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## Public's perception and satisfaction on the role and services provided by family medicine health centers in Duhok city

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### Abstract

**Background:** Family medicine, a cornerstone of comprehensive healthcare, emphasizes the holistic well-being of individuals across age, gender, and medical conditions. Family physicians (FPs) play pivotal roles in providing a gamut of health services, including treatment, prevention, and education. This study aims to understand the patient's awareness, perception, and preferences toward family physicians in a healthcare setting.

**Methods:** A cross-sectional study was conducted among adults visiting public hospitals and private clinics. Participants were selected using purposive sampling. The study included patients aged 18 years and above and excluded those with mental or psychiatric disorders, disabilities hindering response capability, and those who were disoriented.

**Results:** The average age of participants was 36.7 years, with the 21-30 age group representing the largest demographic (30.25%). Females constituted 64.50% of the sample. Notably, 86.75% of the participants were aware of family physicians, and 69% had consulted with them at least once. Despite 55.5% acknowledging the availability of FPs in health centers, a majority (56.75%) showed a preference for specialized doctors. The study identified a significant correlation between a patient's occupation and educational level and their attitude towards family physicians. However, other factors showed no such correlation.

**Conclusion:** This study underscores the role of occupation and education as determinants in shaping perceptions toward family physicians. While awareness of FPs is relatively high, preferences lean towards specialized healthcare, highlighting a potential area for outreach and education about the benefits of family medicine.

**Keywords:** Public's, perception, satisfaction, services, Provided, family medicine, health, centers, Duhok, city

### Introduction

Family medicine stands as a pivotal specialty in the medical field, emphasizing the comprehensive healthcare of individuals regardless of age, gender, or specific health issues <sup>[1]</sup>. FPs draw upon insights from clinical, biological, and behavioral domains, and they are founded on the principles of comprehensiveness, care continuity, coordination, and easy access <sup>[2]</sup>. They play a central role in the healthcare system, offering a range of services from treatment and prevention to rehabilitation, family planning, and health education <sup>[3]</sup>. Consequently, the public's understanding of FPs' roles is crucial as it significantly influences health-seeking behaviors <sup>[4]</sup>. Research indicates that many patients often bypass primary healthcare centers (PHCCs), opting instead for specialized centers or tertiary hospitals, underlining the importance of studies that gauge patient awareness about FPs' roles. In Iraqi Kurdistan, the number of family physicians has been witnessing a steady rise. However, research evaluating healthcare services in the region remains limited. One study juxtaposed patient satisfaction levels between a premier family medicine center and two traditional primary healthcare centers in Duhok. Findings highlighted that the family medicine center boasted a significantly higher patient satisfaction rate across several parameters, including tangibility, reliability, responsiveness, assurance, and empathy. Interestingly, older, male patients with less education seemed to exhibit greater satisfaction compared to their younger, more educated, female counterparts, although these differences were not statistically significant <sup>[5]</sup>. Another research piece delved into the perspectives of recent medical graduates in the Duhok governorate regarding family medicine.

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The study found specialties like radiology, pediatrics, internal medicine, and general surgery to be more favored than family medicine. A mere 10.0% showed inclination towards family medicine, attributing the lack of interest to societal perceptions that devalue the specialty, limited career growth, and lesser remuneration compared to other medical fields [6]. We need to evaluate the healthcare services of family medicine continue to examine the related factors to poor quality of these services in this region.

#### The objectives of the study are

- Identify the level of satisfaction of patients towards family medicine services in Duhok city.
- Find out the areas of non-satisfaction of public towards family medicine services in Duhok city.

#### Materials and Methods

**Study design:** The patients are included in this study through a cross-sectional study.

**Study duration:** 20 May 2022 to 20 March 2023.

**Study setting:** The study is conducted among patients of public hospitals and private clinics of family doctors and internal medicines in Duhok city.

**Sampling method and size:** The sample of this study is recruited through a purposive technique. The adult patients who visit the public hospitals or private clinics are selected purposively into this study. The sample size is calculated by a Cochran formula as follows based on the estimated number of patients who visit the private clinics and public hospitals.

