

ORIGINAL ARTICLE

# Factors affecting the decision to choose family medicine as a specialty among medical interns at King Abdul-Aziz University

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## ABSTRACT

**Background:** Family medicine is one of the primary specialties in medicine. This study aims to obtain in-depth information from medical interns at King Abdul-Aziz University in Saudi Arabia who are interested in choosing family medicine as their future specialty and highlight key points of misconception and knowledge gaps regarding family medicine that might affect their decision-making process.

**Methods:** A cross-sectional study was conducted from June 2021 to October 2021 among medical interns enrolled at King Abdul-Aziz University. Data were collected via online questionnaires distributed on social media. The study excluded first- to sixth-year medical students. The questionnaire included sex, grade point average, perception of family medicine as a future specialty, and knowledge about the family medicine residency program in Saudi Arabia. We used IBM Statistical Package for the Social Sciences Statistics for Windows, Version 23.0 (IBM Corp., Armonk, NY) for data analysis.  $p < 0.05$  was considered significant.

**Results:** Most participants reported preferring a medical specialty during their clinical and internship years. Most participants had moderate to high levels of perception of family medicine as a future specialty. Regarding the level of perception of possible rotation during the family medicine program, most participants considered internal medicine, and fewer than 50% considered pediatrics and obstetrics/gynecology (OB/GYN).

**Conclusions:** Half of the participants preferred a medical specialty as a future career, including a family medicine specialty. Interns had misconceptions regarding extra rotations outside of internal medicine, pediatrics, and OB/GYN rotations offered during the Saudi residency program.

**Keywords:** Family medicine, medical intern, specialty.

## Introduction

Family medicine is one of the essential medical specialties in the Kingdom of Saudi Arabia. Enrollment in family medicine is one of the main steps in the health ministry's 2030 Saudi Vision goals. Family medicine in Saudi Arabia was first established in 1980 at King Faisal University in the eastern province of Saudi Arabia. The concept spread to four universities in the country, reaching King Abdul-Aziz University in 1985 [1]. Courses in family medicine were added to the undergraduate curricula, and postgraduate programs first appeared in 1988 at King Saud University and King Faisal University. The Arab Board of Family Medicine was formed in 1991. In 1995, the Saudi Commission for Health Specialties

created the Saudi Board of Family Medicine, which directed further development of primary health care (PHC) in the Kingdom [1]. Al-Khaldi et al. [2] reported that of 6,107 physicians in 2,282 PHC centers, only 636

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were family physicians (10%), and the Saudi Board of Family Medicine had only 756 trainees [2]. A medical intern faces a variety of postgraduate programs in which to enroll and start a career path. However, due to many misconceptions about this specialty, interns may need an accurate understanding of PHC and family medicine. This study aims to obtain in-depth information from medical interns interested in choosing family medicine as their career path and highlight key points of misconception and gaps in knowledge regarding family medicine that might affect their decision-making process. There is no study in Jeddah on what makes an intern choose family medicine as a career path.

**Subjects and Methods**

A cross-sectional survey-based study was conducted among medical interns enrolled at King Abdul-Aziz University from June to October 2021. The Institutional Review Board of Jeddah University approved the study design. Data were collected via online questionnaires distributed on social media. The study excluded first-year through sixth-year medical students. Among the 450 questionnaire recipients, only 216 responded. Of those, 120 responses were incomplete and excluded, leaving 92 complete responses analyzed in the study. The questionnaire collected sex, grade point average (GPA), perception of family medicine as a future specialty, and knowledge about the family medicine residency program in Saudi Arabia. The authors designed the questionnaire and reviewed it with family medicine professors at Jeddah University.

