Cerrahpaşa Med J 2022; 46(2): 91-96 ORIGINAL ARTICLE

Insufficient Knowledge About Primary Health Care Services: Is It the Reason for Not Applying to Family Medicine?

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Cite this article as: Bayraktar M, Mutlu M. Insufficient knowledge about primary health care services: Is it the reason for not applying to family medicine?. *Cerrahpaşa Med J.* 2022;46(2):91-96.

Abstract

Objective: The annual number of applications to family health centers in Turkey, which is 3.3, does not meet the Ministry of Health's target of 4 applications per capita. Due to the necessity of examining the reasons why family medicine is not preferred, this study aimed to investigate the awareness of patients about the health services provided by family health centers.

Methods: A cross-sectional, descriptive study was conducted on patients aged 18-75 years who applied to the family health center. They were asked to answer a 3-point Likert scale questionnaire consisting of 24 questions about the health services offered by family health centers. The relationship between the knowledge levels, demographic characteristics, and application rates of the participants was investigated.

Results: A total of 165 responses were examined and the mean age of the participants was 35.8 ± 12.8 years, 47.3% were women, 61.8% were married, 59.4% had children, and 23.6% had chronic diseases. The rate of correct answers to the questionnaire was 50.9 ± 23.8. There was a statistically significant association between knowledge levels and women ($P < .001$), the participants who had children ($P = .025$), those with chronic diseases ($P = .005$), and those who applied to family health centers more frequently ($P = .019$). There were no significant associations in terms of previous applications, age, and marital status.

Conclusion: The levels of knowledge and awareness about the healthcare services offered by family health centers were considered to be low. This lack of information may be affecting the application rates of patients. It could be improved through effective activities aimed at disseminating information about and raising awareness of family health centers.

Keywords: Primary care, family practice, healthcare services, awareness

Introduction

Family physicians are at the forefront of healthcare system practices as the "gatekeeper".[1] As family health centers (FHCs) are the patients' first point of contact with the healthcare system, family physicians provide appropriate guidance on the appropriate use of medical services to patients. It has been shown that the family physician in the role of "gatekeeper" has the ability to reduce some of the costs of the healthcare system[2] and can even contribute to lower rates of hospitalizations at the end of life.[3] Studies also show that many patients attending the emergency department can be managed in family medicine.[4] In this context, there is a need to investigate family medicine application rates and patient preferences, to develop a family medicine practice that will better respond to the needs of patients and ultimately improve healthcare systems and costs.

Family medicine was implemented for the first time in Turkey in 2005, and at the end of 2010, FHCs are provided in all provinces across the country.[5] Since strengthening family practice will contribute to the maintenance of success in the management of non-communicable diseases and to ensure efficiency in the management of communicable diseases, the Ministry of Health of Turkey has determined a strategic priority to increase the rate of primary care use by strengthening primary care services. The strategic plan of the Ministry of Health for 2019-2023 includes the objectives of increasing the number of family medicine applications per person to 4.[6] However, according to the data of the *Health Statistics Yearbook* of the Ministry of Health, the average number of annual applications to health institutions per person was 9.8 in 2019, while only 3.3 (34%) of these applications were to family physicians.[7] It is noteworthy that the rates of referral to family medicine were lower than expected, so the reasons for family medicine being less preferred need to be determined.

In a study investigating the extent to which patients use family medicine practices, it was found that only 16.5% of the study participants applied to their family physicians, and 73.5% mostly preferred secondary or tertiary health institutions for health problems that could otherwise have been solved at primary care facilities at a rate of 85%-90%.[8] In another study in 2018, only 54.1% of the participants were satisfied with the current family medicine system, and 78.4% of the dissatisfied participants found the conditions at the FHCs insufficient.[9] One of the possible reasons for these low referral rates and dissatisfaction is the low level of knowledge of patients about the services offered by FHCs.