#### A. Inclusion criteria

- Patients of 18<sup>th</sup> years and above.

#### B. Exclusion criteria

- Patients with mental/psychiatric disorders.
- Patients with disability who unable to respond to the questions.
- Disoriented patients.

**Statistical analysis:** (Brief description of statistical methods used and the statistical significance of the findings (when appropriate) giving references to the statistical methods and defining statistical terms and abbreviations. Computer software and version used should be specified. The prevalence of satisfaction and areas of dissatisfaction is determined in number and percentage. The association of factors to level of satisfaction is examined in Pearson chi-squared test. The Significant level of difference is determined in a p-value of less than 0.05. The statistical calculations are performed in JMP Pro 14.3.0 statistical software.

#### Results

The mean age of the patients was 36.57 aged between 16 and 65 years old. The patients had different age groups. The patients were males (35.5%) and females (64.50%) and had different education levels and mostly had medium level of education. The study found that most of the patients had non-health related occupations (90.75%). The patients had various marital status and were mostly married (70.50%;

Table 1).

**Table 1:** General information of the patients

| Characteristics (n=400) | Statistics  |            |
|-------------------------|-------------|------------|
|                         | Number      | Percentage |
| Age (16-65 years)       | Mean: 36.57 | SD: 11.41  |
| <b>Age category</b>     |             |            |
| 16-20                   | 26          | 6.50       |
| 21-30                   | 121         | 30.25      |
| 31-40                   | 114         | 28.50      |
| 41-50                   | 90          | 22.50      |
| 51-60                   | 43          | 10.75      |
| 61-70                   | 6           | 1.50       |
| <b>Gender</b>           |             |            |
| Male                    | 142         | 35.50      |
| Female                  | 258         | 64.50      |
| <b>Education</b>        |             |            |
| Illiterate              | 20          | 5.00       |
| Primary school          | 71          | 17.75      |
| Secondary school        | 156         | 39.00      |
| High school             | 6           | 15.25      |
| Institute               | 65          | 16.25      |
| College                 | 27          | 6.75       |
| <b>Occupation</b>       |             |            |
| Health-related          | 37          | 9.25       |
| Non-health related      | 363         | 90.75      |
| <b>Marital status</b>   |             |            |
| Married                 | 282         | 70.50      |
| Single                  | 110         | 27.50      |
| Widow/separated         | 8           | 2.00       |

The study found that most of the patients had a background about the family physician (86.75%) and visited a family physician (69.0%). In addition, most of the patients knew the role of family physician in Kurdish society (72.25%) and knew the place of family medicine clinics (45.75%). In terms of attitude, the study found that a family doctor has a role in treating many of the health issues (43.25%), early detection of any health issues (50.50%), advising the family members in terms of healthy lifestyles (56.75%). In addition, the study found that the patients reported that having a family physician in our society is valuable (55.50%).

Many patients reported that they prefer to have specialist or consultant from other specialties involved in healthcare (56.75%). Most of the patients reported that family physician have not enough expertise in the healthcare (53.50%). A considerable percentage of the patients reported that they cannot discuss all health issues with a family doctor. But they reported that having family physician involved in healthcare is a positive expertise (Table 2; Fig 1).

The study showed that the general characteristics of the patients are not associated with role of physicians (Table 3) The study showed that patients with health-related occupations were more likely to be aware of the medical expertise of the family physicians; 72.97% vs. 51.52%; P=0.0127). The association with other socio-demographic aspects was not found in the table 4.

The study showed that patients with higher level of education and those who had health-related occupations were more likely to find out the medical field of the family medicine compared to those patients with lower level of education and those who had the non-health-related occupations (Table 5).