Data analysis was performed using IBM Statistical Package for the Social Sciences Statistics for Windows, Version 23.0 (IBM Corp., Armonk, NY). We used frequency and percentages to display categorical variables. Range, mean, and standard deviation were used to present continuous variables, and independent *t*-tests and analysis of variance were used to test for factors associated with perception toward family medicine as a specialty. We considered *p* < 0.05 as significant. We established a scoring system using eight questions to assess the participant’s perception of family medicine. A strongly positive perception was given two points, a positive perception was given one point, and a negative perception was given zero points. The perception score was then summed, and the total perception score was generated; the lowest possible score was zero, and the highest score was 16. The level of perception was then constructed for the participants based on the perception score. Those with a total score of <50% (scores of ≤7) were considered to have a low level of perception. Those who had a total score between 50% and 75% (score of 8-12) were considered to have a moderate level of positive perception, and those who had a total score >75% (scores ≥13) were considered to have a high level of positive perception.

**Results**

A total of 92 respondents were included in the study. Table 1 shows the sociodemographic and academic profile of the study population. Sixty-one participants (66.3%) were men, 31 (33.7%) were women, and most respondents (*n* = 33; 35.9%) had a GPA between 3.5 and 4. Figure 1 displays the participants’ preferred future career paths. Most respondents (*n* = 48; 52.2%) preferred a medical specialty (e.g., internal medicine, pediatrics, family medicine), while 25 (27.2%) reported preferring both medical and surgical specialties [obstetrics/gynecology (OB/GYN); ear, nose, and throat surgery; emergency medicine; urology]. Figure 2 showed when the participants started considering a specialty. Most respondents (*n* = 56; 60.9%) started considering a specialty while in their clinical years, and 23 (25%) started considering it during their internship year. Table 2 shows the respondent’s perception of family medicine as a specialty. Scores ranged from 4 to 15, with a mean of 9.62 ± 2.79. Twenty-five respondents (27.2%) had a low level of perception, 54 (58.7%) had a moderate level of perception, and 13 (14.1%) had a high level of perception. Fifty-four (58.7%) of participants strongly agreed that family medicine had more free time from work compared to other specialties and good family life.

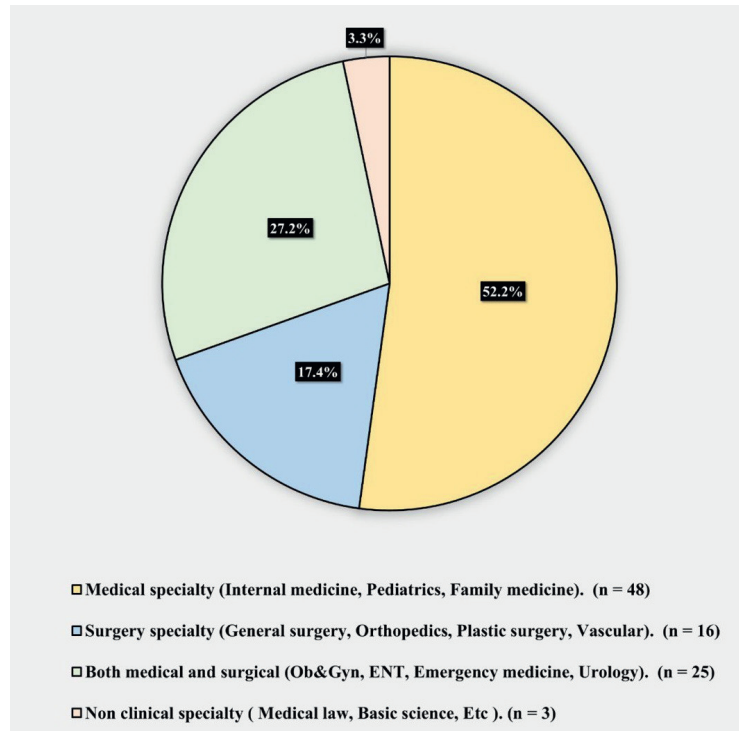
Figure 3 illustrates the perceived specialty rotations in family medicine among participants. The specialties that the participants most commonly thought about were internal medicine (*n* = 85; 92.4%), pediatrics (*n* = 73; 79.3%), and OB/GYN (*n* = 63; 68.5%). Ear, nose, and throat surgery was the least considered specialty (*n* = 41; 44.6%). Figure 4 presents respondents’ awareness of activities available in a family residency program. Seventeen respondents (18.5%) thought there were only family medicine clinics, 12 (13%) thought the program had specialized services (e.g., well-baby clinic, antenatal care, chronic disease clinic, mental health

