Reliability and Validity of Ethical Attitude Scale in Dietitians: Methodological Study

Diyetisyenlerde Etik Tutum Ölçeğinin Geçerlik ve Güvenirliği: Metodolojik Çalışma

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ABSTRACT This study was methodologically conducted to develop a scale for determining ethical attitudes among dietitians and to assess the validity and reliability of the scale. The research was carried out in Türkiye between September 2021 and January 2022. A draft scale, formed through literature review, served as the data collection tool. Expert opinions were sought for the scope validity of the research. The "Ethical Attitude Scale for Dietitians," with 48 items designed for nutrition and dietetics professionals, underwent a scope validity study in the initial stage. Opinions from 21 experts on this subject were collected between August and October 2021. Confirmatory factor analysis and exploratory factor analysis methods were employed for construct validity in the study. A total of 440 dietitians participated in the research, with 412 females (93.6%) and 28 males (6.4%). The majority of dietitians (83.3%) were in the age range of 20-29, and 43.6% had 1-5 years of professional experience. In the reliability analysis of the scale, the Cronbach's Alpha value was found to be 0.827, the Spearman-Brown reliability coefficient was 0.725, and the Guttman Split Half reliability value was 0.724. The exploratory factor analysis resulted in a structure comprising 6 sub-factors and 27 items, explaining a total variance of 50.9%. Confirmatory factor analysis fit indices were as follows: chi-square degrees of freedom 1.766, adjusted goodness-of-fit index 0.887, and square root of the mean squared residuals 0.043. In conclusion, the Ethical Attitude Scale for Dietitians is a valid, reliable tool for assessing ethical attitudes among dietitians.

Keywords: Ethical attitude; dietitian; validity; reliability

ÖZET Bu çalışma, diyetisyenlerde etik tutumu belirlemeye yönelik bir ölçek geliştirmek ve geliştirilen ölçeğin geçerlik ve güvenirlik çalışmalarını belirlemek amacıyla metodolojik olarak gerçekleştirilmiştir. Araştırma, Türkiye'de Eylül 2021 ile Ocak 2022 arasında yürütülmüştür. Veri toplama aracı olarak literatür taranarak oluşturulan taslak ölçek kullanılmıştır. Araştırmanın kapsam geçerliği için uzman görüşlerine başvurulmuştur. İlk aşamada, beslenme ve diyetetik meslek üyelerine yönelik hazırlanan 48 madde içeren "Diyetisyenlerde Etik Tutum Ölçeği"nin kapsam geçerliği çalışması için Ağustos-Ekim 2021 tarihlerinde bu konuyla ilgili 21 uzmanın görüşleri alınmıştır. Çalışmada yapı geçerliği için doğrulayıcı faktör analizi ve açıklayıcı faktör analizi yöntemlerine başvurulmuştur. Araştırmaya 412 kadın (%93,6) ve 28 erkek (%6,4) olmak üzere toplamda 440 diyetisyen katılmıştır. Diyetisyenlerin büyük çoğunluğunun (%83,3) yaşı 20-29 arasında olup, %43,6'sının meslekte çalışma yılı 1-5 yıl arasındadır. Ölçeğin güvenilirliğiyle ilgili yapılan analizde Cronbach Alfa değeri 0,827, Spearman-Brown güvenirlik katsayısı 0,725 ve Guttman Split Half güvenirlik değeri 0,724 olarak bulunmuştur. Açıklayıcı faktör analizi sonucunda toplam varyans değeri %50,9, 6 alt faktör ve 27 madde içeren bir yapı elde edilmiştir. Doğrulayıcı faktör analizi uyum değerleri; ki-kare serbestlik derecesi 1,766, düzeltilmiş uyum iyiliği indeksi 0,887 ve ortalama hataların karekökü değeri 0,043 olarak bulunmuştur. Sonuç olarak diyetisyenlerde etik tutum ölçeğinin geçerli ve güvenilir bir ölçüm aracı olduğu ve diyetisyenlerde etik tutum düzeylerinin ölçülmesinde kullanılabileceği söylenebilir.

