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Validity and Reliability Study of the Turkish Adaptation of the Sustainable Food Literacy Scale

Sürdürülebilir Gıda Okuryazarlığı Ölçeğinin Türkçe Uyarlamasının Geçerlilik ve Güvenirlilik Çalışması

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ABSTRACT

This study was conducted to determine the validity and reliability of the Turkish version of the Sustainable Food Literacy Scale.

The study was conducted with personnel working in Sakarya Metropolitan Municipality and trainees currently attending the training centers affiliated to the municipality. The study included a total of 533 participants. A demographic information form, and the Mediterranean Diet Adherence Screener, Short Food Literacy Questionnaire, and Sustainable Food Literacy Scale were used. Exploratory factor analysis was conducted to analyze validity. The internal consistency coefficient, parallel form reliability, and test-retest methods were used to analyze reliability. Statistical data analysis was performed with the IBM SPSS Statistics 28.0 package program. A significance level of $p<0.05$ was accepted as significant.

The scale comprises a total of 26 items. A five-factor structure that accounts for a total variance of 77% has been achieved. The factors are named as Sustainable Food Knowledge 1, Sustainable Food Knowledge 2, Cooking and Kitchen Skills, Attitudes and Intentions for Action, and Action Strategies, respectively. The Cronbach's Alpha value of the scale was found to be 0.941. There was a significant difference between the sustainable food literacy of individuals of different genders, education levels, and occupations.

The Turkish adaptation of the Sustainable Food Literacy Scale is the first and only valid and reliable instrument that can assess the sustainable food literacy of adults.

Keywords: Food, Literacy, Scale, Sustainable development, Validity and reliability

ÖZ

Sürdürülebilir Gıda Okuryazarlığı Ölçeğinin Türkçe versiyonunun geçerlilik ve güvenilirlik çalışmasını yapmak amaçlanmıştır.

Çalışma, Sakarya Büyükşehir Belediyesi çalışanları ve belediyeye bağlı kurs merkezlerindeki kursiyerler ile yürütülmüştür. Çalışmaya toplam 533 katılımcı dahil edilmiştir. Verilerin toplanmasında demografik bilgi formu, Akdeniz Diyeti Bağlılık Ölçeği, Gıda Okuryazarlığı Kısa Formu ve Sürdürülebilir Gıda Okuryazarlığı Ölçeği kullanılmıştır. Geçerlilik analizi için açıklayıcı faktör analizi yapılmıştır. Güvenilirlik analizi için iç tutarlılık katsayısı, paralel form ve test-tekrar test yöntemleri kullanılmıştır. Elde edilen veriler, IBM SPSS Statistics 28.0 paket programıyla analiz edilmiştir. İstatiksel analizlerde anlamlılık düzeyi $p<0,05$ olarak kabul edilip, yorumlanmıştır.

Ölçek, 26 madde içermektedir. Toplam varyansın %77'si açıklanabilen beş faktörlü bir yapı elde edilmiştir. Faktörler sırasıyla Sürdürülebilir Gıda Bilgisi I, Sürdürülebilir Gıda Bilgisi II, Yemek ve Mutfak Becerileri, Tutumlar ve Harekete Geçme Niyeti ve Harekete Geçme Stratejileri olarak adlandırılmıştır. Ölçeğin Cronbach’s Alfa değeri 0,941 bulunmuştur. Bireylerin cinsiyeti, eğitim seviyeleri ve meslekleri ile sürdürülebilir gıda okuryazarlığı düzeyi arasında anlamlı fark bulunmuştur.

Sürdürülebilir Gıda Okuryazarlığı Ölçeğinin Türkçe uyarlaması yetişkinlerde sürdürülebilir gıda okuryazarlığı düzeyini değerlendiren ilk ve tek geçerliliği ve güvenilirliği doğrulanmış ölçme aracıdır.

