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Evaluation of Family Medicine by the Society in the COVID-19 Period: Cross-Sectional Research

COVID-19 Döneminde Aile Hekimliklerinin Toplum Tarafından Değerlendirilmesi: Kesitsel Araştırma

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ABSTRACT Objective: This study aims to determine how society evaluates family medicine during the coronavirus disease-2019 (COVID-19) pandemic process. **Material and Methods:** Sociodemographic information form and European Patients Evaluate General/Family Practice (EUROPEP) Physician Evaluation Scale adapted to Turkish by Aktürk et al. were used as data collection tools in the study. The study includes individuals who applied to family medicine in the last 12 months in Samsun between 01.04.2021 and 06.06.2021. In the study, a power analysis was performed, and the number of samples was determined as 344, and 351 participants were reached by snowball sampling method. The data obtained in the study were analyzed with the SPSS Statics 23 Package program. **Results:** According to the EUROPEP Physician Evaluation Scale, the average of the answers given to the statements is between 3.56-4.03. As a result of the analysis carried out in the study, a statistically significant difference was found between the gender (p=0.029<0.05), income (p=0.046<0.05), and age (p=0.000<0.05) variables of individuals and their positive evaluation of family physicians. There was no statistically significant difference between the variables of marital status (p=0.166>0.05), education level (p=0.391>0.05), occupation (p=0.314>0.05) and place of residence (p=0.751>0.05) and positive evaluation of family physicians. **Conclusion:** As a result of the study, it has been concluded that individuals have a high level of positive evaluation of family physicians during the COVID-19 pandemic process and that measures have been taken against the COVID-19 epidemic in family health centers.

Keywords: COVID-19; disease outbreaks; family medicine; patient satisfaction

ÖZET Amaç: Çalışma, koronavirüs hastalığı-2019 [coronavirus disease-2019 (COVID-19)] pandemi sürecinde toplumun aile hekimliğini nasıl değerlendirdiğini belirlemeyi amaçlamaktadır. **Gereç ve Yöntemler:** Çalışmada veri toplama aracı olarak, sosyodemografik bilgi formu ve Aktürk ve ark. tarafından Türkçeye uyarlanan "European Patients Evaluate General/Family Practice (EUROPEP) Hekim Değerlendirme Ölçeği" kullanılmıştır. Çalışma, Samsun'da 01.04.2021-06.06.2021 tarihleri arasında son 12 ayda aile hekimliğine başvuran bireyleri kapsamaktadır. Çalışmada power analizi yapılarak örneklem sayısı 344 olarak belirlenmiş ve kartopu örnekleme yöntemi ile 351 katılımcıya ulaşılmıştır. Çalışmada elde edilen veriler SPSS Statics 23 Paket programı ile analiz edilmiştir. **Bulgular:** EUROPEP Hekim Değerlendirme Ölçeğine göre ifadelere verilen cevapların ortalaması 3.56-4.03 arasındadır. Çalışmada gerçekleştirilen analizler sonucunda bireylerin cinsiyet (p=0,029<0,05), gelir (p=0,046<0,05) ve yaş (p=0,000<0,05) değişkenleri ile aile hekimlerini olumlu yönde değerlendirmeleri arasında istatistiksel olarak anlamlı farklılık tespit edilmiştir. Medeni durum (p=0,166>0,05), eğitim durumu (p=0,391>0,05), meslek (p=0,314>0,05) ve ikamet yeri (p=0,751>0,05) değişkenleri ile aile hekimlerini olumlu yönde değerlendirmeleri arasında ise istatistiksel olarak anlamlı farklılık bulunamamıştır. **Sonuç:** Çalışma sonucunda, COVID-19 pandemi sürecinde bireylerin aile hekimlerini olumlu yönde değerlendirmelerinin yüksek düzeyde olduğu ve aile sağlığı merkezlerinde COVID-19 salgınına yönelik tedbirlerin alındığı sonucuna ulaşılmıştır.

