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Evaluation of Nutrition Knowledge, Sources of Nutrition Information and Digital Healthy Diet Literacy of Schoolteachers: A Cross-Sectional Study

Öğretmenlerin Beslenme Bilgisi, Beslenme Bilgi Kaynakları ve Dijital Sağlıklı Diyet Okuryazarlığının Değerlendirilmesi: Kesitsel Bir Çalışma

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ABSTRACT

Schoolteachers who interact with students continuously and intensively are important role models for students to gain healthy eating habits and eating behaviors. In this study, it was aimed to evaluate teachers' nutrition knowledge, sources of nutrition information and digital healthy diet literacy. This cross-sectional study was conducted online between May 2022 and July 2022. Schoolteachers completed Nutrition Knowledge Scale and Digital Healthy Diet Literacy Scale and the questionnaire containing questions about sociodemographic characteristics and sources of nutrition information. Schoolteachers' average scores of nutrition knowledge was found to be 94.54±12.97. About 65.6% of the participants had mid-to-high nutrition knowledge. Participants who had information about healthy nutrition had higher nutrition knowledge scores (p=0.013). Participants who used medical institution (p=0.007) and scientific books and publications (p<0.001) for nutrition information scored higher marks on the nutrition knowledge assessment. It was showed that Digital Healthy Diet Literacy of schoolteachers whose nutrition knowledge was low-to-mid were higher than schoolteachers whose nutrition knowledge was mid-to-high (p=0.007). Nutrition knowledge of most of schoolteachers were mid-to- high. It is crucial to select right information sources in order to increase nutrition knowledge. Teachers play an important role in promoting of healthy eating habits for students and their families by becoming role models and referring them to the right sources of information. Therefore, it is very important to enhance nutrition knowledge of school teachers and implement nutrition educations regularly in order to promote healthy nutrition and eating behaviors from childhood to adolescence.

Keywords: Nutrition Knowledge, Nutrition Education, Information Sources, Digital Healthy Diet Literacy, Teacher

ÖZ

Öğrencilerle sürekli iletişim ve etkileşim halinde olan öğretmenler öğrencilere sağlıklı beslenme alışkanlıklarının ve yeme davranışlarının kazandırılmasında önemli bir rol modeldir. Bu çalışmada, öğretmenlerin beslenme bilgi düzeyleri ve ilişkili faktörlerin değerlendirilmesi amaçlanmıştır. Bu kesitsel çalışma Mayıs 2022-Temmuz 2022 tarihlerinde online olarak yürütülmüştür. Öğretmenlere beslenme bilgi ölçeği ve dijital sağlıklı diyet okuryazarlığı ölçeği uygulanmış, sosyodemografik özellikleri ile beslenme bilgi kaynakları sorgulanmıştır. Öğretmenlerin beslenme bilgi puanları 94,54±12,97 olarak bulunmuştur. Katılımcıların %65,6'sının beslenme bilgi düzeyi orta-yüksektir. Sağlıklı beslenme konusunda bilgi sahibi olanların beslenme bilgi puanları daha yüksek bulunmuştur (p=0,013). Bilgi kaynağı olarak sağlık kurumu (p=0,007) ve kitap ve bilimsel kaynaklardan (p<0,001) yararlananların beslenme bilgi puanlarının daha yüksek olduğu belirlenmiştir. Beslenme bilgi düzeyi düşük-orta olanların dijital sağlıklı diyet okuryazarlığının, beslenme bilgi düzeyi yüksek olanlardan daha fazla olduğu gösterilmiştir (p=0,007). Öğretmenlerin büyük bir kısmının beslenme bilgi düzeyinin orta-yüksek olduğu görülmektedir. Beslenme bilgi düzeyinin arttırılmasında doğru bilgi kaynaklarına ulaşmak büyük önem taşımaktadır. Öğretmenler sağlıklı beslenme konusunda öğrenci ve ailelerine hem rol model olarak hem de doğru bilgi kaynaklarına yönlendirerek sağlıklı beslenme alışkanlıklarının kazandırılmasında önemli rol oynar. Dolayısıyla, çocukluktan adolesan döneme kadar sağlıklı beslenme ve yeme davranışlarının kazandırılması için öğretmenlerin beslenme bilgi düzeylerinin arttırılması ve beslenme ile ilişkili seminer ve eğitimlerin yaygınlaştırılması ve sürekli hale getirilmesi büyük önem taşımaktadır.

