



# Family Physicians vs Other Specialists: A Cross-sectional Analysis of Patients' Preferences and Factors Influencing Physician Choice in Pakistan

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## Article Info

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### Date Received:

03<sup>rd</sup> August, 2025

### Date Revised:

26<sup>th</sup> December, 2026

### Date Accepted:

21<sup>st</sup> January, 2026

## Abstract

**Objective:** This study aims to investigate patients' knowledge and attitude towards Family Physicians (FPs) and factors influencing their choice of physicians.

**Methodology:** This cross-sectional study recruited participants through snowball sampling between September 2023 and March 2024. Participants' demographics, awareness of the role of FPs, and choice of physician for different health conditions were collected. Descriptive analysis, one-way ANOVA and T-test were applied. A significance of  $p < 0.05$  was set for all evaluations.

**Results:** 341 participants were included with a median age of 26 years. 184 (54%) respondents knew about the qualifications of a FP. For most health conditions, the majority preferred to consult other healthcare workers instead of FPs, with 19% choosing to consult FPs for chronic illnesses. Participants over 26 years had a significantly higher mean frequency ( $4.1 \pm 2.64$ ) of selecting FPs for health conditions as compared to those below 26 years ( $3.1 \pm 2.42$ ,  $p < 0.001$ ). Among participants who preferred a FP, convenient location (74%) and easier appointment (72%) were common factors influencing their choice.

**Conclusion:** There is a significant gap in awareness and preference for FPs. To increase the utilization of FM services, public initiatives should aim to improve health literacy regarding the role of FPs and improve access to FM services by strengthening primary care.

**Keywords:** Family Medicine, specialist, Family Physicians, perception



### This article may be cited as:

Anwar E, Amjad A, Alidina Z, Banani I, Fatima SS, Qidwai W, Saeed SJ, Awan HJ, Zaki S. Family physicians vs other specialists: A cross-sectional analysis of patients' preferences and factors influencing physician choice in Pakistan. J Postgrad Med Inst. 2026;40(1):3-8. <http://doi.org/10.54079/jpmi.40.1.3806>

## Introduction

Family Medicine (FM) is considered as the first point of contact for seeking medical care in any healthcare setup.<sup>1</sup> Especially in developing countries like Pakistan, FM clinics can ensure that people living in remote villages receive optimum care in a cost-effective way.<sup>2</sup> FPs integrate care across different specialties, crucial for preventive medicine and personalized management of chronic conditions.<sup>3</sup>

However, despite their benefits, FM services are underused in countries like Pakistan. The normal trend of patients seeking direct consultations with specialists results in poor resource allocation and increased patient traffic at these facilities.<sup>4</sup> This may be related to the general inaccessibility of primary care services in remote areas or a preference for other specialists over FPs for common ailments.<sup>5</sup> There is also a misconception in Pakistan about associating FPs, who undergo extensive postgraduate training, with local general practitioners (GPs), typically medical graduates without formal training.<sup>6</sup>

A well-structured FM program may conserve resources, alleviate the burden on tertiary care centres, and enhance effective healthcare for the community. Many studies have been conducted worldwide to understand the motivating and opposing influences on people's choice of a physician.<sup>1</sup>

A study from Huda et al. identified the factors influencing public perception of FPs, although the results were limited due to a smaller sample size.<sup>7</sup> Consequently, there is limited information about this concept within the Pakistani context.

The present study aimed to analyse factors that affect an individual's decision to seek care from a FP or a specialist of another field, as well as awareness and general attitudes towards a FP. The findings may contribute to future measures for enhancing the efficiency of the healthcare system at every level.

## Methodology

A cross-sectional study was conducted between September 2023 and March 2024. An online questionnaire on Google Forms was employed to assess the factors influencing the public's decision to visit a FP versus a specialist for specific symptoms. Study investigators recruited participants through online social platforms, such as WhatsApp and Facebook.

### Participants and Study Settings

Inclusion criteria consisted of individuals over the age of 18-year, who could read and write in English or Urdu and were not associated with any healthcare profession. No follow-ups were required; the participants were only required to fill out the questionnaire once.