The number of studies investigating the knowledge level and awareness of individuals applying to FHCs about the services provided at FHCs is limited. A 2013 study that examined the levels of awareness of the population about the healthcare services available in Turkey found that only 50.1% of individuals stated that they had sufficient knowledge of family medicine practices.[10]

Received: January 24, 2022 **Accepted:** April 28, 2022 **Available Online Date:** July 15, 2022
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DOI: 10.5152/cjm.2022.22008

It is reasonable to postulate that having knowledge about the services provided by FHCs would increase patients' utilization of these services, their satisfaction with the services, and family medicine application rates.

The aim of this study was therefore to investigate the knowledge and awareness levels of individuals who applied to an FHC in Erzurum about the healthcare services offered in family medicine practices.

Methods

Study Design

This was a descriptive, cross-sectional, single-center study.

Ethical Approval

This study was approved by the chairmanship of the Atatürk University, Faculty of Medicine, Clinical Research Ethics Committee of our university (approval number: February 27, 2020/27). During the course of the research, the rules of Good Clinical Practice of the Declaration of Helsinki were followed.

Setting

This study was conducted in two family practice units at an education FHC in Erzurum province in northeastern Turkey. In the Northeastern Anatolia region, which includes Erzurum and the surrounding provinces, the lowest applications (<30%) are made to primary healthcare institutions per person annually, yet it has the highest number of family physicians at 1 family physician per 2984 people.[11] It would therefore be meaningful to investigate patients' awareness of the healthcare services provided by a local FHC to determine the possible reasons for the low number of applicants in this region. As a result of this research, it will be possible to develop the opportunities and conditions necessary for people to obtain sufficient benefit from FHCs.

Participants

Eligible participants consisted of male and female patients aged 18-75 years who applied to 2 family medicine units within 1 month. Patients in the pediatric age group and emergency cases and patients who did not participate voluntarily were excluded.

Questionnaire

All the participants included in the study were asked to fill out the questionnaire, which queried their knowledge of the services offered at the FHC. We prepared the study survey questions in line with the duties and responsibilities of family physicians and family health staff stated in the Turkish Family Medicine Practice Regulation, 2013.[12] The duties and responsibilities included in this regulation and within the scope of the healthcare services provided to citizens thus constituted the content of the survey questions.

A total of 24 questions were included in the questionnaire. We used a 3-point Likert scale that allowed the answers "Yes," "No," or "I don't know" to questions regarding vaccinations, pregnancy and puerperal monitoring, infant and child monitoring, health counseling, preventive medicine, cancer screening, nursing services, and primary care diagnostic and treatment practices. Three questions (22, 23, and 24) were designed as reverse coded questions. Participants are expected to know that all health services asked in the questionnaire are currently offered and available at the FHC and to answer "yes" ("no" for reverse coded questions).

Study Size

A simple random sampling method was used so that individuals would be provided with the opportunity to participate in this study with equal probability. To determine the sample size, with a 0.05 type 1 error with 80% power and an approximately 0.10 sample error, the required sample size was determined to be 186.

Quantitative Variables

Since all of the questions in the questionnaire were prepared based on the duties and responsibilities of family physicians specified in the Turkish Family Medicine Practice Regulation, all these health services should be provided in the FHC, and therefore, the expected answers should be "yes" ("no" for reverse coded questions) and accordingly attributed as the correct answer, whereas "no" ("yes" for reverse coded questions) and "I don't know" answers were considered as the wrong answer. In this context, in the evaluation of the answers, 1 point was allocated per correct answer, while the wrong answer scored 0. The total scores were calculated by adding the points.[13] A total of 24 points, which was the highest possible score, were calculated to be equivalent to 100, and each person's score was determined out of possible total of 100. The score a person gets out of 100 gives the percentage of correct answers given by that person to all questions and therefore his level of knowledge. Then, the average correct answer score of all the participants was calculated according to these scores, and thus the knowledge levels of all participants were determined.