Anahtar Kelimeler: Beslenme Bilgisi, Beslenme Eğitimi, Bilgi Kaynakları, Dijital Sağlıklı Diyet Okuryazarlığı, Öğretmen

Ethics committee approval was obtained from Hacettepe University Non-Interventional Clinical Research Ethics Board (number of protocol: 22/1100). This study was presented as a verbal presentation at the 8th International Congress On Nutrition, Obesity and Community Health held online between 22-23 December 2022

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INTRODUCTION

Nutritional habits acquired in childhood and adolescence play a critical role in shaping lifelong eating habits.[1] It is of great importance to gain healthy eating habits and eating behaviors in the prevention of non-communicable chronic diseases such as obesity, type 2 diabetes and hypertension.[2] Because of the fact that students spend most of their time at school and consume at least 1 main meal and many snacks at school, the school environment plays an important role in promoting healthy eating behaviors.[3, 4] In addition to inspecting school canteens and providing healthy meals, schoolteachers also play a key role in shaping their students' eating habits and maintaining healthy eating behaviors.[5, 6]

School teachers may affect their students' eating habits in various ways such as being a role model or a rewarding approach as they are in constant and intense interaction with their students.[7, 8] It is very crucial that teachers have sufficient nutrition knowledge in order to be a positive role model to their students about healthy nutrition and to convey the right nutrition information.[9] In a previous study, it was reported that primary, secondary and high school teachers had moderate nutrition knowledge.[10] In another study, it was indicated that most of the prospective teachers (72%) had a low-to-mid nutrition knowledge.[8] In a study conducted with kindergarten teachers, it was shown that both their nutrition knowledge and level of participation in nutrition education were low.[11] These results draw attention to the need of organizing nutrition educations and directing schoolteachers to proper nutrition information sources to increase their nutrition knowledge.[12] It has been reported that nutrition knowledge of teachers, supported by an online training program on healthy nutrition, child and adolescent nutrition, and physical activity, has increased significantly.[10] It is of great importance to determine the nutrition knowledge and related factors of teachers, who play a critical role in being a positive role model for students in healthy eating habits, informing both students and their families about healthy nutrition and providing them with access to accurate nutrition information. In this study, it is aimed to evaluate nutrition knowledge, the information sources that influence the nutrition knowledge and digital healthy diet literacy of schoolteachers.

MATERIALS AND METHODS

This cross-sectional study was conducted between May 2022 and July 2022 in order to evaluate nutrition knowledge, sources of nutrition information and digital healthy diet literacy of schoolteachers**.** All procedures involving research participants were approved by Hacettepe University Non-Interventional Clinical Researches Ethics Board (GO: 22-474).

The total sample size for the study was computed as 268 schoolteachers when the Type 1 error was 0.05 and the power of the study was 90%. The exclusion criteria for the study were being retired and working at adult education centers. Data was obtained for this study by using an online questionnaire which was shared in social media platforms including teacher groups working in the public shools in Western Black Sea Region including Bartın, Zonguldak and Samsun provinces. The questionnaire consisted of demographic variables (sex, age, marital status, years of experience, smoking status), anthropometric measurements (weight and height) and nutritional habits (skipping meals during the day and skipped meals), nutrition knowledge scale and digital healthy diet literacy scale. Furthermore, knowledge of the participants about nutrition was questioned and the information sources (medical institution, scientific books and publications, brochures and internet) that they could reach were evaluated. In addition, the organization of nutrition-related seminars in the schools where they work and the seminar topics were