Using snowball sampling, online platforms were leveraged for participant recruitment.

### Data Collection Tool

The questionnaire was derived from a previous study by Huda et al identifying the factors influencing patients' perception of Family Medicine (7). It was divided into different sections: demographics, awareness about the qualifications and role of a FP, and participants' inclination to consult a FP for certain clinical conditions in comparison to specialists, homeopaths, or other healthcare providers. Associations were explored between demographics and understanding of a FP's role with the frequency of selecting a FP for each health condition. In the last section, participants were asked to identify the factors that influenced their choice of physician.

The questionnaire was piloted among 30 participants for face validity. After filling the survey, the participants were asked about language, comprehension, general feedback, and time taken to complete the form. The responses were not considered a part of the final sample, and the feedback was used to modify the questionnaire before data collection. The questionnaire was translated into Urdu, and back translation was performed by language experts. It was administered in both English and Urdu, depending on the preference of participants.

### Sample size

The sample size was calculated to be 385 using the OpenEpi Version 3.01 with a two-sided confidence level of 95%.<sup>8,9</sup> This calculation assumed a precision level of 5% and an anticipated frequency of positive perceptions of Family Medicine of 50%, with a confidence interval of 95%.

### Statistical Analysis

Statistical analyses for this study were run using Statistical Package for Social Sciences (SPSS) version 21. The categorical data was reported as absolute numbers and/or percentages (n; %). One-way ANOVA and T-test were used to find the associations between demographic factors and the mean frequency of selecting a FP. A p-value of < 0.05 was considered significant for all analyses.

### Ethical Considerations

The study was conducted in compliance with the principles of the Declaration of Helsinki (10) and the Good Clinical Practice (GCP) guidelines (11). Ethical approval was obtained from the Ethics Review Committee at the Aga Khan University, Karachi, Pakistan (ID Number: 2023-9051-26192). Informed consent from participants was obtained through agreement on a checkbox for consent at the start of the survey. Participants' confidentiality was maintained with data accessible only to the research team, and all identifiers were removed before data analysis. Participants were informed of

their right to withdraw from participation at any time during the study.

## Results

### Participant Characteristics:

We received a total of 400 responses, and 341 responses were included in the study. The remaining 59 responses were excluded due to participants being associated with a healthcare profession or incomplete responses. Since the data collection period had expired at the time of analysis, it was not possible to collect further responses. The median age of participants was 26 years (IQR = 19-42 years). The gender distribution included 144 males (42.2%) and 197 females (57.8%). Participants were predominantly from Sindh (73.3%), followed by Punjab (26.1%), and a small proportion from Khyber Pakhtunkhwa (0.6%). Out of all participants, 241 (70.7%) had visited a Family Physician.

The level of education among 331 participants showed that 2 (0.6%) had completed primary school, 7 (2.1%) had Matric/O-levels, 83 (25.1%) had Intermediate/A-levels, 164 (49.5%) had a Bachelor's/Graduate degree, and 75 (22.7%) had postgraduate education. Monthly household income, reported by 320 participants, revealed that 5.9% earned less than PKR 25,000, 8.8% earned PKR 25,000-49,999, 22.5% earned PKR 50,000-99,999, 33.8% earned PKR 100,000-299,999 and 29.1% earned PKR 300,000 and above. Household size data from 336 participants indicated that 2.1% had fewer than 2 members, 32.4% had 2-3 members, 42.3% had 4-5 members, 14.6% had 6-7 members, 6.0% had 8-9 members, and 2.7% had > 10 members. (Table 1)

### Understanding and Perceptions of a Family Physician:

When asked about their understanding of a FP (Figure 1), only 184 (54%) respondents correctly identified a medical graduate who had specialized in FM. Around half misinterpreted the qualifications of a FP with other specialists, homeopathic doctors, and MBBS graduates without formal training.