Anahtar Kelimeler: Geçerlilik ve güvenilirlik, Gıda, Okuryazarlık, Ölçek, Sürdürülebilir kalkınma

The study was approved by the Ethics Committee of the University of Health Science (protocol code 22/469 and date of approval 30.09.2022). This article is derived from a master's thesis.

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INTRODUCTION

With the rapid increase in the world population, the increasing demand for food and changing dietary habits negatively affect both human health and the health of our planet. It is therefore important to promote food sustainability and ecological harmony while promoting healthy eating. Accordingly, the population of the world needs to adopt adequate, balanced, and nutritious diets that are also sustainable, contribute to food security, support local or seasonal food production, and have low environmental impact.[1] The Mediterranean diet is recognized as a sustainable dietary model that is both healthy and has a low environmental impact.[2] The fact that the Mediterranean diet encourages the consumption of wild species as well as cultivated crops plays a major role in protecting biodiversity. Many other factors such as the seasonal consumption of fresh and local products and traditional cooking methods are also cited among the factors of the Mediterranean diet that promote environmental sustainability.[2]

The Food and Agriculture Organization (FAO) has suggested that in order to transition from current food systems to ensure sustainable nutrition, consumer behavior needs to change and habits that contribute positively to human health and the environment should be promoted.[3] Hence, developing food literacy programs to enable individuals to acquire the knowledge and skills necessary to understand food systems, make informed food choices and develop healthy eating habits is necessary. While food literacy improves personal nutrition, health, and well-being, it also enables individuals to gain an insight on the environmental impacts of their food choices. In other words, providing training and establishing policies regarding food literacy plays a pivotal role in laying the foundation for a sustainable future.[4] The literature on food policies emphasizes that discussion regarding food literacy should not only focus on healthy nutrition but also include social, environmental, economic and sustainability facets of food literacy.[5, 6] Existing food literacy assessment tools fall short of measuring literacy regarding environmental sustainability issues and the knowledge and skills needed to implement sustainable diets. To close this gap, the Sustainable Food Literacy Scale was recently developed by Teng and Chih (2022).[7] The aim of this study was to evaluate the validity and reliability of the Turkish version of the aforementioned scale, which emphasizes the issue of environmental sustainability and is suggested to be used as a tool to assess individuals' abilities to implement sustainable diets, in order to validate the use of this scale in the Turkish population.

MATERIAL AND METHODS

This study was conducted between November 2022 and February 2023 and included personnel working in Sakarya Metropolitan Municipality and trainees currently attending the training centers affiliated to the municipality. The sample size was calculated according to the recommendation that validity and reliability studies should have a sample size at least 10 to 20 times the number of scale items.[8] The number of items in the scale was 26 and a sample size 20 times the number of items was targeted, which amounted to 520 participants. Individuals over the age of 18 who were literate were included in the study. Individuals diagnosed with any psychiatric illness, pregnant or lactating women, those who did not speak Turkish fluently enough to have reading comprehension, and participants who gave incomplete answers to the questions in the scale were excluded from the study.

In order to adapt the Sustainable Food Literacy Scale into Turkish, Chueh Chih, one

of the original developers of the scale, was contacted via e-mail to obtain permission to use and adapt the scale, and detailed information about the scale assessment was requested. The scale was translated into Turkish using standard procedures recommended in the guidelines.[9] Accordingly, the scale was translated from English into Turkish by three different professional translation services. Expert opinions regarding the comprehensibility of the items were obtained from four experts in this field. The Turkish version of the scale was edited according to the consentient opinions of the experts. The version of the scale that was considered to have the most appropriate wording was back translated into English and compared with the original scale. It was decided that there were no differences between the source and target texts in terms of meaning and comprehensibility, and that translation validity was achieved. A pilot study was conducted with 50 participants to assess the comprehension of the scale items and the approximate time it would take to administer the scale. Feedback received in the pilot study was evaluated and the scale was finalized. Data were collected using the demographic information form and the Sustainable Food Literacy Scale, the Short Food Literacy Questionnaire, and the Mediterranean Diet Adherence Screener. The latter two were used as parallel forms that assess similar behavior patterns in order to evaluate the parallel form reliability of the adapted scale. To evaluate the reliability of the Sustainable Food Literacy Scale using the test-retest method, fifty individuals who had previously participated in the study were randomly selected and asked to respond to the scale again after 6 weeks.