In the evaluation of the results, the threshold value of the Public Health Education Regulation was taken into account in order to determine the knowledge level of the participants and it was considered sufficient to have knowledge of 70 out of 100.[14]

Questions were asked regarding the participants' demographic characteristics, namely, age, gender, marital status, parental status, and chronic disease status, as well as their FHC application rates and whether they had previously received services at the FHC, and the relationship between these data and the participants' knowledge levels was investigated.

Statistical Analysis

The data obtained in our study were analyzed using Statistical Package for the Social Sciences version 23.0 (IBM, NY, USA) program. Incomplete forms or missing answers were excluded. The categorical data were presented as frequencies and percentages, and the numerical data as mean and standard deviations. The Kolmogorov–Smirnov test was used to determine whether the variables were normally distributed. If 2 compared groups were not distributed normally, the Mann–Whitney *U* test was applied. For 3 or more compared groups, the Kruskal–Wallis test was used. The chi-squared test was used for the categorical data analysis, and Spearman's correlation test was used for the correlation analysis. Dunnett's T3 test was performed in the post hoc analysis. Statistical significance was set at $P < .05$.

Results

Participants

The total number of participants who signed the informed consent form and participated voluntarily was 183. Of these, 18 people were removed from the study due to incomplete or blank survey forms. As a result, 165 completed surveys were evaluated (Figure 1).

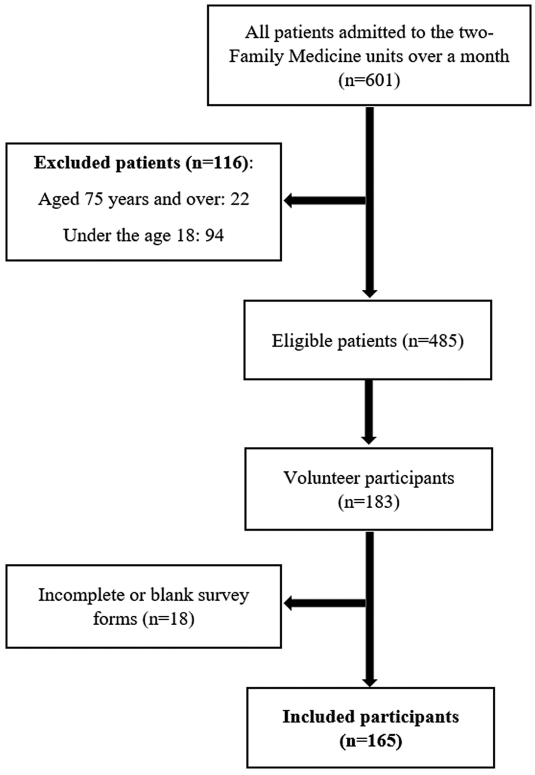

Figure 1. Flowchart of the study.

Descriptive Data

The average age of the participants included in our study was 35.8 ± 12.8 years, and 47.3% (n = 78) of the participants were women. Among the participants, 35.8% (n = 59) were single, 61.8% (n = 102) were married women, 2.4% (n = 4) were widowed or divorced, and 59.4% (n = 98) had children. Furthermore, 23.6% (n = 39) had chronic diseases.

When the frequency of the participants' FHC applications was examined, we found that 41.8% (n = 69) applied every 2-3 months, and 36.4% (n = 60) applied every 6 months in a year. Additionally, 72.7% (n = 120) of the patients had previously received healthcare services at the FHC where the study was conducted. The demographic characteristics and FHC application data of the participants are presented in Table 1.

Outcome Data

In terms of the frequency of referral to the FHC, it was observed that the frequency of applying to the FHC increased with increasing age ($P = .012$, $r = 0.261$). A statistically significant relationship was found between the frequency of referral to the FHC and the participants who were married, had children, and had chronic diseases (Table 1). However, a statistically significant association was not found between the gender of the participants and their previous application to the FHC and the frequency of applications ($P = .301$ and $P = .658$, respectively).