**Table 2:** Knowledge and attitudes of patients towards family physician

| Knowledge and attitudes (n=400)  | No  |       | Yes |       |
|--|-----|-------|-----|-------|
|  | No  | %     | No  | %     |
| <b>Knowledge</b>   |     |       |     |       |
| Have you ever heard about a family physician?  | 53  | 13.25 | 347 | 86.75 |
| Have you ever visited a family physician?  | 124 | 31.00 | 276 | 69.00 |
| Do you know the role of the family physician in society?   | 111 | 27.75 | 289 | 72.25 |
| Do you know the places of family medicine clinics?   | 217 | 54.25 | 183 | 45.75 |
| <b>Attitude</b>  |     |       |     |       |
| A family physician has a role in treating many of the health problems experienced by family member?                                      | 227 | 56.75 | 173 | 43.25 |
| A family physician has a role in the early detection of any disease threatening society.   | 198 | 49.50 | 202 | 50.50 |
| A family physician has a role in advising family members to follow a healthy life, exercise, and learn ways to prevent various diseases. | 173 | 43.25 | 227 | 56.75 |
| It is valuable to have a family physician in our healthcare.   | 178 | 44.50 | 222 | 55.50 |
| I usually prefer to have a specialist or consultant from other specialties involved in my healthcare.                                    | 173 | 43.25 | 227 | 56.75 |
| I think that the family physician doesn't have enough medical expertise to be involved in our healthcare.                                | 186 | 46.50 | 214 | 53.50 |
| The family physician is medicine field.  | 203 | 50.75 | 197 | 49.25 |
| I can discuss all health issues with the family physician.   | 206 | 51.50 | 194 | 48.50 |
| Having a family physician involved in my care was a positive experience.   | 221 | 55.25 | 179 | 44.75 |

**Table 3:** Factors associated with negative attitude towards the role of family physicians.

| Characteristics       | Role of family physicians no (%) |             | P-value (two-sided) |
|-----------------------|----------------------------------|-------------|---------------------|
|                       | No (n=227)                       | Yes (n=173) |                     |
| <b>Age groups</b>     |                                  |             |                     |
| 16-20                 | 18 (69.23)                       | 8 (30.77)   | 0.3576              |
| 21-30                 | 69 (57.02)                       | 52 (42.98)  |                     |
| 31-40                 | 58 (50.88)                       | 56 (49.12)  |                     |
| 41-50                 | 57 (63.33)                       | 33 (36.67)  |                     |
| 51-60                 | 22 (51.16)                       | 21 (48.84)  |                     |
| 61-70                 | 3 (50.00)                        | 3 (50.00)   |                     |
| <b>Gender</b>         |                                  |             |                     |
| Male                  | 77 (54.23)                       | 65 (45.77)  | 0.4496              |
| Female                | 150 (58.14)                      | 108 (41.86) |                     |
| <b>Education</b>      |                                  |             |                     |
| Illiterate            | 16 (80.00)                       | 4 (20.00)   | 0.1816              |
| Primary school        | 41 (57.75)                       | 30 (42.25)  |                     |
| Secondary school      | 87 (55.77)                       | 69 (44.23)  |                     |
| High school           | 38 (62.30)                       | 23 (37.70)  |                     |
| Institute             | 32 (49.23)                       | 33 (50.77)  |                     |
| College               | 13 (48.15)                       | 14 (51.85)  |                     |
| <b>Occupation</b>     |                                  |             |                     |
| Health-related        | 18 (48.65)                       | 19 (51.35)  | 0.2964              |
| Non-health related    | 209 (57.58)                      | 154 (42.42) |                     |
| <b>Marital status</b> |                                  |             |                     |
| Single                | 60 (54.55)                       | 50 (45.45)  | 0.5177              |
| Married               | 161 (57.09)                      | 121 (42.91) |                     |
| Widow/separated       | 6 (75.00)                        | 2 (25.00)   |                     |

Pearson chi-squared test was performed for statistical analyses.