Demographic Information Form

This form was used to inquire about the sociodemographic characteristics of the participants, such as age, gender, educational status, occupation, marital status, income status, budget allocated for food, and dietary habits such as number of main meals per day, number of snacks per day, reasons for skipping meals, and frequency of eating out.

Sustainable Food Literacy Scale

The Sustainable Food Literacy Scale, which emphasizes important issues such as healthy nutrition and environmental sustainability, was developed by Teng and Chih in 2022.[7] The Sustainable Food Literacy Scale consists of a total of 26 items, including 9 items in the sustainable food knowledge sub-dimension, 6 items in the food and culinary skills sub-dimension, 4 items in the attitudes sub-dimension, and 7 items in the intention to take action and strategies to take action sub-dimension, and evaluates all components of sustainable nutrition literacy under four sub-dimensions. The scale is a 7-point Likert scale with scores ranging from 1 (strongly disagree) to 7 (strongly agree) for each item. The scale is scored between 26 and 182 points and higher scores indicate higher sustainable food literacy. Cronbach's Alpha values of all the sub-dimensions containing a total of 26 items were determined to be above the recommended value of 0.70. In addition, a confirmatory factor analysis was conducted. As a result of the analyses, the scale was found to be a valid and reliable tool for assessing individuals' ability to implement sustainable diets.

Mediterranean Diet Adherence Screener

This scale was developed by Schröder et al. (2011) to assess adherence to the Mediterranean diet.[10] The Turkish validity and reliability of the scale was verified by Pehlivanoglu et al. (2020) The Mediterranean Diet Adherence Scale consists of 14 items.[11] The scale is used to evaluate the types of oils the participants used in meals, the amount of olive oil they consumed daily, their fruit and vegetable portions, red meat consumption, and weekly consumption rates of legumes, wine, fish and seafood, tomato sauce with olive oil, nuts, pastry and white meat and red meat. Each item is scored as either 1 or 0 according to whether the answers of the participants reach predetermined consumption threshold values, then the total score is calculated. A total score of less than 7 is considered to indicate low adherence to the Mediterranean diet, a score of 7 and

above is considered to indicate acceptable adherence to the Mediterranean diet, and a score of 9 and above is considered to indicate high adherence to the Mediterranean diet.[12]

Short Food Literacy Questionnaire

The Short Food Literacy Questionnaire was developed by Krause et al. (2018) in order to evaluate food literacy.[13] The Short Food Literacy Questionnaire contains 12 questions. Questions 2, 3, 7, and 8 are scored between 0 and 5, while all of the other questions are scored between 0 and 4.[13] The Turkish validity and reliability of the scale was verified by Durmuş et al. (2019) through a study that included university students.[14] The study of Gokler et al. (2020) determined the cut-off score of the scale as 31, considering a score of <31 points as low food literacy and a score of ≥31 points as high food literacy.[15]

Statistical Analysis

IBM SPSS Statistics 28.0 (IBM Corp., Armonk, NY, USA) was used to evaluate the exploratory factor analysis, reliability analysis, and descriptive statistics data. A significance level of $p<0.05$ was accepted as significant.

The Shapiro-Wilk test was used to examine whether the continuous variables were normally distributed, the Independent Samples T test was used to compare paired groups for normally distributed variables, and the Mann-Whitney U test was used to compare paired groups for non-normally distributed variables. For comparisons of more than two groups, one-Way ANOVA was used for normally distributed variables, and the Kruskal-Wallis test was used for non-normally distributed variables. Significant differences found as a result of these analyses were analyzed with the paired Bonferroni Corrected Post-hoc test. Pearson Correlation Analysis was used to determine the significance, direction, and strength of the relationship between normally distributed quantitative variables, and Spearman Correlation Analysis used to determine the significance, direction, and strength of the relationship between non-normally distributed quantitative variables.

