

The Development of Family Medicine Identity Scale

Duygu Ustunol¹, Ismail Kasim², Ali Timucin Atayoglu³, Adem Ozkara⁴

¹Department of Family Medicine, Sulakyurt State Hospital, Kırıkkale, Türkiye. ORCID iD: 0000-0002-3060-8071. duyguustunol@gmail.com (Corresponding Author)

²Department of Family Medicine, Ankara Bilkent City Hospital, Health Science University, Ankara, Türkiye. ORCID iD: 0000-0003-0762-5823

³Department of Family Medicine, Istanbul Medipol University, Istanbul, Türkiye. ORCID iD: 0000-0003-4568-4234

⁴Department of Family Medicine, Ankara Bilkent City Hospital, Health Science University, Ankara, Türkiye. ORCID iD: 0000-0003-1658-3071

ABSTRACT

Aim: It is to put a scale into the use of the academic community which measures how well the doctors can interiorize the features concerning family practice the training of family practice specialization in our country, by developing a family practice identity scale that is peculiar to Turkey.

Methods: Our research is the study of developing a scale. A 5-point Likert scale is generated by creating the questionnaire and then the aforementioned scale is studied to verify the validation and reliability in Turkey. The scale has been performed on 351 people who work as academicians, specialists and residents in the field of family practice.

Results: During the analyses, while the first four factors whose eigenvalues are the highest are kept fixed, the questions from the other factors are distributed according to their content similarities. As a result, forty-six questions is obtained. Kaiser-Meyer-Olkin value conformity assessment the result was obtained at a very good level (KMO: 0.940) and Cronbach's alpha value was calculated as 0.952. The sub-scales are named by the contents of the questions: Patient-doctor communication, professional satisfaction, the scope of the working area and comprehensive approach, and biopsychosocial approach. It has been concluded that the scale is a valid and reliable questionnaire in Turkey after these advanced statistical analyses.

Conclusion: "The Scale of Family Practice Identification" is developed successfully. With the aforementioned scale, by observing the professional progress of residents, the doctors that have an occupational identity and sense of belonging can be trained for the community of family practice.

Keywords: family practice, reliability and validity, scales

Date of submission: 07.06.2022 / **Date of acceptance:** 29.12.2022

How to cite: Ustunol D, Kasim I, Atayoglu AT, Ozkara A. The development of family medicine identity scale. Euras J Fam Med 2022;11(4):217-28. doi:10.33880/ejfm.2022110405.

Conflict of interest: No conflict of interest was declared by the authors.

Financial disclosure: No financial disclosure was declared by the authors.

This research has been presented in 14th Family Medicine Research Days held in Istanbul between 11-13 April 2019 as an oral presentation.

Introduction

Nowadays, professionalism features are pursued in every profession. These characteristics can be explained as having appropriate behaviors and attitudes through the education and training stages specific to the profession (1,2).

A professional identity must be formed in the vocational education process for developing professional behaviors. Professional identity is the whole of the characteristics that include many attitudes, behaviors, and ethical elements, from performing an individual's profession to accessing professional knowledge (3).

Although specialization increases day by day, family physicians working in primary care have essential duties to protect public health. So, it has become more critical to define the identity of family physicians.

Family medicine residency training consists of long rotations. After long rotations in different disciplines, residents may have confusion about the identity of family medicine, and this process may have negative effects on the development of professional identity (4). Some family physicians think that their professional identities are not clear (5). Professional belonging is an important factor that increases the motivation and performance of professional members in their professional lives (6).

In many studies, it has been found that job satisfaction is higher, and burnout is less common in people with a professional identity (7,8). It has been shown that as the professional satisfaction of the physician increases, the satisfaction of the patients will increase at the same rate (9). People who have developed their skills and formed a professional identity during the family medicine education process perform their profession productively (10). Various studies have

been carried out on family medicine identity throughout the world (11,12). In this study, we aimed to develop a specific family medicine identity scale based on the need for professional identity definition and the problems in our practice.

Methods

This is a methodological study planned to develop the "Family Medicine Identity Scale" using an international scale development process. In the first stage of the study, it was planned to develop the "Family Medicine Identity Scale". In the second stage, it is planned to apply the newly developed scale to family medicine academics, specialists, and registrars across the country to conduct a validity and reliability assessment in Turkey.

Family Medicine Identity Scale

A five-point Likert-type scale was used for the measurement method. The questions were answered as follows (13,14): 1. Totally agree, 2. Agree, 3. Partially agree, 4. Disagree, and 5. Strongly disagree (Table 1).

Based on the core competencies of family medicine determined by WONCA, which is thought to define the professional identity of family medicine by the study team, and based on previous qualitative studies on this subject, 77 closed-ended questions containing positive and negative statements were prepared. By using the Lawshe technique, the questions were evaluated as "appropriate", "appropriate if corrected" and "not appropriate" (15,16). After receiving the field specialist opinion, the number of questions was determined as 48.