Anahtar Kelimeler: Etik tutum; diyetisyen; geçerlilik; güvenirlik

Ethics as a philosophical study can be defined as what is morally right and wrong, understanding good and bad; analysis and distinguish.[1,2] Code of ethics can be defined as social contracts that aim to encourage and develop ethical behavior and prevent professional misconduct among people belonging to any professional group.[3] Bioethics, consisting of the words bios and ethic, emerged from medical ethics,

understood as a principle based on Hippocrates' "Do no harm" precept. Bioethics aspires to disclose the scientific, political, and ethical principles of progress by defending human dignity in the fields of law and health.[4,5] Professional ethics is a discipline and a definition constructed with ways through practice. Professional organizations in the area of vocational education apply ethical or behavioral principles, and concerns relating to special education training in education are discussed.[6]

The ethical development of Nutrition and Dietetics dates back to the 1930s. The Academy of Nutrition and Dietetics first published professional, ethical rules for dietitians under Professional Codes for Hospital Dietitians. It was updated as "The Occupational Behavior Guide" in 1971, and as the "Dietitian Oath" in 1977.[7]

The Academy published official ethical codes for the first time in 1982. These codes were revised several times in the following periods on purpose to overcome the ethical problems that arise in the profession. It was updated in 1987, 1998, and 2009 to the ethical principles consisting of 19 items. In 2016, the Academy updated it to its final version, composed of 1 foreword, 4 titles, and 32 substances.[7]

Ethical rules for dietitians in Türkiye were prepared by the Turkish Dietetic Association and accepted at the 31st Ordinary General Assembly meeting held in Ankara on January 15, 2012.[8]

A scale that Sara Long Anderson carried out validity and reliability tests in 1993 was obtained from the literature survey. The American Public Health Association Ethics and Public Health study by Hiller and Sugarman served as the basis for this scale, which was then modified in accordance with the guidelines of dietetic professional ethics.[9]

As was previously mentioned, while the overall framework of ethical standards has been designed for dietitians worldwide and in Türkiye, adequate surveys to test and examine the level of ethical attitudes of dietitians have not been carried out. To measure ethical attitudes, a multiplicity of scales can be developed. The unavailability of a scale to measure dietitians' ethical attitudes in the Republic of Türkiye compelled the development of one. It aims to create a high content validity scale that can be applied to all dietitians.

MATERIAL AND METHODS

STUDY DESIGN, PARTICIPANTS, AND SETTING

The Ethical Attitude Scale of Nutrition and Dietetics is a scale developed to assess Turkish dietitians' ethical attitudes. The scale was adapted from other ethical attitude scales that health-related found in the literature, and the scale was composed of 5 point Likert scale questions. The sample consisted of 440 participants of dietitians who are working, previously worked or graduated (never worked) in Türkiye.

A methodological study was conducted, and our study sample was individuals who obtained the title of dietitian after completing the undergraduate nutrition and dietetics programs at Turkish universities. The subjects were to be assessed using a 44-Item measure. The sample size was calculated so that the number of participants to variable (Item) ratio was at least 10:1. In this investigation; no sample selection procedure was applied dietitians who met the criteria got an electronic questionnaire between August 2021 and January 2022. A total of 440 participants agreed to take part in the study.

DATA COLLECTION

The study was conducted in accordance with the principles of the Declaration of Helsinki after obtaining Süleyman Demirel University Ethics Committee (date: November 23, 2011, no: E87432956-050.99-168175) approval. Following the appropriate explanations and notifying the participants about the research, 440 people who volunteered to participate in the study, 412 women and 28 men, received an electronic questionnaire created in Google Forms (Google, USA) format. These participant dietitians filled out the questionnaire collected and stored the data on Google Tables.

DATA ANALYSIS

From the sociodemographic design of the individuals, frequency, percentage, and mean are used. The content validity analysis of the previously created scale draft was performed as part of the validity and relia-

bility analysis. Following the accuracy, the structure was validated using a factor analysis procedure. The Kaiser-Meyer-Olkin (KMO) sample adequacy scale and Bartlett's test of sphericity were utilized in the scale's validity and reliability evaluations.

The sample's appropriateness for analysis was assessed at this point. The item analysis, item-whole correlations, Cronbach α, dividing the test into two halves, and explanatory factor analysis approaches were employed. The scale's floor-ceiling effect and item discrimination index were also taken into account. The association between the independent variables and the average scores derived from the sub-factors and the total scale was investigated using the t-test in independent groups and the one-way ANOVA tests.