**Table 1.** Sociodemographic and academic profiles of respondents (*n* = 92).

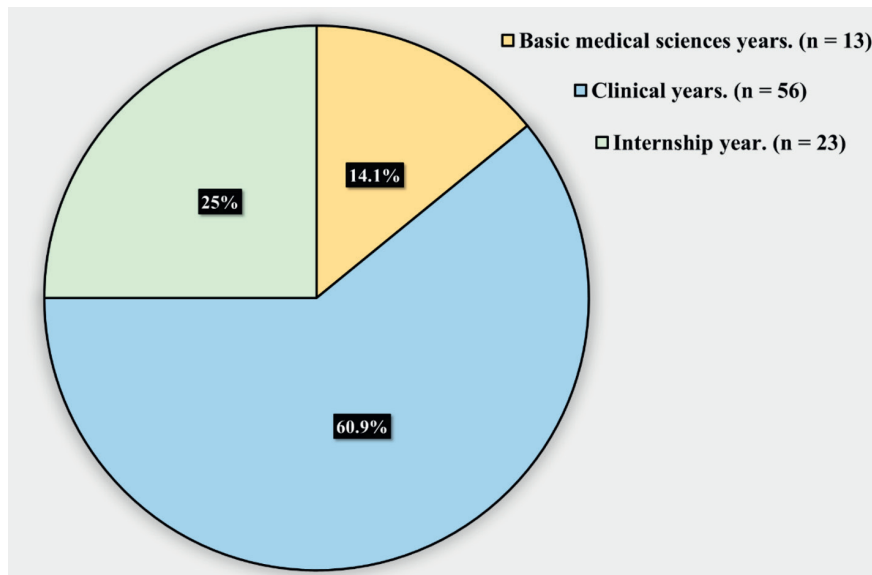
Demographical characteristics	<i>n</i>	%
Sex		
Male	61	66.30
Female	31	33.70
GPA		
<3	1	1.10
3-3.5	5	5.40
3.5-4	27	29.30
4-4.5	33	35.90
>4.5	26	28.30

GPA, grade point average.

## Why Saudi medical interns choose family medicine



**Figure 1.** Respondents' preferred future career path.



**Figure 2.** When respondents began considering specialties.

clinic), 2 (2.2%) were aware of urgent care services (e.g., emergency department), and 61 (66.3%) were aware of all of the above. Table 3 shows the factors associated with the perception of family physicians as a specialty. We found no significant association between perception score and sex, GPA, and the start point for comparing specialties.

## Discussion

The specialty of family medicine is one of the main steps in the development of the health ministry to achieve the 2030 Saudi Vision Goals, which aim to restructure the health sector in the Kingdom as “a comprehensive, effective, and integrated health system based on the health of the individual and society” [3]. The goal is based on