In order to evaluate whether there is any understanding problem, a preliminary pilot application was made to a group of 5 family medicine specialists and registrars, who were different from the previous evaluations.

Table 1. Family Medicine Identity Scale

	Strongly Agree	Agree	Rather Agree	Disagree	Strongly Disagree
1. Being a family physician allows me to spare time for myself.					
2. I think I made the right decision by choosing family medicine.					
3. I think family medicine is a specialty that suits my character.					
4. I think I get enough respect in the eyes of patients.					
5. Meeting the families of the patients and being involved in their lives strengthens the patient-physician relationship.					
6. Since there is a population group in my responsibility, seeing the same patients constantly builds up a close relationship between the patient and the physician.					
7. As I know the sick person, treating the patient, not the disease, separates me from other physicians.					
8. I am not a doctor who will only prescribe medication or report for my patients.					
9. I am a source of information for my patients where they can get information about healthy living.					
10. Family medicine practices allow me to devote enough time to my patients.					
11. When a new disease emerges in my area of duty, managing the situation is part of my daily practice.					
12. It makes me happy to be the first person that my patients can consult about their health problems.					
13. Educating my clients with chronic illnesses about illness and treatment is part of my job.					
14. I inform my patients about protecting their health, educate them and guide them when necessary.					
15. The fact that my patients are in a wide age range from babies to the elderly does not pose a problem.					
16. It makes my job easier to know the health history of my patients with chronic problems when they consult me with acute problems.					
17. As a physician, I think the area where I can express myself best is family medicine.					
18. I include the patient in the decision-making process regarding the management of chronic diseases.					
19. It is my responsibility to direct my patients to screen programs for diseases that can be treated with early diagnosis.					
20. Carrying out periodic health screenings for my patients of different ages is my responsibility to the community.					
21. The fact that family medicine practice covers many areas of medicine and has a wide perspective creates difficulties for me.					
22. When my patients consult with nonspecific complaints, I decide according to the prevalence of the diseases.					
23. Being easy to reach the doctor for my patients affects the patient-physician relationship positively.					
24. When my patients consult with a somatic complaint, I evaluate the possibility of an underlying psychological problem.					
25. Delivery of mobile health care is my responsibility toward community health.					
26. As a family physician, I can perform small surgical interventions on patients when necessary.					
27. My patients prefer to consult me first for all kinds of health problems.					
28. It is one of my favorite aspects of family medicine that it provides the opportunity to work in all fields of medicine.					
29. I think that when an acute problem arises with my practices, I can take the situation under control and refer a patient under appropriate conditions.					
30. I guide my patients by helping them in all areas of medicine and life.					
31. As a family physician, it is my responsibility to society to constantly improve myself and to follow the developments in medical practice closely.					
32. Family medicine is a way of life for me.					
33. I believe that I am equipped to solve the acute problems I encounter in my daily practice.					

	Strongly Agree	Agree	Rather Agree	Disagree	Strongly Disagree
34. Providing all kinds of support to my patients in case of social problems reflected on the individual is a part of my practice.					
35. Another aspect of my profession that I like is the people-oriented approach to family medicine.					
36. It is my responsibility to the community to ensure that disadvantaged groups benefit equally from the delivery of healthcare.					
37. Being competent in many clinical issues provides me with professional satisfaction in family medicine practice.					
38. I think it is necessary to receive specialist training for the formation of a family medicine identity.					
39. As a family physician, I think I am a role model and social leader in society.					
40. As a family doctor, being ready for any health problem of the individual regardless of age, gender and origin is part of my job.					
41. As a family physician, even though I have referred the patient for a treatment that requires specific expertise, I ensure the follow-up of the patient's current illness.					
42. As a family physician, every meeting I have with my patients is an opportunity for health protection and promotion.					
43. As a family physician, it is my responsibility to the community to use diagnostic laboratory examinations. to prescribe and manage resources for the benefit of society by controlling referrals.					
44. I think that the contributions of primary healthcare practices carried out by family physicians to public health cannot be provided by another area of specialization.					
45. Knowing my patients allows me to evaluate their living conditions and opportunities when they consult with me.					
46. As my family medicine identity is formed, I feel that I am professionally satisfied.					

Factor Analysis, Validity and Reliability

Since there is no other Family Medicine Identity Scale that is accepted as valid and reliable in Turkey, this study could not be conducted as "Validity Based on a Criterion/Criteria Validity". Since there is no similar measurement result in terms of "external construct validity", an examination could not be carried out. Exploratory factor analysis was performed in terms of "internal validity".