Main Results

The questions asked in the questionnaire and the answers received from the participants are presented in Table 2. The mean score of the correct answers was 50.9 ± 23.8. Only 2 of the participants answered all the questions correctly and were thus knowledgeable about all the services offered at the FHC. The lowest number of correct answers were for the questions about the directly supervised drug administered to tuberculosis patients (29.1%, n = 48) and the capability to have all laboratory results analyzed (21.8%, n = 36). The 2 questions answered correctly most often were those regarding the nursing services such as injections and dressings that are provided at the FHC (92.7%, n = 153) and the referral of patients to higher-level health institutions when necessary (87.9%, n = 145).

Table 1. The Relationship of the Demographic Characteristics and Application Data of the Participants with the Frequency of Application and the Knowledge Level of the Participants

		N, %	FHC Application Frequency (*P*)	Knowledge Levels (*P*)
Gender	Female	78 (47.3)	.301*	**<.001‡**
	Male	87 (52.7)		
Marriage	Married	102 (61.8)	**<.001***	.193‡
	Single	59 (35.8)		
	Widowed	4 (2.4)		
Having children	Yes	98 (59.4)	**<.001***	**.025‡**
	No	67 (40.6)		
Presence of chronic illness	Yes	39 (23.6)	**<.001***	**.005‡**
	No	126 (76.4)		
Earlier service from FHC	Yes	120 (72.7)	.658*	.300‡
	No	45 (27.3)		
Frequent reference to FHC	Once in a week	7 (4.2)	-	**.019†**
	Once in a month	29 (17.6)		
	Once in 2-3 months	69 (41.8)		
	Once in 6 month- 1 year	60 (36.4)		
Advanced age			**.012†**	.559†

*Chi-squared test; †Kruskal–Wallis test;‡Mann–Whitney *U* test.
FHC, family health center.

When the knowledge levels of the participants were compared to their sociodemographic data, it was found that the rate of correct answers was 44.1% for the men, while the women had a higher rate (58.7%) of correct answers than the men (Table 1). This association was found to be statistically significant ($P < .001$).

While the rate of correct answers by the participants who had children was 54.6%, it was determined that those who did not have children gave correct answers at a lower rate (45.8%), and this was found to be statistically significant ($P = .025$). However, the marital status of the participants did not cause a statistically significant difference in their answers ($P = .193$), and there was no statistically significant difference between the individuals who were married but did not have children ($P = .306$).

The relationship between the frequency of referral to the FHC and the rate of the participants' correct answers was found to be statistically significant ($P = .019$). In the post hoc analysis, a

Table 2. Survey Questions Asked Within the Scope of the Study and the Correct Answer Rates

		Those Who Answered Correctly
1	In the family health center, I can have my newborn baby and children all vaccines free of charge in the routine vaccination schedule of the Ministry of Health.	65.5% (n = 108)
2	In the family health center, when necessary, I can have vaccinations for adults, such as tetanus, rabies, and hepatitis B, free of charge.	59.4% (n = 98)
3	Iron and vitamin D preparations are given free of charge to pregnant women in the family health center.	52.1% (n = 86)
4	Baby heart sounds of pregnant women can be listened by fetal hand Doppler in the family health center.	40% (n = 66)
5	In the family health center, blood and urine tests are performed on each follow-up.	52.1% (n = 86)
6	I can get counseling service about prenatal and postnatal issues from my family physician and family health worker.	54.5% (n = 90)
7	I can get condoms and protective pills free of charge as sexual contraception from my family doctor or family health worker.	31.5% (n = 52)
8	I can get sexual health counseling service from my family doctor.	33.3% (n = 55)
9	In the family health center, I can have breast cancer, cervical cancer, and colon (bowel) cancer screenings free of charge.	39.4% (n = 65)
10	If I have a chronic disease such as hypertension or diabetes, I can have my family doctor follow up for my chronic disease.	57.6% (n = 95)
11	In the family health center, iron and vitamin D preparations are given free of charge to babies up to the age of one.	49.1% (n = 81)
12	My family physician will perform a hip dislocation examination and eye examination (with red reflex test) if I have a newborn baby.	38.2% (n = 63)
13	In the family health center, all newborns' heel blood scan is done on third-fifth days.	48.5% (n = 80)
14	If I have a baby or child, my family doctor will evaluate them for autism and hyperactivity.	32.7% (n = 54)
15	If I have a baby or child, my family physician will evaluate and follow up the developmental assessment of him, such as height, weight, and head circumference.	69.7% (n = 115)
16	If I have a school-age child, my family physician evaluates my child in terms of obesity.	55.2% (n = 91)
17	My family physician can prepare single physician reports such as military service examinations, employment reports, and marriage reports.	72.1% (n = 119)
18	I can receive breastfeeding counseling and nutrition counseling from my family doctor and family healthcare provider.	55.2% (n = 91)
19	I can get services such as dressing, wound care, and injection from the family health center.	92.7% (n = 153)
20	The family physician can refer the patient to a higher level if he/she deems it necessary.	87.9% (n = 145)
21	Tuberculosis patients take the doses of the drugs they use under the supervision of their family doctor.	29.1% (n = 48)
22*	I can have all laboratory tests done in the family health center.	24.8% (n = 41)
23*	My family doctor is not authorized to perform the emergency intervention in cases of emergency.	30.3% (n = 50)
24*	My family doctor can prescribe all medications.	22.4% (n = 37)