The adequacy and suitability of the sample for factor analysis were assessed using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlet's Sphericity Test, respectively. The factor structure of the Turkish version of the Sustainable Food Literacy Scale was examined by Exploratory Factor Analysis. Principal Component Analysis and Varimax Rotation method were used to determine the factor structure of the scale items. The criterion for primary factor loadings was item values of ≥0.4. The Scree Plot Test was used to determine the number of factors. The internal consistency reliability of the Turkish version of the Sustainable Food Literacy Scale was calculated using Cronbach's Alpha. A Cronbach's Alpha coefficient of >0.80 indicates that the scale is reliable.

Ethical Considerations

The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Ethics Committee of the University of Health Science (protocol code 22/469 and date of approval 30.09.2022). Information about the study was provided to the participants, and written informed consent was obtained.

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FINDINGS AND DISCUSSION

This study included a total of 533 individuals aged 18–71 years, 282 of whom were female (52.9%) and 251 of whom were male (47.1%). Most of the participants (82.4%) were high school or university/college graduates. The demographic characteristics of the participants are presented in Table 1.

Table 1. Sociodemographic Characteristics of Sakarya Metropolitan Municipality Employees and Trainees in Municipal Centers

Characteristics		N	%
Gender	Male	251	47.1
	Female	282	52.9
Age (year)	18-30	217	40.7
	31-40	128	24.0
	41-50	112	21.0
	51-60	65	12.2
	>60	11	2.1
Education	Primary school	31	5.8
	Junior high school	29	5.4
	High school	237	44.5
	University/college	202	37.9
	Post-graduate education	34	6.4
Occupation	Student	67	12.6
	Educator	23	4.3
	Healthcare worker	46	8.6
	Engineer and architect	51	9.6
	Government employee	98	18.4
	Worker	124	23.3
	Homemaker	56	10.5
	Retiree	15	2.8
	Others	53	9.9
Household income	Income < Expense	146	27.4
	Income = Expense	291	54.6
	Income > Expense	96	18.0

%: Percent

Analysis of Reliability and Validity

Validity Analyses

The KMO sampling adequacy measure of the scale was 0.926 and the Bartlett's test of sphericity result of the scale was $p<0.001$. Thus, it was determined that the selected sample was adequate and factor analysis could be conducted.

Exploratory Factor Analysis

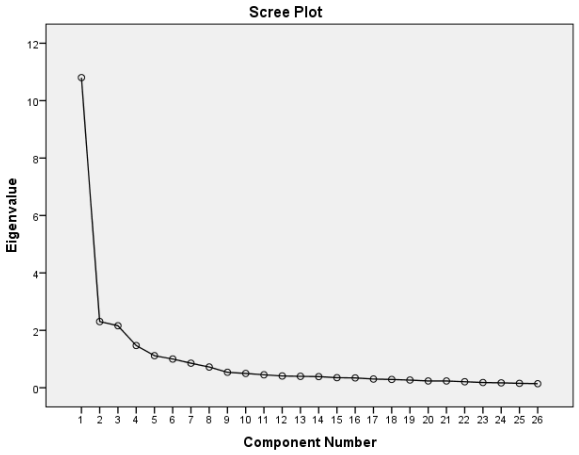
Factor analysis of the 26 scale items was conducted using Principal Component Analysis and the Varimax Rotation method. As shown in Table 2, all of the primary factor loadings were at least 0.420 and there were no items that cross-loaded on other factors. Factor loadings ranged between 0.420 and 0.880 (Table 2).