## Why Saudi medical interns choose family medicine

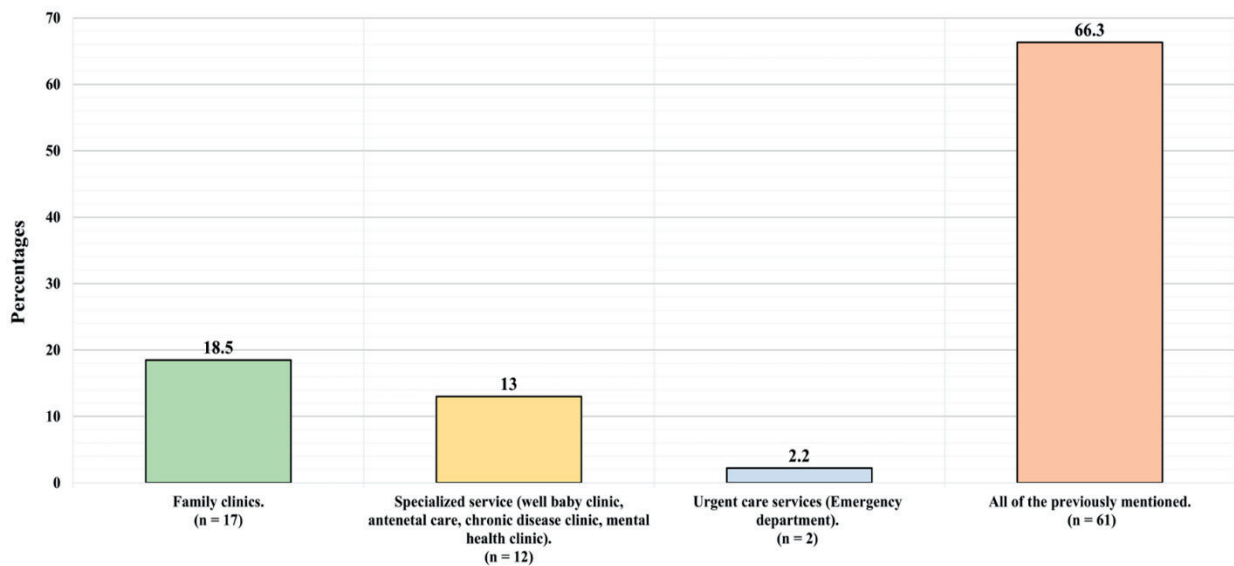
**Table 2.** Respondent perception of family medicine as a specialty (n=92)

Question	n	%
Perception of Participants Toward Family Medicine as a Specialty		
Q1/ Do you think family medicine have more free time from work compared to other specialties?		
Strongly agree	54	58.7
Agree	27	29.3
Disagree	11	12
Q2/ Do you think family medicine doctors have a satisfactory family life?		
Strongly agree	54	58.7
Agree	31	33.7
Disagree	7	7.6
Q3/ Do you think family medicine satisfies your career goals in the future?		
Strongly agree	20	21.7
Agree	18	19.6
Disagree	54	58.7
Q4/ Do you think family medicine doctors' role in treating all patients from different ages is an attractive idea?		
Strongly agree	34	37
Agree	36	39.1
Disagree	22	23.9
Q5/ Do you think the length of family medicine residency in Saudi Arabia is an attractive idea (three years)?		
Strongly agree	44	47.8
Agree	39	42.4
Disagree	9	9.8
Q6/ Do you think family medicine doctors can work in the private sector?		
Strongly agree	28	30.4
Agree	44	47.8
Disagree	20	21.7
Q7/ Do you think family medicine doctors improve the health of patients with multiple comorbidities?		
Strongly agree	44	47.8
Agree	42	45.7
Disagree	6	6.5
Q8/ Do you think family medicine doctors' income is an attractive factor compared to other specialties?		
Strongly agree	15	16.3
Agree	29	31.5
Disagree	48	52.2
Participants Perception Toward the Difficulty of Family Medicine Specialty in Saudi Arabia		
Q1/ Do you think family medicine residency program is difficult to match in?		
Strongly agree	16	17.4
Agree	43	46.7
Disagree	33	35.9
Q2/ Do you think family medicine residency program in Saudi Arabia is stressful?		
Strongly agree	10	10.9
Agree	35	38
Disagree	47	51.1