Reliability is calculated after the scale is shown to be valid. Cronbach's alpha values and the internal

consistency coefficient were calculated to determine the reliability level for the sub-dimensions and the overall scale, and the item fit values of the factors obtained. "Equivalent Forms Reliability" could not be examined because there is no other scale that has passed a validity and reliability study and measures the same feature in Turkey.

While calculating the content validity ratio (CVR) the minimum values of CVRs at $\alpha=0.05$ significance level were calculated and converted into a table (Table 2).

Table 2. Assessment of the relationship between the scale sub-dimensions and the total

Subdimensions	Factor 1	Factor 2	Factor 3	Factor 4
Factor 2	<i>Sr</i> =0.668; p<0.001	–	–	–
Factor 3	<i>Sr</i> =0.701; p<0.001	<i>Sr</i> =0.680; p<0.001	–	–
Factor 4	<i>Sr</i> =0.624; p<0.001	<i>Sr</i> =0.577; p<0.001	<i>Sr</i> =0.492; p<0.001	–
Total Scale	<i>Sr</i> =0.918; p<0.001	<i>Sr</i> =0.859; p<0.001	<i>Sr</i> =0.846; p<0.001	<i>Sr</i> =0.696; p<0.001

Sr: Spearman Rho correlation coefficient

The following analyses were made under this table's guidance and the study continued with questions with CVRs of 0.5 and above (17,18). After getting the expert opinion, the number of questions was determined as 48. The scale's content validity index (CVI) was calculated as 0.68 by the average of the CVRs of the remaining questions as a result of the evaluations (15,19).

Application of the Scale

The scale was prepared in printed questionnaire form and electronic questionnaire, with an informed consent form. The electronic questionnaire form was shared on various social media platforms used by family medicine residents, specialists and academics across Turkey. The link created to fill in the scale was left open for six weeks between 23 May 2019 and 7 July 2019. Printed questionnaires were distributed and collected.

Ethics committee approval was obtained for our study from a Training and Research Hospital, dated 19 July 2018, and numbered E. Board -E-18-2119.

Statistical Analysis

The conformity of the continuous variables such as the age of the volunteers, the total scores of the four factors obtained as a result of the factor analysis of the applied candidate scale, and the total scale score to the normal distribution, were examined using the Shapiro-Wilk's test and graphical methods. Descriptive statistics were given as mean±standard deviation for variables with normal distribution and median (interquartile ranges) for variables that did not fit a normal distribution.

Exploratory factor analysis (EFA) was performed to determine the "Family Medicine Identity Scale." To determine the suitability of the data for factor analysis, Bartlett's test of sphericity result and the Kaiser-Meyer-Olkin (KMO) sample adequacy measure were examined.

Since the original model was not sufficient to determine the sub-dimensions of the scale, the Varimax factor rotation method was used. As a result of factor analysis, scale subdimensions consisting of 46 items with four factors were determined.

The split-half method was used, and the Spearman-

Brown coefficient and the Guttman Split-half coefficient were reported to demonstrate the reliability of the data. Tukey's nonadditivity test determined the total score obtainability from the factors obtained. Subdimensions' scores and total scores were changed according to the 100-point system to facilitate the interpretability of the obtained scores. To convert to the hundredth system the following formula was used.

$$Score_{100} = \left(\frac{\text{Obtained Total Score}}{\text{The Highest Possible Score in Subdimension}} \right) * 100$$

In the comparison of the total scores obtained from the factors according to demographic information, the Mann-Whitney U test, which is the non-parametric equivalent of the independent two-sample t-test, was used because the normal distribution and homogeneity of variance could not be achieved in the two-category independent variables (gender and marital status). ANOVA test was used where normal distribution and homogeneity of variance were provided for score comparisons made for variables with more than two independent categories (such as years of expertise and employment). The non-parametric counterpart of this test, the Kruskal Wallis test, was used where assumptions could not be met. In cases where a statistically significant difference was observed between the groups, the post-hoc test t-test with Bonferroni correction or the Mann-Whitney U test, which was appropriate, was used to determine which subgroup made the difference.

Correlation analysis was performed to determine the relationship between scale sub-dimensions and grand totals. Spearman Rank Correlation Coefficient-p (rho) was reported because the data did not assume a normal distribution (19).

The statistical significance level in the study was accepted as $p < 0.05$. Statistical analyzes and calculations were performed using IBM SPSS Statistics for Windows v.22.0 (IBM Corp. Armonk, NY:) and MS-Excel 2016 programs.

Results

Demographical Data

The study was evaluated with 350 volunteer family

physicians. 64.6% (n=226) of them were female, 35.4% were male (n=124) 65.4% of participants were married and 34.6% were single. 54.0% of the participants, did not have a child; 23.1% had one child; 19.7% had two children. It was determined that 3.2% of them had three or more children. The median age of the family physicians participating in the study was 31.00 (interquartile range-IQR=11) and the mean age was 34.72. The mean age of female participants was 32, and the median age was 29. The mean age of male participants was 39, and the median age was 35. The academic status of the participants was determined as 57.1% family medicine residents, 29.7% family medicine specialists, and 13.1% family medicine academicians.