In the study of the research data, the IBM SPSS 22 package software (Chicago, Illinois) was utilized for explanatory factor analysis, and the IBM AMOS 23 package (Armonk, New York, USA) program was used for confirmatory factor analysis.

ETHICAL CONSIDERATIONS

The research proposal was submitted to the Ethics Committee of Süleyman Demirel University's Institute of Health Sciences, and the ethics committee approved the study. During the research data collection, the participants were given the necessary information about the research. It was stated that the knowledge acquired would be kept confidential, the study would be conducted for scientific objectives, and the investigation would be conducted with only volunteers, without coercion at the time of invitation to participate in the research. The principles of informed consent, confidentiality, and confidential protection, as well as the principles of respect for autonomy, non-harm, and benefit, have all been considered and implemented.

VALIDITY AND RELIABILITY

The concept of content validity can be characterized as the ability of the items chosen to demonstrate the construct variables in the measure.[10]

It is also possible to add elements to the scale that are more important to the issue than those less relevant to the subject. Expert views ranging from 5 to 40 are required in content validity studies to evaluate the extent to which the items in the scale measure the feature.[11]

Experts can use the Lawshe technique to classify each item as "measuring the targeted structure," "connected to the structure but not necessary," or "does not measure the targeted structure".[11]

Items might be categorized as "suitable," "sure but should be corrected," or "should be eliminated" by the expert.[12]

The KMO test can be used to identify whether or not factor analysis can be done on the data. The results are statistically significant if the KMO value is greater than 0.6 and the p-value is less than 0.05. However, factor analysis won't be useful when the KMO value is less than 0.50.[13]

The KMO value ranges between 0 and 1 and is expected to approach 1. The correlation matrix, KMO, and Barlett test were used to assess the data's appropriateness. Due to the correlation matrix calculation, variables with a very high correlation are typically included in the same component. A structure that provides factorization between 0.30 and 0.90 is desired for correlation values. At levels less than 0.30, there is no evidence of factorization.[13-15]

Confirmatory factor analysis is used to see if the original scale's factor structure is accurate.[16] The estimated covariance matrix of the model is compared to the covariance matrix discovered over the sample using the root mean square error of approximation (RMSEA) estimation method. This essential fit index assesses how close a hypothesized model is from a perfect model. Values less than 0.05 suggest a good match, between 0.05-0.08 is acceptable, 0.08-0.10 indicate moderate compliance, while values greater than 0.10 indicate undesirable values.[17-19]

The Goodness of Fit Index (GFI) indicates how well the model measures the sample's covariance matrix, and its values vary from 0 to 1. If the value of this index is greater than 0.90, the model is considered good.[20]

The Adjusted Goodness of Fit Index (AGFI) takes into account the amount of observed variables while adjusting the GFI value for the degrees of freedom. It is preferable to go closer to 1 in this index,

which has a range of 0-1. Good fit is indicated by values over 0.95.[17]

The root mean square residual (RMR) value shows the average of all equal residuals between 0 and 1. A value of less than 0.05 is considered acceptable.[21]

The reliability was attained through the Cronbach α coefficient and the split-half correlation. We used an item-total correlation to analyze the relationship between items and the scale. The Cronbach α value is described as a number from 0 to 1, and the threshold for an item's total correlation coefficient was accepted as 0.25.[15,22]

RESULTS

VALIDITY AND RELIABILITY

Content Validity. In the first step, a 48-item draft scale was developed for members of the Nutrition and Dietetics profession. The item pool was developed based on the ethical rules for dietitians adopted by the Turkish Dietitians Association at the 31st Ordinary General Assembly meeting. Items were not taken verbatim from scales measuring ethical attitudes and behavior in other professional groups. In order to conduct the content validity study of the Ethical Attitude Scale in Dietitians, the opinions of 21 experts (9 Nutrition and Dietetics, 8 Public Health, 3 History of Medicine and Medical Ethics, 1 Biostatistics experts) on this subject were received. The items were evaluated in 3 categories: "Appropriate, Needs editing/please write your opinion and suggestion, Not suitable/please write your opinion and suggestion". In addition, experts were asked to indicate in the relevant sections the items they wanted to be changed or added, as in similar studies in the literature. After obtaining their opinions, the data of the experts were evaluated using the Lawshe technique.