Anahtar Kelimeler: COVID-19; hastalık salgınları; aile hekimliği; hasta memnuniyeti

In December 2019, a new coronavirus disease emerged in Wuhan, China's province.[1,2] This coronavirus disease, which affected the world and was declared an internationally alarming public health emergency by the World Health Organization (WHO) on January 30, 2020, was named coronavirus disease-2019 (COVID-19).[3,4] Within the scope of the fight against COVID-19, which has caused so many

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deaths globally and whose effect continues, various measures have been taken in Türkiye surgeries have to be postponed, and it has been suggested that receive service from family health centers (FHC) of non-emergency patients.[5] FHCs are primary health care institutions that serve all individuals who have a chronic illness or apply for various health care needs, regardless of age, gender, and race.[6] The best management of the pandemic in FHCs is also critical in the course of transmission of the disease. To manage the pandemic in the best way in these centers, it is recommended to create FHC action plans and triage at FHC entrances.[5]

In March 2020, WHO announced that it would minimize the transmission of COVID-19 in the community by social distancing, frequent hand washing, and reducing the population density in the health care centers to prevent COVID-19.[7] Having the necessary equipment for hygiene in FHCs and paying due attention to the distance rule inside can significantly affect the course of the epidemic. If family physicians fulfill their duties to take precautions against the outbreak within the institution, it will strengthen the fight against the COVID-19 pandemic. Health systems that do not take the necessary measures and lose their power against the epidemic can aggravate the epidemic's impact and limit the capacity to carry out adequate surveillance and control.[8]

The way family physicians behave towards their patients in a friendly, approachable, reliable, nervous, hasty, or different mood can have positive or negative consequences, especially on patients who are bored with the psychological state of the pandemic. The psychological burden that aggravates the COVID-19 pandemic and the negative behavior of family physicians increase dissatisfaction with health services and sometimes lead to termination of treatments.[9]

The aim of the study is the evaluation of FHCs and family medicine by society. The study is of great importance as the course of the epidemic, and the post-epidemic FHCs will play a key role in improving society's physical and mental health. The limited number of studies in the literature in which the community evaluation of FHCs during the pandemic increases the study's importance.

MATERIAL AND METHODS

To carry out the study, necessary permissions were obtained from Ondokuz Mayıs University Social and Human Sciences Ethics Committee (date: March 26, 2021, no: 2021/275), Scientific Research Studies Commission on COVID-19, Ministry of Health Scientific Research Platform (application form: 2021-02-27T17_17_47) and Samsun Provincial Health Provincial Health Directorate (date: April 30, 2021 and decision no: 49). The study was conducted by the principles of the Declaration of Helsinki. The study was carried out with volunteer individuals.

A questionnaire method was used to obtain data in the study. The questionnaire used in the study consists of two parts: socio-demographic information and the European Patients Evaluate General/Family Practice (EUROPEP) Physician Evaluation Scale. The validity and reliability study of the Turkish version of the EUROPEP Scale was conducted on 1,160 people by Aktürk et al.[10] The Cronbach alpha's value of the scale was calculated as 0.98. In this scale, there are 23 statements in which individuals evaluate the family physicians they receive service from.

The research was carried out on individuals who applied to family medicine in the last 12 months in Samsun between 01.04.2021 and 06.06.2021. In the Health Statistics Yearbook 2018 Report published by the Ministry of Health of the Republic of Türkiye, the average rate of applications to primary care in Türkiye is 34%. In Samsun, the number of primary care applications is 5,142,850 in total, and the average number of applications per person to primary care is 11.2. From this point of view, approximately 459,183 people applied to primary care in Samsun. This resulting number was divided by Samsun population (1,356,079), and thus the average of applications to primary care in Samsun was determined as 34%. As a result of all these data, a power analysis was performed, and the sample number of the study was defined as 344. In the study, 351 participants were reached, and it was determined that the data obtained as a result of the normality analysis showed a normal distribution.

STATISTICAL ANALYSIS

Data were analyzed with "Descriptive Statistical Analysis, Frequency Analysis, independent samples test and one-way ANOVA test" via the SPSS (IBM, USA) program. Two-way independent sample t-test and one-way analysis of variance were performed to test whether there was a difference between the sociodemographic characteristics of individuals and their positive evaluation of family physicians. First of all, the homogeneity of variance was examined to realize the assumptions of the analysis of variance. As a result of the Levene test, it was determined that there was no homogeneity of variance in the age ($p=0.011<0.05$) and occupation ($p=0.014<0.05$) characteristics of the individuals. For this reason, the Welch Test was performed on the variables.

RESULTS

Demographic characteristics of the participants are given in Table 1. According to Table 1, 59.8% of the participants were female and 40.2% were male, 38.7% of the participants are between the ages of 26-and 35. The rate of participants in the 18-25 age range is 33.6%, the rate of participants in the 41-60 age range is 15.7%, and the rate of participants in the age range of 61 and above is 12%, 58.7% of the participants are single, and 41.3% are married. When the educational status of the participants is examined, the highest education level is the undergraduate level with 56.7%. It is seen that 26.2% of the participants are in high school, 8% are in secondary school, 5.4% are graduates and 3.7% are literate. Considering the occupational group distribution, 23.9% of the participants are public employees, 17.7% are students, 16.8% are private-sector employees, 13.1% are housewives, 9.1% are tradesmen, 8.5% are unemployed and 5.7% employees. 5.1% workers, 5.1% other (retired, self-employed) group, 48.1% of the participants have an income of 0-2,825 TL, and 51.9% have an income of 2,826 TL or more. 72.9% of the participants reside in the central district, 19.1% in other districts, and 8.0% in villages (Table 1).