Factor Analysis, Validity and Reliability

Kaiser-Meyer-Olkin value and Bartlett's sphericity test were applied to determine the suitability of the collected data for factor analysis. The obtained KMO value (KMO: 0.937) was calculated as very good, and it was determined that the sphericity assumption was met ($\chi^2=9307.532$; $p<0.001$). After the results were obtained, it was concluded that the data were suitable for factor analysis.

As a result of the factor analysis, the distribution of the items to the factors showed a skewed accumulation. There would be problems in the interpretation of the items, so factor analysis was repeated using the varimax rotation method. In the result of the factor analysis using the rotation method, a new model with 10 factors explained 63.46% of the total variance. So, it was decided to reduce the obtained 10 factors to 4. The remaining items were assigned to the first 4 factors, which was appropriate.

Cronbach's alpha values and the internal consistency coefficient were calculated to determine the reliability level for the sub-dimensions and overall scale and the consistency of items with factors. Cronbach's alpha value for 46 questions was calculated as 0.953.

After the changes, the KMO analysis result was obtained at an excellent level (KMO: 0.940), and Bartlett's sphericity test result was significant for the

sphericity assumption ($\chi^2=9140.034$; $p<0.001$).

The test-retest method could not be used for the reliability study of the scale, so the Split-half (dividing the test into two halves) method was used. A total of 46 questions were evaluated. The first 23 questions were called Model I, and the following 23 questions were called Model II. The Spearman-Brown and Gutman Coefficients values obtained as a single value for the overall scale with the split-half method are 0.901 and 0.899, respectively.

When the questions distributed to the 4 factors were examined, the factor sub-dimensions were named patient-physician communication (Factor 1), professional satisfaction (Factor 2), the scope of work and comprehensive approach (Factor 3), and biopsychosocial approach (Factor 4) respectively.

Examining the Relation Between Factor Subdimensions

The correlation between the scale sub-dimensions and the full scale was determined between all sub-dimensions ($p<0.05$) (Table 3).

Discussion

Family physicians play an essential role in protecting and promoting health by doing their jobs but as they are the most affected group by the changes in the health system, family physicians experience confusion about their professional identity (5). Uncertainty about professional identity brings about job dissatisfaction, burnout, and depression (20).

The literature demonstrates that job satisfaction is low, and the level of burnout is high among family physicians (21). When professional identity confusion is overlapped, we see unhappy physicians who cannot do their jobs professionally.

This study aimed to define the sub-dimensions that we think constitute the family medicine identity, focus on the missing issues in residency education, and train physicians who have a well-established professional identity and are self-confident.

Table 3. Comparison of factor sub-dimensions and the total according to demographic data

Subdimensions		Factors [Median (IQR)]				Total Score
		Factor 1	Factor 2	Factor 3	Factor 4	
Gender	Female (n=226)	33.04 (12.17)	44.00 (20.00)	48.00 (16.00)	33.33 (20.00)	39.35 (12.72)
	Male (n=124)	35.65 (13.04)	40.00 (16.00)	44.00 (14.00)	33.33 (20.00)	38.48 (11.96)
	Z	1.370	2.284	2.651	0.296	0.878
	P	0.171	0.022	0.008	0.767	0.380
Marital Status	Single (n=121)	36.52 (11.30)	48.00 (18.00)	48.00 (15.00)	40.00 (13.33)	40.87 (11.09)
	Married (n=229)	32.17 (13.04)	40.00 (18.00)	44.00 (18.00)	33.33 (20.00)	37.39 (13.04)
	Z	3.258	4.035	3.163	2.948	3.861
	P	0.001	<0.001	0.002	0.003	<0.001
Academic Status	Resident (n=200)	33.47(11.30)	44.00(17.50)	48.14 (11.84)	33.33 (18.33)	39.57 (10.87)
	Specialist (n=104)	36.52 (13.91)	44.00 (26.00)	48.25 (12.98)	33.33 (25.00)	40.43 (13.80)
	Academician (n=46)	28.69(12.39)	33.00(16.50)	36.83 (9.47)	20.00(13.33)	31.74 (12.82)
	F; χ^2	$\chi^2=20.356$	$\chi^2=22.583$	F=18.124	$\chi^2=17.244$	$\chi^2=29.699$
	P	<0.001	<0.001	<0.001	<0.001	<0.001
Number of Children	None (n=189)	35.65 (11.30)	46.00 (17.00)	50.00 (13.00)	40.00 (13.33)	40.43 (10.87)
	One (n=81)	31.30 (13.48)	40.00 (20.00)	42.00 (20.00)	26.67 (20.00)	36.09 (16.08)
	Two (n=69)	28.69 (12.61)	36.00 (16.00)	42.00 (15.00)	26.67 (20.00)	35.22 (13.04)
	Three and more (n=11)	30.86 (13.70)	38.00 (19.50)	45.00 (31.00)	23.33 (15.00)	35.22 (15.44)
	χ^2	24.185	29.830	35.609	16.617	33.432
Working Years	<10years (n=92)	35.65 (12.17)	44.00 (25.00)	47.76 (13.46)	33.33 (20.00)	40.00 (14.02)
	11-20 years (n=40)	30.43 (16.30)	35.00 (14.00)	41.45 (11.56)	26.67 (25.00)	35.22 (16.09)
	21> years (n=18)	28.69 (11.09)	32.00 (20.00)	36.67 (9.15)	26.67 (13.33)	30.43 (12.93)
	F; χ^2	$\chi^2=6.359$	$\chi^2=11.429$	F=7.776	$\chi^2=3.905$	$\chi^2=10.984$
	P	0.042	0.003	0.001	0.142	0.004
Specialty Year	≤ 1995 (n=12)	29.13 (9.13)	37.00 (18.00)	37.00 (11.00)	26.67 (13.33)	30.44 (11.41)
	1996-2005 (n=36)	30.43 (17.17)	33.00 (15.00)	39.00 (19.00)	26.67 (26.67)	35.22 (18.59)
	2006-2015 (n=40)	31.73 (14.78)	40.00 (24.50)	44.00 (12.00)	33.33 (20.00)	39.13 (13.37)
	≥ 2016 (n=62)	36.52 (14.13)	46.00 (24.50)	50.00 (16.50)	33.33 (21.67)	40.43 (14.03)
	χ^2	7.605	13.911	17.200	2.799	11.850
P	0.055	0.003	0.001	0.424	0.008	