The analysis determined that items with a content validity and reliability value less than 0.810 should be removed from the scale (13th and 28th items). The 24th, 26th, and 31st items were also eliminated from the scale since they were comparable. The 18th item was rearranged, and a new item (Item 44) was added to the scale based on expert recommenda-tions. The Content Validity Index (CVI) was found to be 0.965 as a consequence of the calculations performed on the remaining items. Additionally, due to the participants' feedback, the 19th item was removed from the scale because it was recognized that it was difficult to understand and caused confusion.

Construct Validity. To determine the scale's construct validity, we assessed exploratory and confirmatory factor analysis. The Barlett's Sphericity test was conducted before performing the factor analysis. The KMO coefficient was 0.877, the Bartlett's Test Value was (x^2) 3138.377, and the p-value was <0.001. These results showed that the data were suitable for factor analysis. The anti-image matrix in the extraction through the principal components method and direct oblimin rotation showed that 50.9% of the total variance was contained in six factors. Within the construct validity, the principal components approach, which is one of the explanatory factor analysis methodologies, was utilized. In our research, the slope plot (Scree Plot) reveals a 6-factor structure with eigenvalues greater than 1. Because of the items with a large load distribution in more than one factor and a load value difference of less than 0.1, factor rotation "direct oblimin" was utilized. Six items with a load distribution of less than 0.1 belonging to at least two factors were eliminated from the scale after reviewing the load distributions created as a consequence of the factor analysis.

The sample consisted of 412 females and 28 males. The mean age of the individuals participating in this study was found to be 26.4. 82% of the participants are in the age group of 20-29, 13.9% are in the age group of 30-39, and 3% are in the age group of 40+. It was observed that 298 (67.7%) of the participants received undergraduate education, 111 (25.2%) master's education and 31 (7%) doctoral education. In terms of the institution, 42 of the participants work in Public Hospitals, 29 in Private Hospitals, 9 in University Hospitals, 120 in Clinical Offices and 34 as Academicians. In addition, 131 participants stated that they provided nutrition and diet counselling (Family Health Centers, Community Health Centers, Online Diet, Catering, etc.) other than these institutions, while 87 participants stated that they did not work.

The average score for ethical attitude was found that 119 (min 99, max 135). The male participants' scores were 118.43, while the female participants' scores were 119.97. The average ethical attitude score of bachelor's degree participants was 119.67, graduate students' average was 118.98, and doctoral students' average was 125.00. Dietitians who attended ethics conferences or seminars had an average ethical attitude score of 121.15, whereas dietitians who did not attend any conferences or seminars had an average ethical attitude score of 118.80. While individuals who rank the importance of ethics courses on a scale of 0 to 5 have an average ethical attitude score of 115.88, those who assess it on a scale of 6 to 10 have an average ethical attitude score of 120.19. The average ethical attitude score of dietitians working in public and university hospitals was 117.62, 112.41 in private hospitals, 118.26 in clinical offices, 125.03 in academics, 119.66 in dietitians working in other institutions, and 120.62 in those who had never worked. Dietitians who have been practicing for less than a year had an ethical attitude score of 118.36, 119.81 for those who have been practicing for 1-5 years, 118.82 for those who have been practicing for 6-10 years, 124.50 for those who have been practicing for

11 years or more and dietitians who had never worked previously had a score of 120.48. The average ethical attitude score of dietitians who evaluated their viewpoint on their profession by ranking them on a scale of 0 to 5 was 117.65, while the average ethical attitude score of dietitians who evaluated them by scoring them on a scale of 6 to 10 was 120.28 (Table 1).

Following an examination based on the Cronbach α coefficient and item-total correlation, it was determined that removing ten items from the scale was necessary. Accordingly, items 8, 35, and 41, which had the most significant impact on the Cronbach α coefficient, were deleted from the scale. The item-total correlation computation resulted in the removal of 7 more items, namely items 21, 22, 30, 36, 38, 40, and 44, whose correlation coefficient was less than 0.25. The Nutrition and Dietetic Ethical Attitude Scale, which consists of 25 positive and 2 negative statements, was found to be spread over 6 components as a result of the factor analysis (Table 2). The reliability of our scale, which has 27 items and 6 subfactors, was assessed using Cronbach α, Spearman-Brown, and Guttman Split Half reliability. For the complete Nutrition and Dietetic Ethical Attitude