Most participants agreed that a FP's role was to provide referrals (53%), prescribe tests (63%), conduct a general physical exam (65%), and diagnose diseases (58%). However, there was less confidence in their ability to treat all family members (44%) and manage chronic diseases (22%). (Figure 2)

### Choice of Family Physician:

The participants were asked which medical professionals they would consult for specific health conditions. For most of the conditions, people preferred to consult an MBBS graduate with specialization in any other specialty except for flu and cold symptoms (52%) and tolerable pain (56%) in which FPs were the most consulted.

### Variables affecting choice of Family Physician:

The mean frequency of selecting a FP for health conditions (range: 0-10) was evaluated across demographic variables (Table 2). Participants aged more than 26 years had a significantly higher mean frequency ( $4.1 \pm 2.64$ ) compared to those aged  $\leq 26$  years ( $3.1 \pm 2.42$ ,  $p < 001$ ). No significant differences were observed between males and females ( $p = 0.843$ ) or between participants from Sindh and Punjab ( $p = 0.151$ ).

**Table 1. The Demographic characteristics of the cohort (N=341)**

Variable	Participants (n=341)
Median Age (IQR)	26 (23)
Gender	
Male	144 (42.2%)
Female	197 (57.8%)
Province	
Sindh	250 (73.3%)
Punjab	89 (26.1%)
Khyber Pakhtunkhwa	2 (0.6%)
Level of Education	n=331
Primary School	2 (0.6%)
Matric/O-levels	7 (2.1%)
Intermediate/A-levels	83 (25.1%)
Bachelors/Graduate	164 (49.5%)
Postgraduate	75 (22.7%)
Monthly Household Income in PKR	n=320
<25,000	19 (5.9%)
25,000-49,999	28 (8.8%)
50,000-99,999	74 (22.5%)
100,000-300,000	110 (33.8%)
>300,000	93 (29.1%)
Number of members in the household	n= 336
<2	7 (2.1%)
2-3	109 (32.4%)
4-5	142 (42.3%)
6-7	49 (14.6%)
8-9	20 (6.0%)
>10	9 (2.7%)

Education level showed a trend towards significance ( $p = 0.055$ ), with primary school graduates having the highest mean frequency ( $7.5 \pm 2.12$ ) compared to other education levels. Monthly household income and household size were not significantly associated with the frequency of choosing a FP ( $p = 0.375$  and  $p = 0.081$ , respectively).

#### Correlation Analysis:

Age and mean choice frequency had a significant positive correlation ( $r = 0.175$ ,  $p < 0.001$ ), using the Pearson correlation analysis.

Factors influencing the choice of Family physician: Seventy-six participants (22%) chose FP over other healthcare professionals for most health conditions (>5) mostly due to convenience of the physician's location and the ease of securing appointments (Figure 3).

## Discussion

The study highlights that there is a notable lack of awareness regarding FM and reduced preference for FPs as compared to other healthcare professionals in our subset. In the present study, the number of participants who have visited a FP was higher as compared with the study conducted in Saudi Arabia which reported that 37.3% consulted a family doctor.<sup>6</sup> Our study also reflected that poor understanding and lack of knowledge of the training and professional experience of the concerned physician may reduce confidence in the physician's capabilities. This trend was mostly due to misconceptions as in a Saudi Arabian study, 20.2% of participants believed that a FP and a General Practitioner were the same.<sup>12</sup>

While our results showed a moderate consensus for FPs' role in providing referrals and conducting general physical examinations, there were marked gaps in awareness regarding the management of chronic diseases and other roles. Huda et al's study reported a lower level of confidence in participants for both referrals (14%) and physical exams (11%).<sup>7</sup> In contrast, in internationally published literature, more respondents trusted FPs for managing chronic diseases and referring to other specialties.<sup>12, 13</sup> There appears to be less confidence in the services provided by FPs in Pakistan as compared to other countries, which is likely to impact health-seeking behaviours. Awareness about the role and scope of care from FPs must be enhanced to reduce this misconception. In a self-referral system, patients often bypass primary care to directly access specialists.<sup>12</sup> While evaluating the choice of physician, the present study showed that less than half of the participants preferred FPs for most health conditions. A study from Saudi Arabia found that a higher number of participants chose a primary care centre for issues like fever, body aches, cough, and chronic diseases.<sup>14</sup> The current study findings show an increased reliance on other specialists, untrained physicians, and emergen-