Content validity and construct validity studies were conducted for scale validity. It must be CVI>CVR for the scale to be statistically significant. According to the results, the CVI value of the scale is 0.68 and 0.68>0.50; the scale is statistically significant (15). A 4-factor model explaining 63.46% of the family medicine identity was obtained.

Internal consistency reliability and split-half methods were used for the scale reliability. The internal consistency reliability, Cronbach's alpha value, was calculated at a high level of reliability. Reliability was examined by calculating the Spearman-Brown and Guttman coefficients to divide the test in half. If these coefficients are close to 1, the scale is the most reliable (22).

When the relationship between the overall scale and its sub-dimensions was examined, patient-

physician communication, professional satisfaction, the extensity of the study field, the comprehensive approach, and the biopsychosocial approach, which are the sub-dimensions that we think define family medicine identity, resulted as factors integrated with identity (p<0.05). It was determined that there was a strong, linear, and significant relationship between the sub-dimensions defined in the scale (p<0.001). It was determined that a change in one sub-dimension would affect the other sub-dimensions and thus the professional identity. The most substantial relationship was found between patient-physician communication and family medicine identity, as it should be. Patient-physician communication is one of the essential elements of the Family Medicine discipline (4,14).

The strongest relationship is between patient-physician communication, working area width, and

comprehensive approach in the sub-dimensions of the scale. Patient-physician communication is one of the essential elements of the Family Medicine discipline. The extensivity of the study field and the comprehensive approach factor are developed under the guidance of the core competencies of family medicine, considering the practices in the field. When a physician is assertive about patient-physician communication, physicians will feel competent about the scope of work and comprehensive approach. So, the identity of family medicine will also be positively affected indirectly.

The lowest correlation among the sub-dimensions of the scale was found between the extensivity of the study field and the comprehensive approach factor and the biopsychosocial approach factor. The lower strength of the relationship means that when a problem occurs in one of these fields, the other factor will be affected relatively less.

Evaluation of Scale Scores

There was no significant difference between the male and female groups in the overall scores of the scale ($p=0.380$). It was seen that female physicians experienced more professional satisfaction in family medicine than male physicians. The number of women in the specialist and resident groups was higher than in men, except for the academic group. So, it can be said that female physicians prefer to work in family medicine.

It was observed that female physicians interiorized the extensivity of the study field and comprehensive approach, which is a feature of the family medicine discipline, more than male physicians.

The higher median scores of the single group compared to the married group can be explained that married people have more responsibilities and duties except for their work. So, they may be distracted in their professional development and devote their spare time to their families rather than professional development. On the other hand, single physicians have fewer responsibilities and workloads than married ones, so they have more free time and can participate in activities that contribute to their professional development. This situation provides an advantage for single physicians and strengthens their professional

identity by supporting out-of-hours activities.

