Bahalı et al., 2006). When the eating habits of the patients with type 1 and type 2 diabetes were evaluated in the camp environment, it was found that the patients preferred low carbohydrate and fiber foods and more protein foods and were in such an unhealthy eating habit (Dönmez, Çiftçi, Arslan, İpbuker & Bağrıaçık, 2008). Multiple sclerosis patient camp has been organized by Karadeniz MS Association for 5 years. As we know, MS patients in Samsun camp organized by the MS Association for the first time in Turkey and in the world (Karadeniz MS Society, 2019). Support was given to patients in these camps who attending in various activities (application and consultancy of yoga, pilates, breathing exercises, music, workshops, nutrition [there was a dietician in the camp and nutrition counseling is given to patients who want]). It is believed that this camp contributes greatly to patients mentally, physically, socially and spiritually. Multiple sclerosis patient camp is considered unique experiences for MS patients, even their parents, and health care professionals. It has been observed that there is no study to evaluate patients in MS camps in our country and around the world. Although the positive effects of the patients' presence in this camp are observed, no study has been found to demonstrate this scientifically and specifically evaluate their eating attitudes. All these reasons have led us to plan this study. In this cross-sectional study, we aimed to evaluate eating attitude and nutritional status of patients in the 6th MS patient camp.

MATERIALS AND METHODS

Study design & subjects

This cross-sectional study was conducted between 27th April and 2th May 2019 . There were 50 patients attending the 6th MS patient camp. All patients participating in this camp were included in the study. 45 MS patients agreed to participate the study were included. The data of 5 patients who did not answer all of the questionnaire were excluded from the study. At the end of study totaly 40 data of MS patient were evaluated. Inclusion criteria in the study were determined as follows; individuals who attending MS patient camp, who are literate, who do not have physical and cognitive dysfunction.

A questionnaire including demographic characteristics and Eating Attitude Test-26 (EAT-26) was applied to the patients who volunteered to attend in the study, and their height and body weight were measured by researcher dieticians. During this study, the Helsinki Declaration was complied with and ethical permission was obtained from the Ondokuz Mayıs University Clinical Research Ethics Committee with the decision numbered B.30.2.ODM.0.20.08 / 387.

Questionnaire form

Features including questions about the age, gender, duration of illness, marital status, working status, smoking and appetite were determined by the questionnaire form.

Eating Attitude Test-26 (EAT-26)

Eating attitude test was developed by Garner and Garfinkel (1979) as a 40-item self-rating scale that measures eating disorders in clinical and non-clinical individuals. Afterwards, the 26-item form of the scale was also developed by Garner, Olmsted, Bohr & Garfinkel (1982). In this study, 26-item EAT was used. The adaptation of the 40-item form of EAT to Turkish was made by Savaşır and Erol (1989), and that of the 26-item form was made by Erguney-Okumus and Sertel-Berk (2020). The scale has a 6-item Likert type with multiple choice responses. The total score is determined by adding up the scores of all items. High scores indicate insufficient eating behavior. For EAT-26, 20 points are considered as cut-off points (Savaşır & Erol, 1989). Cronbach alpha reliability coefficient for EAT-26 was determined as 0.791.

Anthropometric measurements

Body height was taken with a portable height meter, with the head in an upright position and eyes facing down, standing and fixed in the Frankfurt plane. Body weight was taken using bascule, with light clothes and without shoes (Lee & Nieman, 2013). Body Mass Index (BMI) was calculated using the equation of "body weight (kg) / height (m)²" and normal (≥18.5-<25.0 kg/m^2), overweight (≥25.0-<30.0 kg/m^2) and obesity (≥30.0 kg/m^2) evaluations have been made (WHO, 2004).

Statistical analysis

SPSS (Statistical Package for the Social Sciences) 21.0 statistical package program was used to evaluate the data. Continuous data are given as mean and standard deviation and categorical data as number-percentage. The normality of continuous data was evaluated by the Shapiro Wilk test. The difference of normally distributed binary variables was examined by Independent sample t test and non-normally distributed variables by Mann Whitney U test. $p < 0.05$ was considered statistically significant.

RESULTS

This study included 22 females (55.0%) and 18 males (45.0%) between the ages of 17-93 year, with a total of 40 MS patients. The distribution of the demographic characteristics of the patients is shown in Table 1. The mean age of patients was 42.07 ± 12.41 years, 72.5% of married and 32.5% are working. 50.0% of patients attending in the camp are overweight / obesity.