**Table 2. Association between demographic variables and the mean frequency of choosing family physicians.**

Variable	Frequency of selecting Family Physician for health conditions (0-10)	
	Mean (SD)	P value
Age		
Less than and equal to 26	3.1 (2.42)	0.000*
More than 26	4.1 (2.64)	
Gender		
Male	3.6 (2.68)	0.843*
Female	3.6 (2.51)	
Province		
Sindh	3.7 (2.65)	0.151*
Punjab	3.3 (2.35)	
Level of Education		
Primary School	7.5 (2.12)	0.055**
Matric/O-levels	4.4 (0.98)	
Intermediate/A-levels	3.1 (2.70)	
Bachelors/Graduate	3.6 (2.64)	
Postgraduate	4.0 (2.40)	
Monthly Household Income in PKR		
<25000	4.2 (2.75)	0.375**
25,000-49,999	4.3 (3.01)	
50,000-99,999	3.7 (2.52)	
100,000-300,000	3.4 (2.43)	
>300,000	3.4 (2.56)	
Number of members in the household		
<2	1.9 (2.27)	0.081**
2-3	4.1 (2.71)	
4-5	3.5 (2.51)	
6-7	3.3 (2.66)	
8-9	2.7 (2.23)	
>10	3.9 (1.54)	

(\* = T test, \*\* = One way ANOVA)

While the dependent variable is not normally distributed, parametric tests are used due to adequate sample size

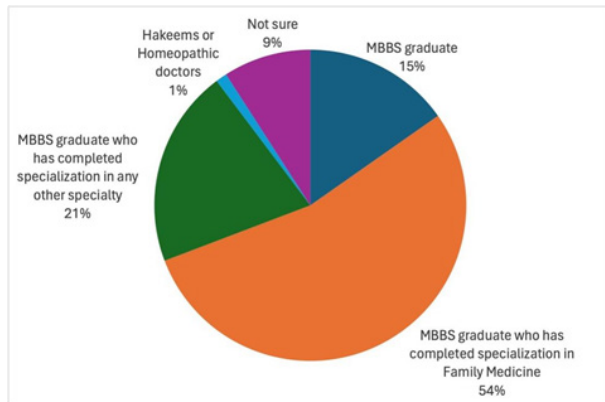


Figure 1: Primary diagnoses of patients in both groups

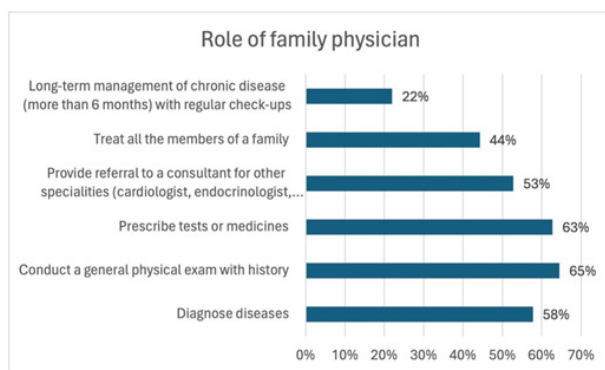


Figure 2: Understanding regarding the Role of a Family Physician (n=341)

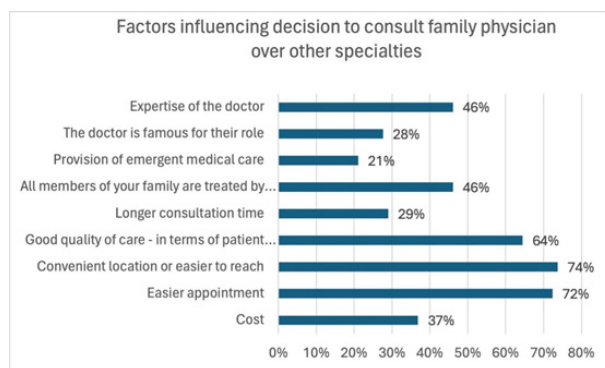


Figure 3: Self-reported factors influencing choice among those who preferred family physicians for most health conditions (n=76)