*Reversely coded questions

statistically significant difference was found between those who had applied to the FHC once a month and those who had applied to the FHC every 6 months in a year (P = .013). While the correct response rate of the people with chronic diseases was 60.6%, this rate was 48% for those without chronic disease (P = .005). However, no significant difference was found in the analysis based on whether the participants had previously received services from the FHC (P = .300).

Discussion

In this study, we investigated patients' awareness of the healthcare services offered by our FHC. The knowledge and awareness levels of the participants about these services and the average percentage of correct answers of all the participants was 51%. This result shows that in family medicine, which has been in practice and in the service of society in Turkey for about 10 years, knowledge of the provision of FHC healthcare services as well as the variety of services available at FHCs is extremely low.

When the individual characteristics of the participants who answered the questionnaire correctly at a high rate were investigated, being a woman, having a child, having a chronic disease, and applying to the FHC more frequently were found to be associated with high awareness of the services provided. In contrast, age, marital status, and previous service from the FHC did not cause statistically significant differences.

In a study with broad participation across the United States, 75%-91% of the patients stated that they could apply to primary healthcare institutions first and have their health problems resolved.[15] Similarly, only a quarter of the study population in India did not use services at a primary care level.[16] The rate of primary care applications in our country is around 34%.[11] These application rates are thus very low, which means that there is a very low rate of preference for primary health care institutions in Turkey compared to India and the United States. However, the difference in these application rates could be related to the fact that the health and insurance systems in Turkey are vastly different from the health policies, including the referral chains, in other countries.

In a qualitative satisfaction study conducted in Turkey in 2013-2014, the reasons for the low use of family medicine were the perception that family physicians deal with simpler health problems than specialist physicians serving in other fields and that patients receive more individual and limited services from FHCs.[17] In another study conducted in Turkey, it was determined that patients mostly preferred second- or third-level health institutions for physical examination purposes, chronic disease follow-up, and pregnancy control. Furthermore, the study participants assumed that the family medicine system could not provide services to the desired extent.[18] It is clear that increasing the knowledge and awareness of patients regarding the services provided in the field of family medicine can increase their satisfaction with family physicians.

In a study comparing patients who applied to family medicine outpatient clinics for second- and third-level healthcare services in hospitals and those who applied to FHCs, it was found that patients with different characteristics preferred either one or the other family medicine unit.[19] This result is important because it shows that although there is confusion about the different family medicine units, people can distinguish between the primary and secondary healthcare services and they can choose to receive different services.