Table 2. Distribution of Sustainable Food Literacy Scale Items According to Factors of a Result of Exploratory Factor Analysis, Factor Loadings

Items	Factor Loading[a]	Items	Factor Loading[a]
S3	0.522	**S14**	0.880
S4	0.715	**S15**	0.816
S6	0.730	**S16**	0.494
S7	0.785	**S17**	0.695
S8	0.783	**S18**	0.834
S9	0.593	**S19**	0.789
S1	0.755	**S20**	0.594
S2	0.715	**S21**	0.774
S5	0.566	**S22**	0.845
S10	0.420	**S23**	0.760
S11	0.566	**S24**	0.650
S12	0.746	**S25**	0.746
S13	0.878	**S26**	0.662

[a]Principal Component Analysis and the Varimax Rotation method.

The Figure 1 shows a graphical representation of the variance explained by each factor. According to the results of the analysis, it was determined that the 5-factor structure of the scale with eigenvalues >1 explained 77% of the total variance. The



Intention to Take Action and Strategies to Take Action factor explains the highest variance, while the Attitudes factor explains the lowest variance.

Figure 1. Scree Plot test graph of the Sustainable Food Literacy Scale

Reliability Analyses

Internal Consistency Reliability

The internal consistency coefficient Cronbach's Alpha value of the scale was calculated as 0.941, which suggested high reliability.

Parallel Form Reliability

The relationships between the Sustainable Food Literacy Scale scores and Mediterranean Diet Adherence Screener and Short Food Literacy Questionnaire scores were examined. As a result of the Spearman's rank correlation coefficient analysis between the scales, it was found that there was a low positive (r=0.213) relationship between sustainable food literacy and adherence to the Mediterranean diet (p<0.001). A moderately significant positive (r=0.545) relationship was found between sustainable food literacy and food literacy (p<0.001).

Test-Retest Reliability

To assess the reliability of the scale over time, the evaluation between the first (test) and second test (re-test) conducted 6 weeks later a randomly selected sample group of 50 individuals was examined using the Pearson correlation coefficient. No significant differences were found between the test and re-test scores of the Sustainable Food Literacy Scale and its sub-scales. A significant, moderately strong (r=0.669), and positive relationship was found between test and re-test scores of the Sustainable Food Literacy Scale (p<0.001) (Table 3).

Table 3. Sustainable Food Literacy Scale Test-Retest Correlation Analysis

		$\bar{x}$	SD	R
Sustainable Food Literacy	Test	31.9	6.1	0.669*
	Re-test	32.2	5	

** p<0.001, Spearman's rank correlation coefficients*
$\bar{x}$: Mean, SD: Standard deviation

Relationship Between the Sustainable Food Literacy Total Score and Sociodemographic Characteristics

In this study, when the total Sustainable Food Literacy Scale scores of the participants were analyzed according to gender, it was found that the sustainable food literacy of the female participants was higher than that of male participants (p<0.001). A significant difference was found between the sustainable food literacy levels of participants with different levels of education. As a result of the Bonferroni Corrected Post-hoc analysis, the sustainable food literacy of participants with high school education was lower than that of participants with university and post-graduate education (p=0.010, p=0.036, respectively). The sustainable food literacy of participants was also found to differ according to occupation/job groups. As a result of the Bonferroni Corrected Post-hoc analysis, the sustainable food literacy of the students was lower than that of the public personnel, engineers/architects, health professionals, and educators (p=0.043, p=0.018, p=0.02, p=0.031, respectively). In addition, the sustainable food literacy of blue-collar workers was lower than that of health workers (p=0.025). No significant difference was found between the sustainable food literacy of participants of different age groups and with different income levels (Table 4).