Table 1. Distribution of patients' demographic characteristics

Variables	n=40
Age (year)	42.07±12.41
Gender	
Male	18 (45.0%)
Female	22 (55.0%)
Marital status	
Married	29 (72.5%)
Alone	11 (27.5%)
Working status	
Working	13 (32.5%)
Not working	27 (67.5%)
Smoking	
Yes	12 (30.0%)
No	28 (70.0%)
Smoking duration (year)	8.45±6.28
Number of cigarettes per day	16.27±9.54
Overweight (25.01-29.99)	16 (40.0%)
Obesity (≥30.00)	4 (10.0%)
EAT-26	14.65±10.53
EAT-26 classification	
Normal (<20)	31 (77.5%)
Non-normal (≥20)	9 (22.5%)
Number of joining the camp	1.67±1.21
Frequency of attending the camp	
First	25 (62.5%)
Multiple times	15 (37.5%)

BMI: Body Mass Index, EAT-26: Eating Attitude Test-26, Values are expressed as n(%) or mean±SD,

The number of patients attending the MS patient camp is 1.67 ± 1.21 years and 62.5% of them attended the MS patient camp for the first time. The mean EAT-26 score of the patients is 14.65 ± 10.53 and 22.5% of them had non-normal eating attitude. There is no statistically significant difference between EAT-26 score and distribution of BMI values ($p > 0.05$).

The distribution of patients characteristics for eating is shown in Table 2. According to the characteristics of eating, 65.0% of the patients do not like to eat alone, 97.5% of them like to eat together with

the patients in the camp and 87.5% of them like the taste of the meals in the camp. There is no statistically significant difference between features for eating with EAT-26 score and distribution of BMI values (p> 0.05).

Table 2. Eating features of MS patients attending the camp

			p	
Variables	**Yes**	**No**	**EAT***	**BMI****
I don't like eating in the community.	13 (32.5)	27 (67.5)	0.896	0.766
I get support from someone else at meals.	1 (2.5)	39 (97.5)	0.129	0.380
I don't like to eat alone.	26 (65.0)	14 (35.0)	0.274	0.157
Hand tremors forces me at meals.	5 (12.5)	35 (87.5)	0.130	0.953
I generally prefer to eat at home.	28 (70.0)	12 (30.0)	0.790	0.555
I don't like to eat in the crowd.	7 (12.5)	33 (82.5)	0.498	0.695
I have more appetite meals in the camp.	24 (60.0)	16 (40.0)	0.890	0.132
I like the taste of the food in the camp.	35 (87.5)	5 (12.5)	0.413	0.913
I like to eat with MS patients.	39 (97.5)	1 (2.5)	0.931	0.207

Values are expressed as n(%), *Mann Whitney U test, ** Independent sample t test

The distribution of patients' eating characteristics is given as a percentage in Figure 1.