The answers given by the participants to the descriptive questions are shown in Table 2.

TABLE 1: Demographic characteristics of the participants.

Socio-demographical characteristics	Number (n)	Percent (%)
Gender		
Woman	210	59.8
Male	141	40.2
Age		
18-25 years old	118	33.6
26-33 years	122	34.8
34 years and older	111	31.6
Marital status		
Married	145	41.3
Single	206	58.7
Educational status		
Literate	13	3.7
Secondary education	28	8.0
High school	92	26.2
Licence	199	56.7
Graduate	19	5.4
Profession		
Public	84	23.9
Special	59	16.8
Employee	20	5.7
Small business	32	9.1
Student	62	17.7
Housewife	46	13.1
Other	18	5.1
Not working	30	8.5
Income status		
0-2,825 TL	169	48.1
2,826 TL+	182	51.9
Place of residence		
Central district	256	72.9
Other district	67	19.1
Village	28	8.0

According to Table 3, the statements were given a minimum score of 1 (Bad) and a maximum of 6 (not applicable/irrelevant). In general, the average of the answers given to the statements is between 3.5-4. This shows that the solutions are concentrated on the "Good" option. According to the table, the most positive answer is "Keeping your records and data confidential," with an average of 4.03. The most negative answer is "Waiting time in the waiting room" is the expression (Table 3).

Table 4 shows the results of the two-way independent sample t-test. According to the t-test results,

TABLE 2: Frequency distribution of answers to descriptive questions.

	Yes		No	
Expressions	**n**	**%**	**n**	**%**
Do you have a chronic illness?	39	11.1	312	88.9
Did your family physician inform you about your chronic illness during the COVID-19 period? (n=39)	21	53.8	18	46.2
Have you been informed about COVID-19 by your family physician?	133	37.9	218	62.1
Have you ever caught the COVID-19 disease?	92	26.2	259	73.8
Has your family physician contacted you during the COVID-19 period?	132	37.6	219	62.4
Were there informative documents about COVID-19 in the family health center?	288	82.1	63	17.9
Was the family health center clean and hygienic during the COVID-19 period?	325	92.6	26	7.4
Was there disinfectant or cologne at the entrance of the family health center for hand cleaning?	328	93.4	23	6.6
Has attention been paid to the implementation of the social distance rule in the waiting areas of the family health center?	295	84.0	56	16.0
Has attention been paid to the implementation of the social distance rule in the test areas in the family health center?	308	87.7	43	12.3

TABLE 3: Average scores of responses to the EUROPEP Physician Evaluation Scale.

Expressions	Number	Mean	SD
Making you feel you had time during consultations	351	3.87	1.460
Interest in your personal situation	351	3.74	1.321
Making it easy for you to tell him or her about your problems	351	3.73	1.289
Involving you in decisions about your medical care	351	3.96	1.500
Listening to you	351	3.74	1.223
Keeping your records and data confidential	351	4.03	1.196
Quick relief of your symptoms	351	3.75	1.328
Helping you to feel well so that you can perform your normal daily activities	351	3.94	1.411
Thoroughness	351	3.82	1.277
Physical examination of you	351	3.76	1.216
Offering you services for preventing diseases	351	3.71	1.295
Explaining the purpose of tests and treatments	351	3.77	1.281
Telling you what you wanted to know about your symptoms and/or illness	351	3.72	1.232
Help in dealing with emotional problems related to your health status	351	3.72	1.526
Helping you understand the importance of following his or her advice	351	3.78	1.378
Knowing what s/he had done or told you during previous contacts	351	3.59	1.405
Preparing you for what to expect from specialist or hospital care	351	3.87	1.403
The helpfulness of staff (other than the doctor)	351	3.72	1.407
Getting an appointment to suit you	351	3.80	1.228
Getting through to the practice on the phone	351	3.79	1.319
Being able to speak to the general practitioner on the telephone	351	3.80	1.502
Waiting time in the waiting room	351	3.56	1.325
Providing quick services for urgent health problems	351	3.72	1.375

EUROPEP: European Patients Evaluate General/Family Practice; SD: Standard deviation.

a statistically significant difference was found between the participants' gender ($p=0.029<0.05$) and income ($p=0.046<0.05$) and their positive evaluation of family physicians. However, there is no statistically significant difference between the marital status of the participants ($p=0.166>0.05$) and the positive evaluation of their family physicians (Table 4).