questioned. Finally, it was questioned whether there were students in need of nutritional therapy such as Type 1 diabetes and celiac disease in the schools where they worked, and if there was, knowledge about nutrition therapy and their sources of information about nutrition therapy were evaluated. On the first page of the questionnaire, participants were asked to tick a box indicated that they accepted to participate in the study. A total of 307 school teachers completed survey, but questionnaires were excluded when they were retired and worked in adult education centers (n=13). Participants' current weight and height were asked to self report, body mass index (BMI) were calculated by dividing their weight (kg) by their height (m) squared and the classification of BMI was performed by World Health Organization (WHO) criteria.[13]

The ability to access correct nutrition information is a key factor in developing healthy eating behaviors. In line with this idea, the scale of health literacy was expanded and the scale, originally called "Digital Healthy Diet Literacy" with four questions for nutrition, was developed by Duong et al.[17] The validity and reliability study of the scale was carried out by Yılmaz and Eskici (2021) and adapted into Turkish.[18] The formula (Index = (Average-1) x 50/3) is used to evaluate the scale. The index value calculated by the formula varies between 0-50, with a higher score indicating better healthy diet literacy. The scale includes 4-point Likert-type response options ranging from 1 (very difficult) to 4 (very easy) and consists of 4 items. The Cronbach alpha reliability coefficient of the 4-item scale was found to be 0.785.

Statistical Analyses

All analyzes were performed using Statistical Package for Social Sciences Version 21.0 (IBM SPSS Corp., Armonk, NY, USA) package program. The variables were investigated using visual and analytical methods to determine whether or not they are normally distributed. Descriptive analyses were presented using means and standard deviations for normally distributed variables and tables of frequencies for ordinal variables. Student's *t*-test was used when two independent groups were compared, while one way ANOVA was performed for more than two groups. When the variables were not normally distributed, Mann-Whitney U test and Kruskal-Wallis test were used for two and more than two independent groups, respectively. $p<0.05$ was considered statistically significant.[19]

RESULTS AND DISCUSSION

The sociodemographic characteristics of teachers were shown in Table 1. Accordingly, most of the participants were women (73.5%) and married (77.6%). When the teachers were grouped according to the schools they work, it was seen that 54.8% of them work in primary and secondary schools, and 45.2% in high school. 76.4% of the participants did not smoke and 36.4% used at least one dietary supplement. The most commonly used dietary supplements were vitamin D (29.9%), vitamin B12 (16.7%), vitamin C (12.9%), multivitamin (12.6%) and iron (10.9%), respectively. In addition, the participants were asked whose recommendation they started to use these dietary supplements, and most of them (23.5%) stated that they were recommended by the doctor. 11.3% of the participants reported that they decided to use dietary supplements through internet research or friend recommendation. The vast majority (89.5%) of the participants reported that they did not apply diet therapy. According to the BMI values calculated by the body weight and height measurements declared by the participants, it was shown that 53.4% of the individuals had normal BMI.

Table 1. Sociodemographic Characteristics of Teachers

Sociodemographic characteristics (n=294)		
Age (years) **(Mean±SD) (min. – max.)**	42.96±8.34 (23 – 58)	
Gender	**N**	**%**
Male	78	26.5
Female	216	73.5
Marital status		
Single	66	22.4
Married	228	77.6
School		
Primary	92	31.3
Secondary	69	23.5
High	133	45.2
Years of experience		
0-10	58	19.7
11-21	107	36.4
≥22	129	43.9
Smoking		
Yes	70	23.8
No	224	76.2
Dietary Supplement		
Yes	107	36.4
No	187	63.6
Multivitamin		
Yes	37	12.6
No	257	87.4
Vitamin D		
Yes	88	29.9
No	206	70.1
Iron		
Yes	32	10.9
No	262	89.1
Vitamin B12		
Yes	49	16.7
No	245	83.3
Vitamin C		
Yes	38	12.9
No	256	87.1
Chronic Disease		
Yes	84	28.6
No	210	71.4
Dietary Treatment		
Yes	31	10.5
No	263	89.5
BMI* (kg/m^2)		
18.5 – 24.99	157	53.4
25.00 – 29.99	95	32.3
≥ 30.00	42	14.3
Total	**294**	**100**