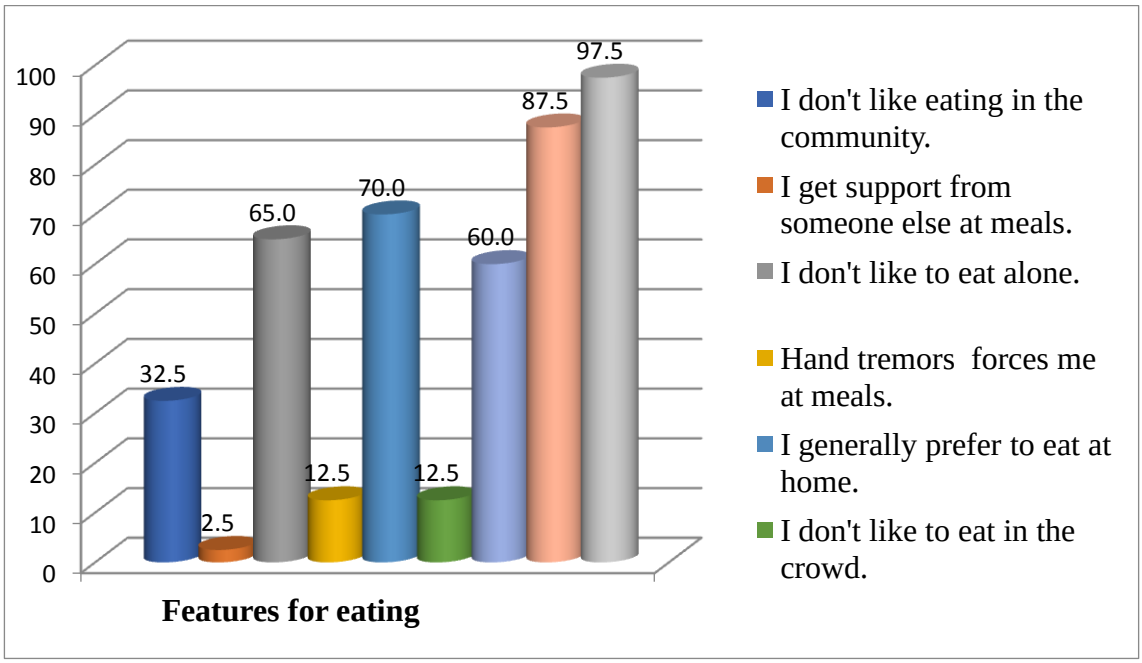

Figure 1. Distribution of patients' eating characteristics

DISCUSSION

This study was planned to investigate patients'eating attitudes in the 6th MS patient camp in Samsun. According to the literature review, this is the first study in the MS patient camp to evaluate the eating attitude.

In patients with MS, overweight/obesity has been associated with greater neuroinflammation relapse risk, disability progression and a higher risk of comorbidities (e.g. diabetes, hypertension, depression) (Bassi et al., 2019; Tettey et al., 2017; Wesnes et al., 2015). Half of the patients attending the camp in this study are overweight/obesity. Similarly, in an epidemiological study involving 2399 multiple sclerosis patients, 22.5% of patients were overweight and 19.4% were obesity (Marck, Neate, Taylor, Weiland & Jelinek, 2016). Another study in patients MS, 28% of women and 42.8% of men was overweight, also 25% of women and 21.2% of men was obesity (Khurana et al., 2009). Other studies strongly demonstrate the prevalence of excess weight status in MS and these findings may be an important variable in the development and management of MS (Hedström, Olsson & Alfredsson, 2012; Munger, Chitnis, Ascherio, 2009; Munger et al., 2013; Wesnes et al., 2015).

Overweight/obesity represent common comorbid conditions in MS and might be associated with excessive rates of physical inactivity and sedentary behavior.

In this study, one-fifth of the patients had an eating disorder. There are few studies on eating disorders in MS patients. Terzi, Kocamanoğlu, Güz & Onar, (2009) found that 9.1% of patients with MS had eating disorders. Similarly Kara and Çelik (2015) found that 10.5% of patients with MS had eating disorders. Clinical evidences show that dysphagia occurred in more than one third of patients with MS (33%-43%) and that this situation contributes to eating disorders (Calcagno, Ruoppolo, Grasso, De Vincentiis & Paolucci, 2002; Solaro et al., 2013; Poorjavad et al., 2010). It was determined that 65% of the patients attending the camp do not like to eat alone and 97.5% like to eat with other patients in the camp. This indicates that activities such as camps support patients and have a positive effect. Due to the high rates of obesity and eating attitude disorder, in patients with MS it is possible that finding the opportunity to consult a dietitian about nutritional problems in the patient camp is likely to raise awareness in patients. It is thought that camp environments where patients have the opportunity to socialize and consult about nutrition are important in determining the nutritional status of patients.

In this study, some limitations deserve mentioning. Due to the low number of patients attending the camp, the sample size does not reflect the general patient characteristics in the community and only presents findings of the patients attending the camp. Demographic features, eating-related features, eating attitudes and anthropometric features of the patients were evaluated during the camp, but their clinical features were not evaluated. Prospective studies are needed in a larger sample to evaluate the nutritional status and appetite of individuals in MS patient camps.

CONCLUSION

Half of the patients attending the camp were overweight / obesity and 22.5% of them had an eating attitude disorder. This study reveals the importance of the sustainability of MS patient camps where patients are together and provides data that will guide future studies on the possibility of providing appropriate conditions to evaluate and improve the nutritional status of patients. However, larger sample and long-term studies are needed to reveal the nutrition and eating attitudes of the MS camp patients

CONFLICTS OF INTEREST

We have no conflicts of interest.

AUTHORSHIP CONTRIBUTION STATEMENT

Zeynep Uzdil: Conceptualization, Methodology, Investigation,Writing - original draft.
Seda Kaya: Conceptualization, Methodology,Investigation, Writing - original draft.
Pınar Sökülmez Kaya: Writing -review & editing.
Murat Terzi: Writing -review & editing.

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