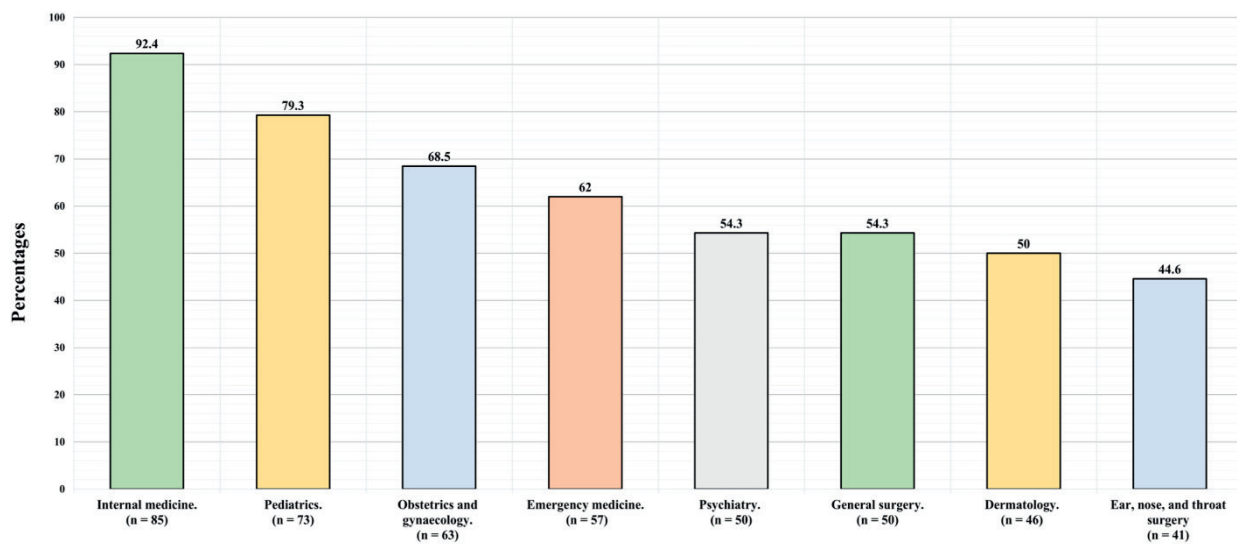
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## Why Saudi medical interns choose family medicine

Question	n	%
Perception Score (Lowest possible score = 0, highest possible score = 16)		
Mean	9.62	
Standard deviation	2.79	
Minimum	4	
Maximum	16	
Perception Levels		
Perception Level	n	%
Low level of Perception (score of $\leq 7$ ; $< 50\%$ of total score)	25	27.20
Moderate level of Perception (Score 8 to 12; 50% to 75% of total score)	54	58.70
High level of Perception (Score of $\geq 13$ ; $> 75\%$ of total score)	13	14.10



**Figure 3.** Respondents' anticipated activities encountered during family medicine training.



**Figure 4.** Respondents' anticipated specialties for rotation during family medicine residency.

**Table 3.** Factors associated with perception of family medicine as a specialty

Factor	Perception Score		P-Value*
	Mean	Standard Deviation	
Sex			
Male	9.84	2.80	0.299
Female	9.19	2.77	
GPA			
3 to 3.5	9.00	3.16	0.530
3.5 to 4.	9.56	3.42	
4 to 4.5	9.24	2.70	
>4.5	10.27	2.13	
When did you start preferring and comparing between specialties?			
Basic years	10.62	2.47	0.310
Clinical years	9.59	2.70	
Internship year	9.13	3.15	

\*Significant at level 0.05

Abbreviation: GPA, grade point average.

the principle of value-based care that ensures transparency and financial sustainability by promoting public health and disease prevention [3]. Approximately half of the participants preferred a medical specialty as a career, which includes the family medicine specialty. Almost 85% of respondents started to consider their specialty in the clinical and internship year, highlighting the importance of the clinical years in making future career decisions among medical students. Regarding the perception of the participants toward family medicine as a specialty, more than 70% had a moderate to high level, indicating the perceived importance of family medicine. We found a significant knowledge gap regarding rotation specialties for family medicine residents. Most participants thought the rotations were internal medicine, pediatrics, and OB/GYN. Fewer than 50% of respondents considered other specialty rotations. No previous studies have assessed the knowledge of medical interns in Saudi postgraduate programs for comparison. We identified multiple important factors affecting choosing family medicine as a career. Interns had positive perceptions of family medicine regarding free time out of work, good family life, low-stress levels, and a short 3-year training period. These factors align with those found in another study in Saudi Arabia in 2019, which showed that a good lifestyle was the second most crucial factor in choosing a specialty among medical students [4-7]. Our study’s small sample was a significant limitation. The small sample size was likely due to our data collection time from June to October 2021, which coincides with Saudi medical license examinations. Another reason behind the small size of our sample was that we limited the respondent population to only medical interns at King Abdul-Aziz University. We recommend further studies focusing on factors affecting medical interns in choosing family medicine as a future specialty in Saudi Arabia with a larger sample size and different