* BMI: Body Mass Index; SD: Standart Deviation

Table 2 indicated teachers' nutritional habits, nutrition knowledge and digital healthy diet literacy scores. 34.7% of the participants stated that they consume three main meals a day. The most skipped main meals were lunch (67.7%) and breakfast (28.6%), respectively. The number of main meals consumed by all participants is 2.70±0.45 and it was seen that individuals consume at least 2 main meals a day. The nutrition knowledge scores of the participants were 94.54±12.97, and it was determined that 29.9% had moderate and 35.7% had high nutrition knowledge.

Table 2. Nutritional Habits, Nutrition Information and Digital Healthy Diet Literacy of Teachers

Variables		
Skipping the main meals	**N**	**%**
Yes	82	27.9
Sometimes	110	37.4
No	102	34.7
Skipped meals		
Breakfast	55	28.6
Lunch	130	67.7
Dinner	7	3.6
Number of meals during a day (Mean±SD) (min. – max.)	2.70±0.45 (2.0-3.0)	
Nutrition information (Mean±SD) (min. – max.)	94.54±12.97 (52.0-124.0)	
Nutrition information	**N**	**%**
Low-to-mid	101	34.4
Moderate	88	29.9
High	105	35.7
Digital healthy diet literacy (Mean±SD) (min. – max.)	24.18±11.65 (0.0-50.0)	
Total	**294**	**100**

SD: Standart Deviation

Digital healthy diet literacy scores were 24.18±11.65, with a minimum of 0 and a maximum of 50. 72.4% of the participants declared that they had knowledge about healthy eating (Table 3). The sources of nutrition information being used were questioned and it was presented that the most used source was the internet (37.1%). This is followed by scientific books and publications (28.6%), medical institutions (19%) and brochures (9.5%). Very few of the participants (18%) reported that nutrition-related seminars were held in their schools. The topics of the seminar were healthy nutrition (8.5%), obesity and nutrition (5.4%), diabetes and nutrition (1.7%), and child nutrition (1.7%). The vast majority of individuals (73.5%) declared that they did not know about child and adolescent nutrition. Finally, the participants were asked whether there was a student needed to dietary treatment in the school they worked at, and 35% of them answered yes. 20.7% of the teachers reported that

they had no information about dietary treatments of these students. When the information sources were questioned, it was indicated that the most frequently consulted information sources were scientific books and publications (3.7%). This was followed by nutrition seminars (2.7%), family (2.4%), health institution (2.4%), internet (2%) and brochure (1%).

Table 3. Nutrition Information and Sources of Nutrition Information of Teachers

Variables		
Nutrition information	**N**	**%**
Yes	213	72.4
No	81	27.6
Information sources		
Medical institution		
Yes	56	19.0
No	238	81.0
Scientific books and publications		
Yes	84	28.6
No	210	71.4
Brochure		
Yes	28	9.5
No	266	90.5
Internet		
Yes	109	37.1
No	185	62.9
Nutrition seminars held in the schools		
Yes	53	18.0
No	241	82.0
Seminar subjects (n=53)		
Healthy nutrition	25	8.5
Obesity and nutrition	16	5.4
Diabetes mellitus and nutrition	5	1.7
Child nutrition	5	1.7
Nutrition friendly school	1	0.3
Adolescant nutrition	1	0.3
Child and adolescent nutrition information		
Yes	78	26.5
No	216	73.5
Students needed dietary treatment		
Yes	103	35.0
No	191	65.0
Having information about students' dietary treatment (n=103)		
Yes	42	14.3
No	61	20.7
Information sources of nutrition (n=42)		
Brochure	3	1.0
Internet	6	2.0
Medical Instution	7	2.4
Family	7	2.4
Nutrition seminars	8	2.7
Scientific books and publications	11	3.7