TABLE 1: The mean, SD and p values of the independent variables for the sub factors and total score of the scale.					
			Total score		
Independent variables		**n (%)**	**Mean**	**SD**	**p value**
Employment status	Actively working	294 (66.8)	119.69	7.81	
	Previously worked	59 (13.4)	119.68	6.63	0.592
	Graduated (never worked)	87 (19.8)	120.62	7.59	
Age	20-29	366 (83.2)	119.63	7.60	
	30-39	61 (13.9)	120.41	7.90	0.106
	40+	13 (3.0)	124.00	5.61	
Gender	Women	412 (93.6)	119.97	7.60	0.301
	Men	28 (6.4)	118.43	7.83	
Level of education	Bachelor's degree	298 (67.7)	119.67	7.51	
	Master's degree	111 (25.2)	118.98	7.85	<0.001
	Doctorate	31 (7.0)	125.00	5.85	
Employed institution	Public and university hospital	42 (9.5)	117.62	6.86	
	A private medical facility	29 (6.6)	122.41	6.57	
	A medical office	120 (27.2)	118.26	7.79	<0.001
	Academician	34 (7.7)	125.03	6.38	
	Other	128 (29.1)	119.66	7.48	
	I do not work/I did not work	87 (19.8)	120.62	7.59	

SD: Standard deviation.

TABLE 2: The nutrition and dietetic ethical attitude scale items' mean, SD, item total correlation, factor analysis, rotated factor analysis, and item discrimination index results.

	Item no	Mean	SD	Item total correlation	Factor load	Rotated factor load	Item Discrimination Strength Index
Factor 1	I1	4.63	0.52	0.413	0.498	0.590	10287
	I3	4.69	0.47	0.589	0.671	0.464	16720
	I4	4.76	0.46	0.455	0.564	0.508	11825
	I7	4.70	0.52	0.472	0.546	0.401	11157
	I8	4.72	0.49	0.520	0.617	0.585	12285
	I9	4.65	0.50	0.573	0.651	0.588	16322
	I10	4.23	0.70	0.442	0.505	0.510	12718
	I11	4.50	0.59	0.431	0.516	0.716	12252
	I12	4.70	0.52	0.565	0.659	0.610	15480
	I13	4.52	0.56	0.535	0.622	0.636	17478
	I14	4.72	0.49	0.540	0.638	0.511	13253
	I21	4.70	0.49	0.518	0.603	0.316	13240
Factor 2	I17	4.57	0.59	0.429	0.517	0.587	10256
	I18	4.23	0.73	0.326	0.435	0.843	8409
	I19	4.30	0.66	0.422	0.485	0.721	10980
	I20	4.43	0.66	0.510	0.581	0.454	15568
Factor 3	I5	4.78	0.61	0.194	0.591	0.829	4394
	I6	4.82	0.56	0.175	0.573	0.807	4146
Factor 4	I2	3.99	0.98	0.002	0.471	0.574	1888
	I26	3.86	1.02	0.234	0.503	0.733	7175
	I27	4.50	0.60	0.376	0.426	0.362	9552
Factor 5	I16	3.62	1.16	0.089	0.451	0.687	4799
	I24	3.97	0.72	0.198	0.455	0.522	6304
	I25	4.40	0.57	0.460	0.563	0.438	13274
Factor 6	I15	4.20	0.81	0.355	0.408	0.622	10823
	I22	4.48	0.56	0.529	0.600	0.598	16314
	I23	4.18	0.70	0.358	0.440	0.640	10072

SD: Standard deviation.

TABLE 3: Confirmatory factor analysis items.

CMIN/df	GFI	AGFI	RMSEA	PCLOSE	RMR
1.766	0.908	0.887	0.042	0.992	0.043

CMIN/df: Chi-square/degree of freedom; GFI: Goodness of Fit Index; AGFI: Adjusted Goodness of Fit Index; RMSEA. Root Mean Square Error of Approximation; RMR: Root mean square residual.

Scale, the Cronbach α value was 0.827, the Spearman-Brown reliability coefficient was 0.725, and the Guttman Split Half reliability value was 0.724.

The model's fit index was evaluated using Confirmatory Factor Analysis on the sample whose explanatory factor analysis. CFA fitness values for the scale were found as chi-square/degree of freedom (CMIN/df) 1.766, GFI 0.908, AGFI 0.887, RMSEA 0.042, PCLOSE 0.992 and RMR 0.043 (Table 3).