Table 4. The Level of Sustainable Food Literacy According to the Sociodemographic Characteristics of the Participants

		Total score of the Sustainable Food Literacy Scale			
Characteristics		**N**	**x̄**	**SD**	**p**
Gender	Male	251	123.3	31.0	<0.001[a]
	Female	282	136.4	24.9	
Age (year)	18-30	217	131.0	27.6	00.513[b]
	31-40	128	132.1	26.4	
	41-50	112	129.5	31.8	
	≥51	76	125.8	30.4	
Education	Primary school	31	123.4	36.9	00.002[b]
	Junior high school	29	134.8	30.7	
	High school	237	124.9	31.0	
	University/college	202	135.0	23.5	
	Post-graduate education	34	141.3	21.3	
Occupation	Student	67	120.2	24.9	<0.001[b]
	Educator	23	142.3	20.1	
	Healthcare worker	46	141.1	22.1	
	Engineer and architect	51	137.7	21.9	
	Government employee	98	133.5	28.4	
	Worker	124	124.2	31.3	
	Homemaker	56	133.5	32.0	
	Retiree	15	119.1	30.3	
	Others	53	128.8	29.9	
Household income	Income < Expense	146	128.9	27.5	00.328[b]
	Income = Expense	291	129.5	29.2	
	Income > Expense	96	134.4	28.6	

a: Mann-Whitney U test, b: Kruskal-Wallis test.
x̄: Mean, SD: Standard deviation

In this study, the Sustainable Food Literacy Scale developed by Teng and Chih (2022) was adapted to Turkish and the validity and reliability of the scale were evaluated. As a result of the analyses, the scale, which consists of 26 items and 5 sub-dimensions, was found to be valid and reliable.[7] This scale is the first scale that can reliably assess sustainable food literacy of the Turkish population. In addition, this study is the first adaptation of the Sustainable Food Literacy Scale to date, as the scale, until now, has not been adapted into another language.

While the lowest and the highest factor loadings of the original scale items in English were reported to be 0.531 and 0.968, respectively, in this study, the lowest and the highest factor loadings were 0.420 and 0.880, respectively.[7] The 4-factor structure of the original English version of the Sustainable Food Literacy Scale, which consists of 26 items, explained 67% of the total variance.[7] The 5-factor structure of the Sustainable Food Literacy Scale adapted into Turkish explained 77% of the total variance. The literature suggests that 40%–60% of total variance explained is adequate

for multi-factor scales.[16] Accordingly, it was observed that the total variance explained of both versions of the scale were adequate. Additionally, the disparity in the number of subscales between the original scale and the Turkish-adapted Sustainable Food Literacy Scale could potentially be attributed to cultural differences within the target population.

The Cronbach's Alpha coefficient of the original English version of the scale was above the recommended value of 0.70.[7] The Cronbach's Alpha coefficient of the Turkish adaptation of the scale was 0.941. When the internal consistency of the scale was evaluated, it was observed that the original English version of the scale was moderately reliable, while the Turkish adaptation of the Sustainable Food Literacy Scale was highly reliable. This showed that the internal consistency of the scale was compatible with the original scale.

In the original scale study, when the sustainable food literacy of individuals with different sociodemographic characteristics was analyzed by comparing their scale scores, it was reported that there was no difference between the total scale mean scores of males and females in the English population.[7] In the current study, the sustainable food literacy of females in the Turkish population was higher than that of males in the Turkish population ($p<0.001$).

The level of education was also highly correlated with food literacy. While the findings of the original scale study in English showed that there was no significant relationship between sustainable food literacy and educational level, it was found in the present study that there was a significant difference between the sustainable food literacy of individuals with different levels of education.[7] The sustainable food literacy of participants with high school education was also lower than that of participants with university and post-graduate education ($p=0.010$, $p=0.036$, respectively). These findings highlight the necessity of expanding the concept of food literacy to include environmental sustainability and educating individuals on sustainable diets. The study of Ronto et al. (2017) included in the literature also supports these findings.[17]

In the literature, financial deprivation was reported to be negatively associated with food literacy.[18, 19] The findings of the form's original scale study that included an English sample suggested that household income was significantly associated with all of the subscales except attitudes, and that individuals with higher household income had higher sustainable food literacy.[7] However, in the current study that included a Turkish sample, no significant correlation was found between income level and sustainable food literacy, although individuals with higher household income had higher levels of sustainable food literacy.