In a study that investigated the satisfaction of patients who applied to university hospital family medicine outpatient clinics, it was found that, while they mostly preferred FHCs to obtain prescription medications, only 24.6% went to an FHC first for treatment and 11.9% stated that they had never been to an FHC before.[20]

In a study investigating the therapeutic healthcare service needs and rate of fulfillment of requests of patients who applied to FHCs regarding their chronic diseases, it was found that the patients felt that the benefits of attending an FHC for treatment and follow-up were insufficient, and FHCs were perceived as a "drug printing place."[21] The study also found that the patients did not have sufficient knowledge and awareness of FHCs, which supports the results obtained in our study. It is thus necessary to increase patients' knowledge and awareness of the wide range and quality of the healthcare services available at FHCs.

Study Limitations

The first limitation is that our study was conducted in a single center. Secondly, since family healthcare centers in different locations are expected to have different patient groups and behaviors, it is possible to obtain different results. The FHC where our study was conducted is located within a university and working in the education FHC structure, which may have affected our study's results. In addition, the study was conducted on patients who applied to the FHC, and the results we obtained do not reflect the knowledge level of the patients who did not prefer to apply to the FHC or were followed by the research hospitals. Also, our study was a cross-sectional study, and the validity and reliability of the questionnaire used to evaluate the participants' knowledge levels were not determined.

In this study, it was found and considered that the levels of awareness and knowledge of patients who applied to our FHC about the healthcare services provided by FHCs were extremely low. This lack of information about FHCs may be affecting the application rates of patients to FHCs. Accordingly, efforts should be made to increase patients' knowledge and awareness of the healthcare services offered at FHCs.

Ethics Committee Approval: This study was approved by the chairmanship of the Clinical Research Ethics Committee of the Faculty of Medicine of the University of Atatürk (approval number: February 27, 2020/02-27).

Informed Consent: Written informed consent was obtained from all participants who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – M.B., M.M.; Design – M.B., M.M.; Supervision – M.B.; Resources – M.B., M.M.; Data Collection and/or Processing – M.M.; Analysis and/or Interpretation – M.B.; Literature Search – M.B., M.M.; Writing Manuscript – M.B.; Critical Review – M.B.

Declaration of Interests: The authors have no conflicts of interest to declare.

Funding: The authors declared that this study has received no financial support.

References

1. Watt WD. The family physician: gatekeeper to the health-care system. *Can Fam Physician*. 1987;33:1101-1104.
2. Norton PG, Nelson W, Rudner HL, Dunn EV. Relative costs of specialist services in a family practice population. *CMAJ*. 1985;133(8):759-761.
3. Reyniers T, Houttekier D, Pasman HR, Stichele RV, Cohen J, Deliens L. The family physician's perceived role in preventing and guiding hospital admissions at the end of life: a focus group study. *Ann Fam Med*. 2014;12(5):441-446. [CrossRef]
4. Thompson MI, Lasserson D, McCann L, Thompson M, Heneghan C. Suitability of emergency department attenders to be assessed in primary care: survey of general practitioner agreement in a random sample of triage records analysed in a service evaluation project. *BMJ, (Open)*. 2013;3(12):e003612. [CrossRef]
5. Akinci F, Mollahaliloğlu S, Gürsöz H, Oğücü F. Assessment of the Turkish health care system reforms: a stakeholder analysis. *Health Policy*. 2012;107(1):21-30. [CrossRef]
6. TC Sağlık Bakanlığı. 2019-2023 Stratejik Planı 2019. Available at: https://stratejikplan.saglik.gov.tr/files/TC-Saglik-Bakanligi-2019-2023-Stratejik-Plan-Web-Katalog.pdf.
7. Başara BB, Aygün A, Çağlar İS, Kulali B, Sağlık Bakanlığı SİY. Sağlık Bakanlığı, Sağlık İstatistikleri Yıllığı 2019 Haber Bülteni. (Turkish Ministry of Health, Health Statistics Yearbook 2019 Newsletter) Turkish Ministry of Health; 30 September, 2020. Available at: https://dosyamerkez.saglik.gov.tr/Eklenti/39024,haber-bulteni-2019pdf.pdf?0.
8. Özdemir ME, Koçoğlu F. Sivas İlinde aile Hekimliği Modelinin Değerlendirilmesi [Evaluation of family medicine model in Sivas Province]. *AHI Evran Tıp Derg*;3(2):59-65.
9. Güven EA, Aycan S. The thoughts on the family medicine system and referral system of the admission to a university hospital in Ankara. *ESTÜDAM Halk Sağlığı Derg*. 2018;3(3):25-36.
10. Çetinkaya F, Baykan Z, Naçar M. Yetişkinlerin Aile Hekimliği Uygulaması ile İlgili Düşünceleri ve Aile Hekimlerine Başvuru Durumu [Adults perspective about family medicine and the status of service utilization]. *TAF Prev Med Bull*. 2013;12(1). [CrossRef]
11. Başara BB, Çağlar İS, Aygün A, et al. *Sağlık Bakanlığı, Sağlık İstatistikleri Yıllığı- 2018* [*Ministry of Health, health statistics*