cy medicine doctors in the local setting, leading to improper utilization of healthcare resources. For primary prevention and chronic disease management, such as hypertension and diabetes, evidence suggests that FPs can provide regular follow-ups and counselling without frequent need for other specialist care, improving patient outcomes.<sup>15</sup> Hence, patients should be educated on approaching FPs as the first point of contact for common diseases as well as consistent care for long-term illnesses.

In the present study, older participants were more likely to consult a FP for health conditions, similar to a study from Jeddah.<sup>1</sup> However, other demographic factors such as gender, education, and monthly income, were not associated with choice of FP, unlike Mercado et al.'s study, which reported significant associations of gender, age, and education with choice of specialty clinic.<sup>16</sup> Therefore, a detailed understanding of each demographics specific requirement could help us tailor FM-based primary care services to meet those needs effectively.

Motivators for choosing a FP align with findings from a study in the United States, where good patient care was an important factor in choosing a primary care physician.<sup>16</sup> Interestingly, only 28% of our participants selected the doctor's reputation as a deciding factor, which contrasts with research from Taiwan, where the "image and reputation" of doctors significantly influenced the choice of outpatient clinics.<sup>17</sup> In another study from Tehran, sufficient consultation time was highly valued by patients, while location and the doctor's reputation were of moderate importance.<sup>18</sup> These self-reported factors can be integrated further into healthcare programs to encourage patients to avail FM and primary care services.

The limitations of the study included failure to achieve the target sample size and non-random sampling, which led to less representation from rural areas and provinces besides Sindh and Punjab, hence limiting the generalizability of results to other areas of Pakistan. Additionally, the online recruitment method likely contributed to selection bias. Since the questionnaire was self-administered and only available in two languages (English and Urdu), participants not knowing how to read and write or not well-versed in these languages could not be included in the sample, affecting overall representation.

The study sample mostly comprised of a younger age group and did not include enough respondents from the geriatric population, who may require a regular FP to establish continuity of care.<sup>1</sup> The mostly urban, younger, and literate population in the study sample may not be a true representation of underdeveloped areas of Pakistan where family medicine services are most needed to strengthen primary care.

## Conclusion

The present study highlights a consistent gap in awareness about FPs in Pakistan. Participants recognized the role of FPs in referrals and physical exams, but their understanding of FPs' qualifications and ability to manage chronic diseases is still limited. In order to solve these issues, focused public awareness campaigns aimed at educating people about the role and training of FPs should be held. Training in family medicine specialties should be included in medical school curriculum and community health programs. This can increase accep-

tance of of FPs by future doctors and general public. Moreover, formal care pathways that place FPs at the center of the referral system should be created, hence strengthening the current referral process leading to reduced unnecessary visits to specialists. To further improve patient experience, consultation times and appointments in FM clinics should be standardized. This change could help build trust in primary care services.

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### Authors' Contribution Statement

EA contributed to the conception, design, acquisition, analysis, interpretation of data, drafting of the manuscript, critical review of the manuscript, and final approval of the version to be published. AA contributed to the design, acquisition, analysis, and interpretation of data. ZA contributed to the analysis, interpretation of data, and drafting of the manuscript. IB contributed to the analysis, interpretation of data, and drafting of the manuscript. SSF contributed to the analysis, interpretation of data, and drafting of the manuscript. WQ contributed to the analysis, interpretation of data, and drafting of the manuscript. SJS contributed to the acquisition, analysis, and interpretation of data. HJA contributed to the analysis, interpretation of data, and drafting of the manuscript. SZ contributed to the conception, drafting of the manuscript, critical review of the manuscript, and final approval of the version to be published. All authors are accountable for their work and ensure the accuracy and integrity of the study.

### Conflict of Interest

Authors declared no conflict on interest

### Grant Support and Financial Disclosure

None

### Data Sharing Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.