Food shopping frequency is recognized as a factor that can reduce food waste.[20] In the original scale development study in English, both the frequency of cooking and frequency of food shopping were significantly associated with all of the subscale scores, and the frequency of food shopping was reported to be negatively associated with all measures of sustainable food literacy.[7] In the present study, it was observed that the total sustainable food literacy scores increased as the frequency of food shopping decreased, but this correlation between the frequency of food shopping and sustainable food literacy was not statistically significant.

CONCLUSION AND RECOMMENDATIONS

This study is the first adaptation of the Sustainable Food Literacy Scale into a different target culture and language. The Sustainable Food Literacy Scale, which includes the critical dimensions of knowledge, skills, attitudes, and behaviors required for sustainable dietary practices, is the first and only valid and reliable

instrument that can assess sustainable food literacy of the Turkish population. This scale can not only allow assessing adults' sustainable food literacy but can also assist policy makers and educators to help develop the population's knowledge, skills, attitudes, and practices necessary for sustainability. The results of the analysis of this scale can be used as a fundamental material in training programs that aim to improve individuals' sustainable food literacy and related practices.

The study's findings may have limited generalizability due to its focus on a specific geographical region. Additionally, the sample used in the adaptation process of the scale may pose challenges for generalization, as it might share similar sociodemographic characteristics. These limitations should be taken into account when understanding the scope of the study and interpreting its results.

REFERENCES

1. Alsaffar, A.A. (2016). "Sustainable Diets: The Interaction Between Food Industry, Nutrition, Health and The Environment". Food Science and Technology International, 22 (2), 102-111.

2. Dernini, S, Berry, E.M, Serra-Majem, L, La Vecchia, C, Capone, R, Medina, F.X, Aranceta-Bartrina, J, Belahsen, R, Burlingame, B, Calabrese, G, Corella, D, Donini, L.M, Lairon, D, Meybeck, A, Pekcan, A.G, Piscopo, S, Yngve, A. and Trichopoulou, A. (2017). "Med Diet 4.0: The Mediterranean Diet with Four Sustainable Benefits". Public Health Nutrition, 20 (7), 1322-1330. https://doi.org/10.1017/S1368980016003177

3. FAO, IFAD, UNICEF, WFP and WHO. (2020). "The State of Food Security and Nutrition in The World". Access Address :https://www.unicef.org/reports/state-of-food-security-and-nutrition-2020. (Access Date: 06.05.2023).

4. Pendergast, D. and Dewhurst, Y. (2012). "Home Economics and Food Literacy: An International Investigation". Journal of Home Economics, 5 (2), 245-263.

5. Dixon, J. and Isaacs, B. (2013). "Why Sustainable and Nutritionally Correct Food is not on The Agenda: Western Sydney, The Moral Arts of Everyday Life and Public Policy". Food Policy, 43, 67-76. https://doi.org/10.1016/j.foodpol.2013.08.010

6. Jones, A.D, Hoey, L, Blesh, J, Miller, L, Green, A. and Shapiro, L.F. (2016). "A Systematic Review of The Measurement of Sustainable Diets". Advances in Nutrition, 7 (4), 641-664.

7. Teng, C.C. and Chih, C. (2022). "Sustainable Food Literacy: A Measure to Promote Sustainable Diet Practices". Sustainable Production and Consumption, 30, 776-86.

8. George, D. and Mallery, M. (2003). "Using SPSS for Windows Step by Step: A Simple Guide and Reference". Boston, MA: Allyn & Bacon.