TABLE 4: Independent sample t-test results regarding the positive evaluation of family physicians by the participants.

Socio-demographic characteristics		Number	Mean	SD	F	p value
Gender	Female	210	3.67	0.94	8.857	**0.029**
	Male	141	3.92	1.08		
Marial status	Married	145	3.86	0.90	8.087	0.166
	Single	206	3.71	1.08		
Income	0-2,825 TL	169	3.60	1.01	1.224	**0.046**
	2,826 TL and over	182	3.89	0.99		

p<0.05; SD: Standard deviation.

Table 5 shows the results of the one-way analysis of variance. According to the results of one-way analysis of variance, there is no statistically significant difference between individuals' educational status (p=0.391>0.05) and place of residence (p=0.751>0.05) and their positive evaluation of family physicians (Table 5).

Table 6 shows the results of the Welch Test. According to Welch Test results, a statistically significant difference was found between age (p=0.000<0.05) and satisfaction with family medicine scale. Post hoc (Tamhane's T2) test was performed to determine which age groups the difference was. According to the results of the analysis, a difference was found between the positive evaluations of family physicians between 18-25 and 26-33 age groups (p=0.000<0.05) and 26-33 and 34 and over age groups (p=0.031<0.05). There was no statistically significant difference between individuals' profession (p=0.314>0.05) and positive evaluation of family physicians (Table 6).

DISCUSSION

Family medicine plays a critical role in providing health services in Türkiye. Family medicine, which is the first place that patients apply to solve their health problems and become healthier, has an important position in the fight against the COVID-19 pandemic. The COVID-19 pandemic, which has brought significant changes in the world we live in, has led to various transformations in the provision of health services. Along with these changes and modifications, the COVID-19 pandemic has also changed patients' demands, expectations, and satisfaction from healthcare services. This study aimed to evaluate family medicine during the COVID-19 pandemic process. The answers given by the participants to the statements in the demographic questions part of the study are as follows:

Of the participants, 37% stated that they were informed about the COVID-19 pandemic; 37.6% of them stated that their family doctor communicated with them during the COVID-19 period; 82% of them stated that there are informative documents about COVID-19 in the FHC; 92.6% of them found the FHC clean and hygienic during the COVID-19 period; 93.4% stated that there was disinfectant or cologne at the entrance of the FHC. The reason why there are participants who answered no to this question may be because individuals have not seen or felt the need to use hygiene materials such as disinfectant or cologne at the entrance of family medicine. Eighty four percent of them stated that the social distance rule is applied in the waiting areas in the FHC; 87.7% of them stated that they paid attention to the implementation of the social distance rule in the test areas in the FHC. Due to medical diagnosis and patient care services, social distancing may not always be maintained in health services. The answers given to the questions show that measures were taken against the epidemic in family medicine during the COVID-19 pandemic process. Taking such measures in family medicine, which is the first point of application in the provision of health services, provides great benefits in the fight against the epidemic. Family medicine plays an active role in the fight against COVID-19 in Türkiye. Therefore, the opinions of the society towards family physicians are important. Because family medicine occupies an important position in health services. These results, which emerged as a result of

TABLE 5: One-way analysis of variance results regarding the positive evaluation of family physicians by the participants.

Socio-demographic characteristics		Number	Mean	SD	F	p value
Educational status	Literate	13	3.99	0.68	1.031	0.391
	Secondary education	28	3.74	1.06		
	High school	92	3.86	0.96		
	License	199	3.76	1.03		
	Graduate	19	3.38	1.10		
Residence	Central district	256	3.80	1.05	0.287	0.751
	Other district	67	3.73	0.88		
	Village	28	3.67	0.97		

SD: Standard deviation.

TABLE 6: Welch test results regarding the positive evaluation of family physicians by the participants.

Socio-demographic characteristics		Number	Mean	SD	p value
Age	18-25 years	118	3.47	1.12	0.001
	26-33 years	122	4.07	0.93	
	34 years and over	111	3.77	0.86	
Profession	Public	84	3.87	1.01	0.314
	Special	59	3.84	1.05	
	Worker	20	3.53	0.86	
	Tradesmen	32	3.84	1.20	
	Student	62	3.48	1.10	
	Housewife	46	3.81	0.78	
	Other	18	4.04	1.05	
	Note working	30	3.84	0.81	

*p<0.05; SD: Standard deviation.

the study, show that family physicians, who are in an important position in health services during the COVID-19 process, are also positively evaluated by the society during the pandemic process.