It was determined that the median score of the academicians group was significantly lower than the resident and specialist groups. It was observed that the family medicine identity of the academicians was relatively less developed. However, the specialists and residents trained by the same academicians had a developed family medicine identity. The result was surprising for us. We do not doubt the professional identity qualifications of our teachers, who have trained and are still training many experts and who are our guides in the residency program. If our academicians did not have the necessary qualifications, it would be impossible for the specialists and residents to get these results. It can be explained by the absence of specialists or academicians with family medicine qualifications to train residents in many training hospitals when our academicians were residents.

The median scores of the group with no children were significantly higher than the other three groups. The married group's increased duties and responsibilities compared to a single group were considered. The majority of the group with no children consists of people who are also single, and this confirms our conclusion in the marital status comparison. Married physicians in the group without children have more time and opportunities for professional development as they have more minor duties and responsibilities than those with children. It can be explained that the family medicine identity has developed in physicians who do not have children compared to the group with children.

The comparison made according to the working year showed that the results were in the opposite direction of the general expectation. This result is pleasing to the family medicine community. Contrary to expectations, it was determined that the family medicine identity was developed in less experienced physicians. Working in different fields for extended periods and learning different disciplines can occur identity confusion in physicians. On the other hand, some physicians may have moved away from their profession by participating in administrative affairs. This situation may hinder adopting the family medicine

identity; working for a shorter time before the residency positively affects the family medicine identity. Another theory is that as people's working time with long working hours increases, family medicine identity may be negatively affected in people who cannot meet their professional expectations due to changing health policies. Physicians, who are more enthusiastic at the beginning of their professional life, may move away from the profession in the future due to the problems they experience in their business life; therefore, it can affect their professional identity negatively.

Limitations

The answers given to the questions asked in our study may be affected by the state perceptions of the individuals. The fact that no measurements were made regarding the state perceptions of the participants can be considered as a limitation of our study. Furthermore, since there is no other Family Medicine Identity Scale that is accepted as valid and reliable in Turkey, this study could not be conducted as "Validity Based on a Criterion/Criteria Validity". Since there is no similar measurement result in terms of "external construct validity", an examination could not be carried out. Exploratory factor analysis was performed in terms of "internal validity".

Conclusion

Positive results were obtained from the validity and reliability analyses of the "Family Medicine Identity Scale" developed by us. Our scale was finalized, consisting of 46 questions and 4 sub-dimensions. Under the identity of family medicine, patient-physician

communication, professional satisfaction, the extensivity of the study field, and comprehensive approach, biopsychosocial approach dimensions are defined. The scale explained 63.03% of the total variance in its final form, and Cronbach's alpha value was calculated as 0.953.

We believe that the residents' professional development can be supported with the help of necessary curriculum arrangements or various collaborations, if necessary, by following the professional identity development of the residents during the residency training program with the help of a scale. We think that physicians who complete their professional development will be more beneficial to society. Thus, both the person providing the service and the person receiving the service will be satisfied, contributing to social peace.

With this scale, the professional development of residents in training hospitals will be followed, and physicians with a professional identity and belonging to the family medicine community will be trained.

Acknowledgement

The authors would like to thank Prof. Selahattin Gelbal for his constructive suggestions. "Developing a Family Medicine Identity Scale" at the 14th Family Medicine Research Days held in Istanbul between 11-13 April 2019. For the question pool created at the next stage, specialist opinion was obtained from people who have received family medicine specialization training and are actively working as academics or specialists in the field of Family Medicine.

References

1. Cambridge Dictionary [Internet]. Professionalism [cited 2019 Aug 3]. Available from: <https://dictionary.cambridge.org/dictionary/english/professionalism>
2. Fitzgerald A. Professional identity: a concept analysis. *Nurs Forum* 2020;55(3):447-72. doi:10.1111/nuf.12450.
3. Arnold L. Assessing professional behaviour: yesterday, today and tomorrow. *Acad Med* 2002;77(6):502-15.
4. Carney PA, Waller E, Eiff MP, Saultz JW, Jones S, Fogarty CT, et al. Measuring family physician identity: the development of a new instrument. *Fam Med* 2013;45(10):708-18.
5. Baykan Z, Çetinkaya F, Naçar M, Kaya A, Işıldak Ü. Burnout among family physicians and its associated factors. *Turkiye Aile Hekim Derg* 2014;18(3):122-33. doi:10.15511/tahd.14.03122.