9. The Council of the International Test Commission (2018). "ITC Guidelines for Translating and Adapting Tests (Second Edition)". International Journal of Testing, 18(2), 101-134. https://doi.org/10.1080/15305058.2017.1398166

10. Schröder, H, Fitó, M, Estruch, R, Martínez-González, M.A, Corella, D, Salas-Salvadó, J, Lamuela-Raventós, R, Ros, E, Salaverría, I, Fiol, M, Lapetra, J, Vinyoles, E, Gómez-Gracia, E, Lahoz, C, Serra-Majem, L, Pintó, X, Ruiz-Gutierrez, V. and Covas, M.I. (2011). "A Short Screener is Valid for Assessing Mediterranean Diet Adherence Among Older Spanish Men and Women". The Journal of Nutrition, 141 (6), 1140-1145.

11. Pehlivanoğlu, E.F.Ö, Balcıoğlu, H. ve Ünlüoğlu, İ. (2020). "Akdeniz Diyeti Bağlılık Ölçeği'nin Türkçe'ye Uyarlanması Geçerlilik ve Güvenilirliği". Osmangazi Tıp Dergisi, 42 (2), 160-164. https://doi.org/10.20515/otd.504188

12. León-Muñoz, L.M, Guallar-Castillón, P, Graciani, A, López-García, E, Mesas, A.E, Aguilera, M.T, Banegas, J.R. and Rodríguez-Artalejo, F. (2012). "Adherence to The Mediterranean Diet Pattern has Declined in Spanish Adults". The Journal of Nutrition, 142 (10), 1843-1850.

13. Gréa Krause, C, Beer-Borst, S, Sommerhalder, K, Hayoz, S. and Abel, T. (2018). "A Short Food Literacy Questionnaire (SFLQ) for Adults: Findings from a Swiss Validation Study". Appetite, 120, 275–280.

14. Durmus, H, Gökler, M.E. and Havlioğlu, S. (2019). "Reliability and Validity of The Turkish Version of The Short Food Literacy Questionnaire Among University Students". Progress in Nutrition, 21, 333-338. https://doi.org/10.23751/pn.v21i2.7094

15. Gökler, M.E, Durmuş, H. and Havlioğlu, S. (2020). "Food Literacy Can Described Adequate? Optimizing Cut-off Scores for The Short Food Literacy Questionnaire (SFLQ)". Mediterranean Journal of Nutrition and Metabolism, 13 (2), 119-126. https://doi.org/10.3233/mnm-190363

16. Çokluk, Ö, Şekercioğlu, G. and Büyüköztürk, Ş. (2012). "Sosyal Bilimler İçin Çok Değişkenli İstatistik: SPSS ve LISREL uygulamaları". Ankara: Pegem Akademi.

17. Ronto, R, Ball, L, Pendergast, D. and Harris, N. (2017). "What is The Status of Food Literacy in Australian High Schools? Perceptions of Home Economics Teachers". Appetite, 108, 326-334. https://doi.org/10.1016/j.appet.2016.10.024

18. Palumbo, R, Adinolfi, P, Annarumma, C, Catinello, G, Tonelli, M, Troiano, E, Vezzosi, S. and Manna, R. (2019). "Unravelling the Food Literacy Puzzle: Evidence from Italy". Food Policy, 83, 104-115. doi:10.1016/j.foodpol.2018.12.004

19. Ashoori, M, Omidvar, N, Eini-Zinab, H, Shakibazadeh, E, Doustmohamadian, A, Abdar-Esfahani, B. and Mazandaranian, M. (2021). "Food and Nutrition Literacy Status and Its Correlates in Iranian Senior High-school Students". BMC Nutrition, 7 (19), 1-10. https://doi.org/10.1186/s40795-021-00426-2

20. Farr-Wharton, G, Foth, M. and Choi, J.H.J. (2014). "Identifying Factors That Promote Consumer Behaviours Causing Expired Domestic Food Waste". Journal of Consumer Behaviour, 13 (6), 393-402. https://doi.org/10.1002/cb.1488