**Table 4:** Factors associated with negative attitude of patients towards medical expertise of family physicians.

| Characteristic      | Medical expertise of family physicians no (%) |             | p-value (twos-died) |
|---------------------|---|-------------|---------------------|
|                     | No (n=186)                                    | Yes (n=214) |                     |
| <b>Age category</b> |   |             |                     |
| 16-20               | 12 (46.15)                                    | 14 (53.85)  | 0.9186              |
| 21-30               | 54 (44.63)                                    | 67 (55.37)  |                     |
| 31-40               | 53 (46.49)                                    | 61 (53.51)  |                     |
| 41-50               | 44 (48.89)                                    | 46 (51.11)  |                     |
| 51-60               | 19 (44.19)                                    | 24 (55.81)  |                     |
| 61-70               | 4 (66.67)                                     | 2 (33.33)   |                     |
| <b>Gender</b>       |   |             |                     |
| Male                | 64 (45.07)                                    | 78 (54.93)  | 0.6706              |
| Female              | 122 (47.29)                                   | 136 (52.71) |                     |
| <b>Education</b>    |   |             |                     |
| Illiterate          | 14 (70.00)                                    | 6 (30.00)   | 0.1484              |
| Primary school      | 35 (49.30)                                    | 36 (50.70)  |                     |
| Secondary school    | 76 (48.72)                                    | 80 (51.28)  |                     |
| High school         | 23 (37.70)                                    | 38 (62.30)  |                     |

|                       |             |             |        |
|-----------------------|-------------|-------------|--------|
| Institute             | 28 (43.08)  | 37 (56.92)  |        |
| College               | 10 (37.04)  | 17 (62.96)  |        |
| <b>Occupation</b>     |             |             |        |
| Health-related        | 10 (27.03)  | 27 (72.97)  | 0.0127 |
| Non-health related    | 176 (48.48) | 187 (51.52) |        |
| <b>Marital status</b> |             |             |        |
| Single                | 47 (42.73)  | 63 (57.27)  | 0.1929 |
| Married               | 133 (47.16) | 149 (52.84) |        |
| Widow/separated       | 6 (75.00)   | 2 (25.00)   |        |

Pearson chi-squared test was performed for statistical analyses.

**Table 5:** Factors associated with negative attitude of patients towards field of family physicians

| Characteristic        | Field of family physicians no (%) |             | p-value (twos-died) |
|-----------------------|-----------------------------------|-------------|---------------------|
|                       | No (n=203)                        | Yes (n=197) |                     |
| <b>Age category</b>   |                                   |             |                     |
| 16-20                 | 12 (46.15)                        | 14 (53.85)  | 0.6183              |
| 21-30                 | 59 (48.76)                        | 62 (51.24)  |                     |
| 31-40                 | 62 (54.39)                        | 52 (45.61)  |                     |
| 41-50                 | 41 (45.56)                        | 49 (54.44)  |                     |
| 51-60                 | 25 (58.14)                        | 18 (41.86)  |                     |
| 61-70                 | 4 (66.67)                         | 2 (33.33)   |                     |
| <b>Gender</b>         |                                   |             |                     |
| Male                  | 74 (52.11)                        | 68 (47.89)  | 0.6859              |
| Female                | 129 (50.00)                       | 129 (50.00) |                     |
| <b>Education</b>      |                                   |             |                     |
| Illiterate            | 16 (80.00)                        | 4 (20.00)   | 0.0163              |
| Primary school        | 36 (50.70)                        | 35 (49.30)  |                     |
| Secondary school      | 86 (55.13)                        | 70 (44.87)  |                     |
| High school           | 25 (40.98)                        | 36 (59.02)  |                     |
| Institute             | 31 (47.69)                        | 34 (52.31)  |                     |
| College               | 9 (33.33)                         | 18 (66.67)  |                     |
| <b>Occupation</b>     |                                   |             |                     |
| Health-related        | 13 (35.14)                        | 24 (64.86)  | 0.0461              |
| Non-health related    | 190 (52.34)                       | 173 (47.66) |                     |
| <b>Marital status</b> |                                   |             |                     |
| Single                | 51 (46.36)                        | 59 (53.64)  | 0.2409              |
| Married               | 146 (51.77)                       | 136 (48.23) |                     |
| Widow/separated       | 6 (75.00)                         | 2 (25.00)   |                     |

Pearson chi-squared test was performed for statistical analyses.