6. Keskin R. Vocational Belonging Scale: a study of developing a valid and reliable scale. *J Int Soc Res* 2016;9(43):2580. doi:10.17719/jisr.20164317818.
7. Zhang W, Meng H, Yang S, Liu D. The influence of professional identity, job satisfaction, and work engagement on turnover intention among township health inspectors in China. *Int J Environ Res Public Health* 2018;15(5):988. doi:10.3390/ijerph15050988.
8. Hwang JI, Lou F, Han SS, Cao F, Kim WO, Li P. Professionalism: the major factor influencing job satisfaction among Korean and Chinese nurses. *Int Nurs Rev* 2009;56(3):313-8. doi:10.1111/j.1466-7657.2009.00710.x.
9. Turgu S, Öztora S, Çaylan A, Dağdeviren HN. Patient satisfaction in primary care and the relationship with physicians' job satisfaction. *Türkiye Aile Hekim Derg* 2018;22(2):78-91. doi:10.15511/tahd.18.00278.
10. Grose NP, Goodrich TJ, Czyzewski D. The development of professional identity in the family practice resident. *J Med Educ* 1983;58:489-91. doi:10.1037/0033-3204.30.4.685.
11. Beaulieu MD, Rioux M, Rocher G, Samson L, Boucher L. Family practice: professional identity in transition. A case study of family medicine in Canada. *Soc Sci Med* 2008;67(7):1153-63. doi:10.1016/j.socscimed.2008.06.019.
12. López-Roig S, Pastor MÁ, Rodríguez C. The reputation and professional identity of family medicine practice according to medical students: a Spanish case study. *Atención Primaria* 2010;42(12):591-601. doi:10.1016/j.aprim.2010.05.005.
13. Özdemir Z. Development of a likert type attitude scale in health sciences. *HUHEMFAD-JOHUFON* 2018;5(1):60-8. doi.org/10.31125/hunhemsire.431132.
14. Tezbaşaran AA. Likert tipi ölçek hazırlama kılavuzu. Ankara: Türk Psikologlar Derneği; 1997.
15. Lawshe CH. A quantitative approach to content validity. *Pers Psychol* 1975;28(4):563-75. doi:10.1111/j.1744-6570.1975.tb01393.
16. Yurdugül H. Ölçek geliştirme çalışmalarında kapsam geçerliliği için kapsam geçerlilik indekslerinin kullanılması. XIV. Ulusal Eğitim Bilimleri Kongresi 2005:1-6.
17. Ayre C, Scally AJ. Critical values for Lawshe's content validity ratio: Revisiting the original methods of calculation. *Meas Eval Couns Dev* 2014;47(1):79-86. doi:10.1177/0748175613513808.
18. Karakoç F, Dönmez L. Ölçek geliştirme çalışmalarında temel ilkeler basic principles of scale development. *Tıp Eğitimi Dünyası* 2014;40:39-48. doi: 10.25282/te.228738.
19. Alpar R. Spor, sağlık ve eğitim bilimlerinden örneklerle uygulamalı istatistik ve geçerlik-güvenirlik. 5. Baskı. Detay Yayıncılık; 2018. 672 p.
20. Stein HF. Family medicine's identity: Being generalists in a specialist culture? *Ann Fam Med* 2006;4(5):455-9. doi:10.1370/afm.556.
21. Yılmaz A. Burnout, job satisfaction, and anxiety-depression among family physicians: A cross-sectional study. *J Fam Med Prim Care* 2018;7(5):952-6. doi:10.4103/jfmpc.jfmpc_59_18.
22. Alpar R. Uygulamalı çok değişkenli istatistiksel yöntemler. 5. Baskı. Detay Yayıncılık; 2017. 840 p.

Appendix. Original version of Family Medicine Identity Scale (Aile Hekimliği Kimliği Ölçeği) in Turkish