In Table 4, factors that could affect teachers' nutrition knowledge were evaluated. It was found that women's nutrition knowledge scores were statistically significantly higher than men's ($p<0.001$). Nutrition knowledge of individuals who use dietary supplements were higher than those who did not ($p=0.001$). It was observed that the nutrition knowledge scores of those who did not have any nutrition related knowledge were significantly lower than those who had ($p=0.013$).

Table 4. Distribution of Factors Affecting Teachers' Levels of Nutrition Knowledge

	Nutrition Knowledge	
	Mean±SD	**p value****
Gender		
Male	89.91±13.93	**<0.001**
Female	96.22±12.22	
Marital status		
Single	94.39±12.77	0.915
Married	94.59±13.06	
School		
Primary	95.16±11.53	0.436
Secondary	92.78±12.53	
High	95.03±14.12	
Years of experience		
0-10	91.28±13.70	0.101
11-21	95.40±13.02	
≥22	95.30±12.47	
Smoking		
Yes	94.93±11.74	0.283
No	94.42±13.36	
Dietary Supplement		
Yes	97.99±11.52	**0.001**
No	92.57±13.37	
Chronic Disease		
Yes	96.25±11.89	0.154
No	93.86±13.35	
Dietary Treatment		
Yes	98.03±10.97	0.114
No	94.13±13.15	
BMI* (kg/m^2)		
18.5 – 24.99	95.06±12.47	0.681
25.00 – 29.99	94.30±13.93	
≥ 30.00	93.14±12.79	
Skipping the main meals		
Yes	95.56±12.13	0.630
Sometimes	94.56±12.66	
No	93.70±14.00	
Nutrition information		
Yes	95.70±13.11	**0.013**
No	91.49±12.19	
Information sources		
Medical institution		
Yes	98.71±11.55	**0.007**
No	93.56±13.12	
Scientific books and publications		
Yes	99.42±12.50	**<0.001**
No	92.59±12.68	

Table 4. (Continued)		
Brochure		
Yes	96.78±13.28	
No	94.31±12.95	0.338
Internet		
Yes	94.55±14.43	0.995
No	94.54±12.08	
Nutrition seminars held in the schools		
Yes	95.67±12.74	
No	94.29±13.04	0.483
Child and adolescent nutrition information		
Yes	98.20±12.47	
No	93.22±12.93	**0.003**
Students needed dietary treatment		
Yes	96.34±12.51	
No	93.57±13.15	0.080
Having information about students' dietary treatment		
Yes	100.19±11.08	
No	93.70±12.83	**0.009**

* BMI: Body Mass Index; SD: Standart Deviation
** Student's *t*-test was used for pairwise comparisons, and One Way ANOVA was used for triple group comparisons.

As a result of the evaluation according to the information sources used, it was concluded that the nutrition knowledge of the participants who used medical institutions (p=0.007) and scientific books and publications (p<0.001) to seek information on nutrition were significantly higher than those who did not. In addition, it was shown that the nutrition knowledge scores of the participants who declared that they had knowledge about child and adolescent nutrition were significantly higher than those who did not (p=0.003). It was also found that the level of nutrition knowledge of the teachers who reported that they had knowledge about dietary treatment of the students needed diet therapy at the school was higher (p=0.009).

Digital healthy diet literacy was evaluated according to teachers' levels of nutrition knowledge and it was indicated that those with low-to-mid nutrition knowledge had higher digital healthy diet literacy scores compared to those with high nutrition knowledge (p=0.007) (Figure 1).