yearbook- 2018]. Ankara: Turkish Ministry of Health; 2019. https://dosyasb.saglik.gov.tr/Eklenti/36134,siy2018trpdf.pdf?0.
12. Turkish family medicine practice regulation: Turkish Ministry of Health; 2013. https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=17051&mevzuatTur=KurumVeKurulusYonetmeligi&mevzuatTertip=5.
13. Turan I, Simsek U, Aslan H. Eğitim Araştırmalarında Likert Ölçeği ve Likert-Tipi Soruların kullanımı ve analizi [The use and analysis of Likert scales and Likert-type items in educational research]. *Sakarya Univ Eğitim Fak Derg*. 2015:186-203:1303-0310.
14. TC Sağlık Bakanlığı. Halkın Sağlık Eğitimi Yönetmeliği 2000 [Resmî Gazete Tarihi: 06.8.2000 Resmî Gazete Sayısı: 24132]. Available at: https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=9352&MevzuatTur=7&MevzuatTertip=5.
15. Grumbach K, Selby JV, Damberg C, et al. Resolving the gatekeeper conundrum: what patients value in primary care and referrals to specialists. *JAMA*. 1999;282(3):261-266. [CrossRef]
16. Sivanandan A, Kumar SG, Krishnamoorthy Y. Awareness and preference in utilizing primary health-care services from rural health center as first point-of-care: a community-based cross-sectional study in South India. *J Educ Health Promot*. 2020;9:85. [CrossRef]
17. Yapakçı A, Altun A, Kesen CH, Yılmaz E, Delican O, Atal SS. Ailelerin Aile Hekimliği'nden Hizmet Alımı ve Memnuniyeti [Families satisfaction and getting services from family medicine]. *The J Turk Fam Phys*. 2019;10(1):22-38.
18. Özdemir ME, Koçoğlu F. Sivas İlinde aile Hekimliği Modelinin Değerlendirilmesi [Evaluation of family medicine model in Sivas Province]. *AHI Evran Tıp Derg*. 2019;3(2):59-65.
19. Maç ÇE, Öztürk GZ. Bir Eğitim ve Araştırma Hastanesinin Aile Hekimliği Poliklinikleri Ile Eğitim Aile Sağlığı Merkezi Polikliniklerine Başvuran Hastaların Kayıtlarının Karşılaştırılması [The comparison of patient records admitted to the family medicine polyclinics of an Education and Research Hospital and an educational family medicine center]. *Ank Med J*. 2018;18(1):14-21.
20. Durmuş H, Timur A, Yıldız S, Çetinkaya F. The satisfaction of the people about family medicine who admitted to outpatient clinics of Erciyes University Hospital. *tahd*. 2018;22(1):2-11. [CrossRef]
21. Şahİn SN, Akman M. Assessment of unmet healthcare needs of therapeutic health services in patients who apply to the educational primary care center. *Turkiye Klinikleri J Intern Med*. 2019;4(2):51-59. [CrossRef]