**Fig 1:** Knowledge and attitudes of patients towards family physician

## Discussion

The necessity of regular family doctors is rising due to the aging of the population and increasing prevalence of chronic disease. The majority of people in the community demand family doctors to provide the family with the medical care and the initial examination and the advices about the lifestyle modifications to modify some factors that may affect some disease progression and to prevent the transmission of some communicable diseases. Their role is very important in the management of some mental disorders that may include anxiety, stress and depression [7]. In many countries the family doctors play a role a part of surveillance system for some infectious diseases and they work as the gatekeepers of the health care system. They influence the vaccination programs and they may recommend vaccination process in the absence of contraindications. The role of the family doctors is also important for the regulation of some guidelines for some community problems such as smoking, health dietary habits, obesity control, and sanitation guidelines [8,9]. A positive attitude is required from the family doctors during their work with their multidisciplinary team, professionalism also is mandatory during the dealing with patients to reduce the conflicts and deliver the best health service to the patients and the community [10]. In this study about 86.75% of the involved persons have an idea about the role of the family doctors and 69% of them visited family doctors. 72.25% of them know the role of the family doctors in the community, and 45.75% of them know the places of some family doctors. Family doctors are the first contacts of patients in many countries. As trusted and respected members of the community, family doctors improve the knowledge and understand the risks and can, through their engagement with the government and authorities, communicate for mitigating them to the public health in an accurate and truthful way [11]. From the involved patients, (56.57%) reported that family doctor have a positive role in advising the family about a healthy life style, 43.25% reported that family doctors have a role in treating some medical diseases, 50.5% reported that they have a role in the early detection of the diseases in the community, 56.57% preferred to have a specialist doctors in their medical care, and 53.5% reported that the family doctors don't have enough experience in the specialized health care services. Family doctors can manage more patients by some innovative ways of practice. Recent modes of practice, like the use of internet and digital health services [12]. In the current study, analyses were performed between the factors associated with factors associated with negative attitude towards the role of family physicians, this analysis showed that there is no significant correlation with the occupation with all the parameters that were studied such as age, gender, education level, occupation and the marital status. Studies showed that the negative attitudes toward family doctors are usually reflective that goes beyond family doctor – patient interaction, and its improvement requires the involvement of some academic and community based organizations [13]. In the current study, another analyses were performed between the factors associated with factors associated with negative attitude of patients towards medical expertise of family physicians, this analysis showed that there was a significant correlation with the occupation (p value 0.0127), while the correlation was not significant with the age, gender, education level and the marital status. Although many physicians have a suboptimal

low level of practicing in some medical fields, the majority of them have a neutral attitude towards evidence based medicine practice. Great experience as a family physician, quick access to web based references is associated with better practice [14]. Among the analysed patients, there was a significant correlation with education level (p = 0.0001) and occupation (p = 0.0001), but not with other variables. There is a significant correlation between education (p = 0.0001), occupation (p = 0.0097), and marital status (p = 0.0341) and the intensity of patients' attitudes towards their family physicians. Negative perceptions about working with patients do not fully explain the inadequacy of care provided to a specific patient group; however, other factors, such as inadequate awareness of the benefits of adapting the format of a consultation and the quality of the interface between the family doctor and the career accompanying the patient, may be associated with this point [15,16].

## Conclusion

- Patients perception towards family physician regarding knowledge and attitude was weak but still better than expected
- Occupation and Education represented important causative factors for deviation toward reduced patient information regarding family physician.
- Occupation is the most important factor affecting Medical expertise of family physicians
- Education is the most important Factor affecting Discussing the health issues with family physicians
- Occupation and Education is the most important Factor affecting field of family physicians number.

## Conflict of Interest

Not available

## Financial Support

Not available

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