	Tamamen Katılıyorum	Katılıyorum	Kısmen Katılıyorum	Katılmıyorum	Hiç Katılmıyorum
1. Aile hekimi olmak kendime zaman ayırmamı sağlar.					
2. Aile hekimliğini seçerek doğru bir karar verdiğimi düşünüyorum.					
3. Aile hekimliğinin karakterime uygun bir uzmanlık dalı olduğunu düşünüyorum.					
4. Hastaların gözünde yeterli saygıyı gördüğümü düşünüyorum.					
5. Hastaların ailelerini tanımak ve yaşamlarına dahil olmak hasta-hekim ilişkisini güçlendirir.					
6. Bana bağlı bir nüfus olduğundan sürekli aynı hastaları görmek, hasta ve hekim arasında yakın bir ilişki oluşturur.					
7. Hastayı tanıdığım için hastalığı değil hastayı tedavi etmek beni diğer branş hekimlerinden ayırır.					
8. Hastalarım/danışanlarım için sadece ilaç yazacak veya rapor verecek bir doktor değilim.					
9. Hastalarım/danışanlarım için sağlıklı yaşam konusunda bilgi alabilecekleri bir kaynağım.					
10. Aile hekimliği uygulamaları, hastalarımın yeterince vakit ayırabilmemi sağlar.					
11. Kendi görev bölgemde yeni bir hastalık görüldüğünde durumu yönetmek günlük pratiğimin bir parçasıdır.					
12. Hastalarımın sağlık problemlerini danışabileceği ilk kişi olmak beni mutlu eder.					
13. Kronik hastalıkları olan danışanlarıma hastalık ve tedavi konusunda eğitim vermek işimin bir parçasıdır.					
14. Hastalarımın sağlıklarını korumaları konusunda bilgi verip, onları eğitir ve gereğinde yönlendiririm					
15. Hastalarımın bebeklerden yaşlılara kadar geniş bir yaş aralığında olması sorun yaratmaz.					
16. Kronik problemleri olan hastalarım, akut problemleri ile başvurduğunda sağlık geçmişlerini biliyor olmam işimi kolaylaştırır.					
17. Bir hekim olarak kendimi en iyi ifade edebileceğim alanın aile hekimliği olduğunu düşünüyorum.					
18. Kronik hastalıkların yönetiminde hastayı karar verme sürecine dahil ederim.					
19. Hastalarımı erken teşhisle tedavisi mümkün olan hastalıklar için tarama programlarına yönlendirmek onlara karşı sorumluluğumdur.					
20. Farklı yaştaki danışanlarım için periyodik sağlık taramaları yapmak, topluma karşı sorumluluğumdur.					
21. Aile hekimliği pratiğinin tıbbın birçok alanını kapsayıp geniş bir bakış açısı olması benim için sıkıntı oluşturur.					
22. Danışanlarımın nonspesifik şikayetlerle başvurduğunda hastalıkların görülme sıklığına göre karar veririm.					
23. Hastalarım için kolay ulaşılabilir olmam hasta ve hekim ilişkisini olumlu etkiler.					
24. Danışanlarım somatik bir şikayetle başvurduğunda altta yatan psikolojik bir problem olasılığını değerlendiririm.					
25. Mobil sağlık hizmeti sunumu, toplum sağlığına yönelik sorumluluğumdur.					
26. Bir aile hekimi olarak gerektiğinde hastalara küçük cerrahi müdahalelerde bulunabilirim.					
27. Hastalarımın her türlü sağlık problemlerinde ilk olarak bana başvurmayı tercih ederler.					
28. Hekimliğin tüm alanlarında çalışabilme imkanı sağlaması aile hekimliğinin sevdiğim bir yönüdür.					
29. Yaptığım uygulamalarla ilgili akut bir problem ortaya çıktığında olayı kontrol altına alarak uygun koşullarda sevk edecek kapasiteye sahip olduğumu düşünüyorum.					
30. Danışanlarıma/hastalarımın tıbbın ve hayatın her alanında yardımcı olarak yol gösteririm.					

31. Bir aile hekimi olarak kendimi sürekli geliştirmek ve tıp uygulamalarındaki gelişmeleri yakından takip etmek topluma karşı sorumluluğumdur.					
32. Aile hekimliği benim için bir yaşam biçimidir					
33. Günlük pratiğimde karşılaştığım akut problemleri çözebilecek donanıma sahip olduğumu düşünüyorum.					
34. Toplumsal sorunların bireye yansması durumunda hastalarımı her türlü destek sunmak uygulamamın bir parçasıdır.					
35. Aile hekimliğinin insan odaklı yaklaşımı, mesleğimin sevdiğim bir yönüdür.					
36. Dezavantajlı grupların sağlık hizmeti sunumundan eşit olarak yararlanmasını sağlamak topluma karşı sorumluluğumdur.					
37. Birçok klinik konuda yetkin olmam aile hekimliği uygulamamda mesleki tatmin sağlar.					
38. Aile hekimliği kimliğinin oluşması için uzmanlık eğitimi alınması gerektiğini düşünüyorum.					
39. Aile hekimi olarak toplumda rol model ve toplumsal lider olduğumu düşünüyorum.					
40. Aile hekimi olarak yaşı, cinsiyeti ve kökeni ne olursa olsun bireyin herhangi bir sağlık sorunu için hazır olmak işimin bir parçasıdır.					
41. Aile hekimi olarak hastamı spesifik uzmanlık gerektiren bir tedavi için sevk etmiş olsam da hastanın mevcut hastalığının takibini sağlarım.					
42. Aile hekimi olarak hastalarla her görüşmem sağlığın korunması ve geliştirilmesi için bir fırsattır.					
43. Aile hekimi olarak tanısal laboratuvar incelemelerini kullanmak, reçete yazmak ve sevkleri kontrol ederek toplumun yararı için kaynakların yönetimini yapmak topluma karşı sorumluluğumdur.					
44. Aile hekimlerinin yürüttüğü birinci basamak sağlık uygulamalarının toplum sağlığına yaptığı katkıların başka bir uzmanlık alanı tarafından sağlanamayacağını düşünüyorum					
45. Hastalarımı tanıyor olmam, başvurduklarında onların yaşam şartlarını ve imkanlarını göz önüne alarak değerlendirmemi sağlar.					
46. Aile hekimliği kimliğim oluştuğu mesleki açıdan tatmin olduğumu hissediyorum.					