Children's eating habits and eating behaviors begin to shape in the family environment for the first time.[20] During school age, the social environment of children diversifies and extrafamilial influences progressively become more important. In this period, children become more independent, start making their own food choices and take personal decisions regarding what they eat. Since nutritional habits and eating behaviors developed during school age and adolescence which become permanent in adulthood, it is of great importance to gain healthy eating habits in this period. Considering the time spent at school during these periods, the school environment plays a key role in promoting healthy eating habits and eating behaviors.[21]

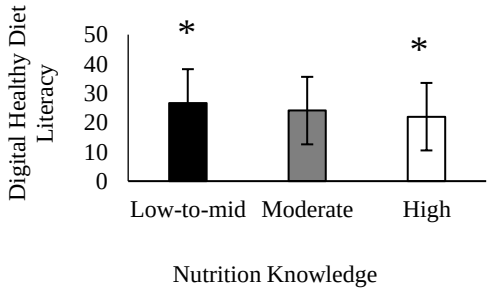

Figure 1. Teachers' Digital Healthy Diet Literacy According to The Levels of Nutrition Knowledge

*p=0.007; Kruskal Wallis Test was used for triple group comparison and Mann Whitney U test was used for pairwise comparisons.

Some strategies should be developed by the school administration in order to encourage healthy eating habits and eating behaviors. Inspecting school canteens, providing adequate and balanced school lunches to students, and healthy nutrition education are among these strategies.[22] It is very important to determine the knowledge and attitudes of teachers, who are in constant communication and interaction with their students and their families, as they are both an important part of healthy nutrition education and should be a positive role model for students.[23]

In a study conducted with the participation of 94 prospective teachers working in primary education, a 10-question

nutrition knowledge index was applied to the participants and it was reported that they had a low nutrition knowledge level with a score of 57%.[24] Similarly, in another study participants recruited form prospective teachers (n=103), it was reported that 72% of the participants' nutrition knowledge was low-to-mid.[8] A 36-item nutrition knowledge scale was applied to teachers (n=1094) working in primary, secondary and high schools, and it was indicated that their nutrition knowledge was moderate (65%). After three months of online nutrition training, teachers' nutrition knowledge increased and reached 80%.[10] Therefore, this study emphasizes the importance of nutrition education in increasing the level of nutrition knowledge. Two hundred twenty-two teachers working in kindergartens were asked 53 questions to measure their nutrition knowledge and it was found that their nutrition knowledge was low (53 points).[11] The nutrition information scale was presented online to 102 teachers working in primary, secondary and high schools.[12] According to the results of the scale, which could be obtained maximum of 58 points, the average score of the teachers was found to be 37.5±9.7. The lowest score obtained was 6 and the highest score was 54. A recent study conducted with female preschool teachers reported that average score of the teachers was found to be 53.6±6.8 and only 35.7% of the participants have good/very good nutrition knowledge level.[13] The Nutrition Knowledge Level Scale was used to determine nutrition knowledge level and a maximum of 80 points can be obtained from section of basic nutrition knowledge.[25] In the current study, the nutrition knowledge of 294 teachers was evaluated using nutrition knowledge scale including 31 items and the mean score was found to be 94.54±12.97. According to the results of the scale, where maximum of 126 points could be obtained, the lowest score was 52 and the highest score was 124. Due to the uses of different scales to measure the level of nutrition knowledge and the differences in their scoring, it would be more appropriate to compare the results of the studies by classifying the nutrition knowledge level. In this study, it was found that 65.6% of the teachers had a mid-to-high nutrition knowledge. The fact that the scales used to measure the level of nutrition knowledge varied greatly, the validity and reliability of some of them have not been carried out, and the nutritional issues evaluated in the scales was differed, varied results were reported in the studies.[26]