A statistically significant difference was found between the gender of the participants and their positive evaluations of family physicians. In parallel with this result, a significant difference was found between family medicine satisfaction and gender in the study conducted by Bostan and Havvatoğlu.[11] In the survey conducted by Kızıl et al., no significant difference was found between gender and patient satisfaction.[12] Sönmez et al. concluded in their study that gender does not affect patient satisfaction.[13] In the study conducted by Ofei-Dodoo, no significant relationship was found between the gender status of the participants and their satisfaction status.[14]

In the study, a statistically significant difference was found between the monthly income status of the participants and their positive approach to family physicians. Individuals with high monthly income status have a higher positive evaluation level of family physicians than individuals with low monthly income status. In the study of Turgu et al. on patient satisfaction in primary care, a significant relationship was found between the income status of the participants and patient satisfaction.[15] In the study conducted by Ardahan et al., no significant difference was found between economic status and satisfaction levels.[16] In the study conducted by Al-Sakkak et al., no difference was found between the satisfaction of the patients and their income status.[17]

In the study, no statistically significant difference was found between the marital status of the par-

ticipants and their positive approach to family physicians. Kırılmaz and Öztürk reached a similar conclusion in their study and conclusion that there is no relationship between marital status and satisfaction.[18] In the study conducted by Margolis et al., it was determined that there was no relationship between satisfaction and marital status of individuals.[19] In the study of Al-Sakkak et al., no difference was found between the satisfaction of patients and their marital status.[17]

In the study, it was concluded that there was no statistically significant difference between the educational status and place of residence of the participants and their positive approach to family physicians. In the study conducted by Ofei-Dodoo, there is no significant relationship between the educational status of the participants and their satisfaction.[14] In the study conducted by Margolis et al., it was determined that there was no relationship between satisfaction and education status of individuals.[19] In another study, it was concluded that as the education level increases, the satisfaction level of the people with the family physician decreases.[20] In the study of Yaya et al., in which satisfaction with primary health care services was compared according to the place of residence, the satisfaction level in urban areas was higher than in rural areas.[21]

In the study, a statistically significant difference was found between age and positive approaches to family physicians. Although there was no significant difference between age groups in the study of Durmuş et al., satisfaction with family medicine practice increases with age, and the highest level of satisfaction is 83.7% in the ≥65 age group.[20] In the study conducted by Margolis et al., it was determined that there was no relationship between satisfaction and age.[19]

In the study, no statistically significant difference was found between individuals' professions and their positive approaches to family physicians. In the study conducted by Al-Sakkak et al., no difference was found between the satisfaction of the patients and their occupational status.[17] Again, in the study of Kırılmaz and Öztürk, a similar result was reached, and no significant difference was found between the occupations of the participants and their satisfaction levels.[18]

The limitation of the study is the evaluation of family medicine only in Samsun province. This study is limited to data obtained from men and women over the age of 18.

CONCLUSION

It is thought that the reason for the differences in the results of the studies carried out in this area is due to the socio-economic levels of the countries, the cultural differences of the societies, and the studies conducted before and after COVID-19. Since this study evaluates family medicine in the period of COVID-19, it is thought that it will be an example for future studies on this subject.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

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

Idea/Concept: *Elif Dikmetaş Yardan;* ***Design:*** *Elif Dikmetaş Yardan, Hasan Fehmi Demirci, Mustafa Samancı;* ***Control/Supervision:*** *Elif Dikmetaş Yardan;* ***Data Collection and/or Processing:*** *Elif Dikmetaş Yardan, Hasan Fehmi Demirci, Mustafa Samancı;* ***Analysis and/or Interpretation:*** *Elif Dikmetaş Yardan, Hasan Fehmi Demirci, Mustafa Samancı;* ***Literature Review:*** *Elif Dikmetaş Yardan, Hasan Fehmi Demirci, Mustafa Samancı;* ***Writing the Article:*** *Elif Dikmetaş Yardan, Hasan Fehmi Demirci, Mustafa Samancı;* ***Critical Review:*** *Elif Dikmetaş Yardan, Hasan Fehmi Demirci, Mustafa Samancı;* ***References and Fundings:****Elif Dikmetaş Yardan, Hasan Fehmi Demirci, Mustafa Samancı;* ***Materials:*** *Elif Dikmetaş Yardan, Hasan Fehmi Demirci, Mustafa Samancı.*

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