universities in Saudi Arabia. Also, we recommend adding a special proposal about the family medicine Saudi postgraduate program and its sub-specialties in Saudi Arabia to be provided in family medicine rotation during medical school and internship year.

**Conclusion**

We conducted this study to obtain in-depth information from medical interns interested in choosing family medicine. We highlighted key points of misconception and gaps in knowledge regarding family medicine that might affect their career choices. According to our results, more than 70% of respondents had a moderate to high level of perception regarding family medicine, and approximately half of the participants preferred a medical specialty as a future career. Factors such as free time out of work, good family life, low-stress levels, and a short 3-year training period were all positive influencers for choosing family medicine as a specialty. Further similar studies are warranted to assess factors affecting whether interns choose to specialize in family medicine in Saudi Arabia with larger sample sizes and different universities. Also, the Saudi postgraduate family medicine rotation program should include a special proposal for family medicine and its sub-specialties during medical school and internship years.

**List of Abbreviations**

GPA Grade point average  
 OB/GYN Obstetrics and Gynecology

**Conflict of interest**

The authors declare that there is no conflict of interest regarding the publication of this article.

**Funding**

None.



### Consent to participate

Written informed consent was obtained from all the participants.

### Ethical approval

The ethical approval was granted by the Bioethics Committee of University of Jeddah, via registration number: HAP-02-J-094, Date Received 8/9/2021 Application Number: UJ-REC-018

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### References

1. Albar AA. Twenty years of family medicine education in Saudi Arabia. *East Mediterr Health J.* 1999;5:589–96. <https://doi.org/10.26719/1999.5.3.589>
2. Al-Khaldi YM, Al-Ghamdi EA, Al-Mogbil TI, Al-Khashan HI. Family medicine practice in Saudi Arabia: the current situation and proposed strategic directions plan 2020. *J Family Community Med.* 2017;24:156–63. [https://doi.org/10.4103/jfcm.JFCM\\_41\\_17](https://doi.org/10.4103/jfcm.JFCM_41_17)
3. Vision 2030. Health sector transformation program delivery plan [Internet]. Saudi Arabia [cited 2022 Nov 28]. Available from: <https://www.vision2030.gov.sa/v2030/vrps/hstp/>
4. McGaha AL, Garrett E, Jobe AC, Nalin P, Newton WP, Pugno PA, et al. Responses to medical students' frequently asked questions about family medicine. *Am Fam Physician.* 2007;76:99–106.
5. Scherger JE, Beasley JW, Brunton SA, Hudson TW, Mishkin GJ, Patric KW, et al. Responses to questions frequently asked by medical students about family practice. *J Fam Pract.* 1983;17:1047–52.
6. Green LA, Fryer GE, Yawn BP, Lanier D, Dovey SM. The ecology of medical care revisited. *N Engl J Med.* 2001;344:2021–5. <https://doi.org/10.1056/NEJM200106283442611>
7. Hing E, Cherry DK, Woodwell DA. National ambulatory medical care survey: 2003 summary. Advance data from vital and health statistics, No. 365. Hyattsville, MD: National Center for Health Statistics; 2005 [cited 20 Feb 2007]. Available from: <http://www.cdc.gov/nchs/data/ad/ad365.pdf>