It is known that age, gender, educational and socioeconomic status affect the level of nutrition knowledge.[27] Women's nutrition knowledge were found to be higher because they are generally more interested in nutrition than men and they are more active in food preparation and cooking.[12] As socioeconomic status and education level increase, the level of nutrition knowledge tends to increase.[28] In this study, it was indicated that female participants had higher nutrition knowledge scores (96.22±12.22). According to the results of a study conducted with teachers working in primary, secondary and high schools, the nutrition knowledge scores of female teachers were found to be higher than male teachers.[12] According to the results of an another study in which female participants aged 18-39 were included in order to evaluate their nutrition knowledge levels and related factors, it was shown that BMI and smoking status affect nutrition knowledge.[29] Accordingly, it was concluded that the nutrition knowledge of obese and non-smokers were lower. In the current study, it was shown that BMI and smoking status did not affect the level of nutrition knowledge. According to the results of the study conducted with kindergarten teachers, it was shown that the nutrition knowledge of overweight and obese individuals was higher.[11] Existence of different study results about nutrition knowledge according to BMI may be due to the fact that nutrition knowledge is not sufficiently effective in acquiring and maintaining healthy eating habits and eating behaviors by putting into practice. In this study, it was observed that schoolteachers' knowledge about healthy nutrition, child and adolescent nutrition, or

dietary treatment of students who needed diet therapy in the schools where they work led to a significant increase in the average nutrition knowledge scores. Studies have shown that nutrition education or having knowledge about nutrition increase the average nutrition knowledge scores.[10, 11]

Studies have reported that sources of nutrition information are generally the internet, family members and friends, television and books.[30, 31] In this study, sources of nutrition information were questioned and it was reported that they were internet (37.1%), scientific books and publications (28.6%), medical institutions (19%) and brochures (9.5%). When the levels of nutrition knowledge were evaluated according to these information sources, it was found that the nutrition knowledge scores were significantly higher if the information resources were medical institution and scientific books and publications, and it was not affected in the case of the internet and brochures.

In a study in which young adults' levels of nutrition knowledge and information sources were questioned, the participants stated that the most common source of nutrition knowledge they consulted was the internet, and reported that the most reliable source of information was the medical institution.[32] In addition, participants who consulted medical institutions for nutrition information, scored higher points on the nutrition knowledge assessment. Because of the fact that frequent use of the internet as a resource of nutrition information, the digital healthy diet literacy of the participants was also questioned. Among the participants classified according to their nutrition knowledge, it was seen that digital healthy diet literacy of those with low-to-mid nutrition knowledge was significantly higher than those with high nutrition knowledge. This unexpected result suggested that the participants had problems in accessing the correct information about nutrition on the internet and may have been affected by information pollution. Although the internet is one of the most frequently used sources for accessing nutritional information, it is known that individuals have problems in both use and access to correct information.[29] Therefore, it is of great importance to control and regulate this information and to ensure that individuals access reliable online resources in order to prevent information pollution and to reach the right nutrition information and thus to increase digital healthy diet literacy. Another important point to draw attention to in this study is the necessity of increasing the nutrition seminars held in schools. In addition, it is very essential to get informed schoolteachers about dietary treatment of their students who needed diet therapy. One of the limitations of this study include the fact that all outcome measures were self-reported. The disproportionate number of males and females and the cross-sectional nature of the study can be considered other limitations. Future studies should evaluate the nutrition knowledge level, eating behaviors and dietary intakes together in order to enable to understand the effects of nutrition knowledge on eating behaviors and dietary intake.

CONCLUSION AND RECOMMENDATIONS

As a result of this study, it was revealed that the nutrition knowledge of most of the teachers was mid-to-good. As expected, the participants' knowledge about nutrition increased their nutrition knowledge scores. It is of great importance to ensure that individuals should have access to the right information sources in the field of nutrition, the internet resources that are frequently used and whose use is increasing rapidly should be controlled and information pollution should be prevented. Moreover, the frequency of seminars and presentations on nutrition in schools should be increased, and nutrition education including students and parents should be carried out continuously. Teachers who are in constant communication and interaction with students

and their families should be encouraged to participate in nutrition seminars in order to be able to direct both students and their families to the accurate sources of nutrition information and to become positive role models for them.

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