Confirmatory factor analysis diagram is shown in Figure 1.

The Nutrition and Dietetic Ethical Attitude Scale was tested for additiveness using ANOVA with Tukey's Test for nonadditivity. As shown in Table 4, The items on the scale were determined to be homogeneous and connected to each other, and the total score was found to be suitable for scale scoring (F=116.42, $p < 0.05$). The Nutrition and Dietetic Eth-
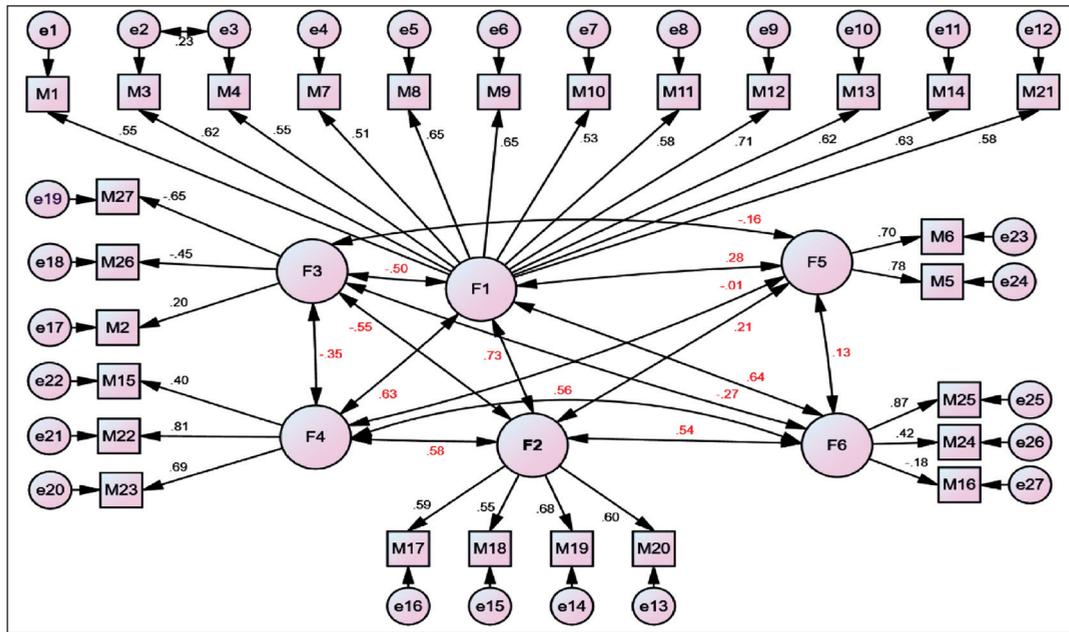
FIGURE 1: Confirmatory factor analysis diagram of the nutrition and dietetic ethical attitude scale.

TABLE 4: ANOVA with Tukey's test for nonadditivity data of the scale.					
	Sum of squares	df	Means square	Friedman's chi-square	Sig
Between groups	942.727	439	2.147		
Within groups between items	1125.529	26	43.290	116.412	0.000
Nonadditivity	1.371	1	1.371	3.687	0.055

df: Degree of freedom.

ical Attitude Scale, consisting of 6 factors and 27 items, is shown in Table 5.

DISCUSSION

The validity and reliability of an ethical attitude scale developed to measure ethical attitudes in nutrition and dietetics professionals were studied in this research. Based on the author's knowledge, it is the first ethical attitude scale developed in the field of nutrition and dietetics in the Republic of Türkiye. The majority of current content validity research approaches are based on Lawshe's Quantitative methods.[23]

To determine the content validity of a scale, experts might be consulted.[10]

Expert views ranging from 5 to 40 are required in content validity studies to evaluate to what extent the items in the scale measure the feature to be mea-

sured. The CVR value of the scale was determined as 0.965 as a result of the analysis made by taking expert opinions. A CVI value greater than 0.67 indicates that the scale is statistically significant. The developed scale includes all important sub-dimensions specific to the subject to be measured and ensures content validity.

The KMO coefficient was 0.877, the Bartlett's test value was (x^2) 3138.377, and the p-value was <0.001. According to the factor structure produced using principal components analysis, this resulted in statistical significance. The anti-image correlation value of all the scale items was found to be greater than 0.5. This finding demonstrates that factor analysis may be done on a scale. All of the elements in our scale have a Cronbach α value of 0.827. This rating implies that the scale is extremely trustworthy. The split-half approach was used to determine the sta-

	TABLE 5: The Ethical Scale of Nutrition and Dietetic.					
		Absolutely I agree	I agree	I am undecided	I do not agree	I strongly disagree
1	I keep my professional practice up to date with the latest scientific study findings.					
2	I believe that the professional information and abilities I received upon graduation will be adequate for the rest of my career.					
3	When contacting patients, I aim to follow the principles of human and patient rights.					
4	In my professional practices, I place great emphasis on both individual and public health.					
5	I do not discriminate against patients because of their political views or beliefs.					
6	I do not discriminate against my patients because of their gender or sexual orientation.					
7	I do not defend or share any information presented by the public or the media without scientific evidence.					
8	It is critical to follow contemporary professional standards based on scientific foundations for professional development.					
9	I care about interchange of views with relevant health professionals in my professional practice					
10	I am open to all professional criticism, both positive and negative.					
11	Patients have the option of accepting or rejecting the applied nutrition program and requesting changes.					
12	I render services by considering the patients' health-related needs, values, and beliefs.					
13	During the nutrition program, I offer knowledge to my patients at a level that allows them to make their own judgments.					
14	I follow the law on the protection of personal data during the nutrition and diet consultation procedure.					
15	Periodicals, magazines, and other forms of social media for my academic posts on platforms, I always acquire permission from the authors I utilize, and I make sure to provide a bibliography.					
16	On social media, I post about my patients' weight loss as a result of diet regimens.					
17	I do not offer unconstructive criticism, cruel or humiliating words or actions to my colleagues or other healthcare professionals.					
18	I stand up for my colleagues when they are subjected to professional insults and harsh comments.					
19	I respect the opinions of my colleagues and other health professionals about their profession.					
20	I avoid professional practices that may lead to unfair competition.					
21	If a colleague has recently joined the institution where I work, I help them with the institutional orientation process.					
22	I can recognize the ethical problems I encounter in professional practice.					
23	I am capable of resolving ethical issues that arise.					
24	I do not hesitate to try new scientific standards in professional practice.					
25	I adapt to changes and updates in the institution, office or center where I work.					
26	I provide services to my patients who declare that they have financial difficulties without any financial expectation.					
27	I think that nutrition program services should be equal, fair and accessible to everyone.					

bility of the Nutrition and Dietetic Ethical Attitude Scale. Results The Guttman Coefficient was 0.724, and the Spearman-Brown coefficient was 0.725. These figures demonstrate that the established scale is highly dependable.

The study's correlation matrix was investigated. The values between 0.30 and 0.90 were found to be extremely high. The chi-square result for the Barlett Sphericity test was found to be 3138.372. This is a significant amount. The correlation matrix is suitable for factor analysis, as evidenced by this result. The scale's confirmatory factor analysis values are as follows: CMIN/df 1.766, GFI 0.908, AGFI 0.887, RMSEA 0.042, PCLOSE 0.992 and RMR 0.043. The Nutrition and Dietetic Ethical Attitude Scale demonstrated good fit values, and the study was at an acceptable level, according to the found fit indices. The scale's additiveness was assessed using an ANOVA with Tukey nonaddivity test. It was concluded that the scale's items are homogeneous and related to each other, and that the total score can be used to measure the scale.

The study's strength is that it is one of the first to thoroughly assess both the content and construct validity of a scale that may be used to measure dietitians' ethical attitude levels. Since dietitians are not directly observed and observed in their workplace, there may be a certain level of consistency between their attitudes and behaviors.

CONCLUSION

Today's professions require ethical rules to protect their status, social reputation, and trust. In addition, ethical attitude scales can be used to assess people's

moral attitudes in the workplace. We designed an ethical attitude scale to evaluate the ethical perspectives of dietitians in Türkiye. The scale's dependability was determined to be high due to the validity and reliability analysis. According to the findings, there is a statistically significant association between ethical views and variables such as educational status, the priority placed on ethics courses and programs, subject of study, and length of time working in the profession. The scale can be used in many investigations to produce mixed results.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

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