



ORIGINAL ARTICLE

Career trends & influences on medical career choice among female medical students

Sayyam Fatima¹, Hafiz Abu Safian², Syed Waqas Hasan³, Jahangir Sarwar Khan⁴, Noshaba Akram⁵, Hafiz Muhammad Sanullah⁶, Bushra Shabana⁷, Sumaira Nawaz⁸, Gohar Rasheed⁹, Usman Qureshi¹⁰, Abeera Zareen¹¹

Article Citation: Fatima S, Safian HA, Hasan SY, Khan JS, Akram N, Sanullah HM, Shabana B, Nawaz S, Rasheed G, Qureshi U, Zareen A. Career trends & influences on medical career choice among female medical students. Professional Med J 2022; 29(11):1733-1739. <https://doi.org/10.29309/TPMJ/2022.29.11.7025>

ABSTRACT... Objective: To determine the factors that influence the future career choice among female medical students of Rawalpindi Medical University (RMU). **Study Design:** Descriptive Cross Sectional study. **Setting:** Rawalpindi Medical University, Rawalpindi. **Period:** 1st July 2021 to 31st August 2021. **Material & Methods:** Female students of 3rd, 4th and final year MBBS were included. Students were asked to complete a pre-designed questionnaire, which included demographic details and parameters such as, marital status, plan to have children in future, house job and post graduation preferences. **Results:** Four hundred fifty three students were included in this study. 69.8% students were neither married nor engaged. 32.5% had no intention of extending their family in next 5 years. Majority of the students (73.1%) chose medical profession on their own wish. About 96.2% females were planning to do house job. Out of these, 97.5% had already planned to pursue their post graduation. A quarter of medical students planned to pursue postgraduate training as well as family progression in the next 5 years (66.7% vs 25.7%). Current marital status, family extension in next 5 years, and reasons for adopting medical profession were found to be statistically significant, when compared to future career progression. ($P < 0.05$). **Conclusion:** Female medical students in Pakistan are becoming more career oriented and taking decisions independently.

Key words: Career Choice, Female Medical Students, Postgraduate Trainee, House Job, Medical Profession.

INTRODUCTION

Pakistan is a third world country where literacy rate of women is 48% as compared to men which is 70%.¹ These statistics are contrary to the fact that more women are getting admissions and graduating from medical colleges in Pakistan. Females account for 65% of the total medical students registered in Pakistan's medical colleges and the percentage is still rising.² This change in trend was seen after 1990, since the implementation of open merit policy by the orders of Supreme Court of Pakistan in the famous Shirin Munir case.³ Before application of open merit system, quota based seats were reserved for female students, which accounted for 30-40% or even less. Similar trends can be seen worldwide. 50% of health care workers in the United Kingdom are females.⁴

Ironically, despite the "feminization of medical education"⁴, percentage of female doctors acquiring post graduate medical degree is disproportionately very low. A number of external and internal factors are involved for this drop out. Marriage has been reported as one of the major factor. It is estimated that around 85,000 female doctors are not pursuing their medical career after graduation and end up as housewives.⁴ Many other social factors are also playing their role i.e; restriction from spouse or in-laws, child bearing and rearing, long duty hours etc.⁴

Choosing a speciality after graduation is a complex and multi factorial process. It is influenced by a multitude of factors and variables such as gender, age, personal interests, family pressure, social norms and financial priorities.^{5,6,7} Many studies are being conducted around the globe to find out

1. MBBS, Postgraduate Trainee Surgical Unit-I, Holy Family Hospital, Rawalpindi.
2. MBBS, House Officer Nephrology, Holy Family Hospital, Rawalpindi.
3. MBBS, FCPS, MRCPs, Senior Registrar Surgical Unit-I, Holy Family Hospital, Rawalpindi.
4. MBBS, FCPS, FRCS, FACS, FICS, Dip M. Ed, Professor & Head Surgical Unit-I, Holy Family Hospital, Rawalpindi.
5. MBBS, Postgraduate Trainee Surgical Unit-I, Holy Family Hospital, Rawalpindi.
6. Final Year MBBS Student, Rawalpindi Medical University, Rawalpindi.
7. MBBS, Postgraduate Trainee Surgical Unit-I, Holy Family Hospital, Rawalpindi.
8. MBBS, Postgraduate Trainee Surgical Unit-I, Holy Family Hospital, Rawalpindi.
9. MBBS, FCPS, Assistant Professor Surgical Unit-I, Holy Family Hospital, Rawalpindi.
10. MBBS, FCPS, Associate Professor Surgical Unit-I, Holy Family Hospital, Rawalpindi.
11. MBBS, FCPS, MSc (Pain Medicine), Assistant Professor Anesthesiology, Benazir Bhutto Hospital.

Correspondence Address:
Dr. Jahangir Sarwar Khan
Department of Surgical Unit-I,
Holy Family, Hospital, Rawalpindi.
jskdr@hotmail.com

Article received on: 17/02/2022
Accepted for publication: 07/07/2022

career preferences of female medical doctors. It is important as it reflects the availability of future specialist doctors in any country, which ultimately has significant impact on policy making for health care system of a country.^{6,7}

It was assumed in the past that majority of doctors choose their speciality after completion of graduation. However, literature supports the evidence that career choices can be determined before graduation during medical college life.^{6,7} The objective of this study was to investigate the priorities and influences regarding future career choice among female medical students of Rawalpindi Medical University (RMU).

MATERIAL & METHODS

This is a descriptive cross sectional study which was conducted at Rawalpindi Medical University, Rawalpindi from 1st July 2021 to 31st August 2021 over a period of 2 months. After approval of the study by the Ethical committee of Rawalpindi Medical University (RMU) and obtaining the written informed consent, students from third to final year of MBBS were included in this survey. Those students who were not interested in filling the questionnaire and those who were reluctant to participate were excluded from the study. Confidentiality and anonymity of the participants was assured during this study.

A predesigned questionnaire was used to collect and record information. The questionnaire was distributed among students during their regular classes. It included demographic details, current marital status, plan to have children in next 5 years and reason for choosing medical profession. The students were also asked about future career preferences after finishing the medical college and reasons for choosing a specific speciality. They were enquired about personal, professional, social and economic factors, that may cause a hindrance in their future career building and progression.

The recorded data was entered and analysed using Statistical Package for Social Sciences (SPSS) version 23.0. Descriptive statistics were applied to check the frequency distribution

of students across various variables. Cross tabulation of current marital status, plan to have children in next 5 years and reason for choosing medical profession with plan to do house job and post graduate qualification was done. Chi-square analysis was applied to see the strength of association. Probability value of less than 0.005 was considered significant.

RESULTS

A total of 453 female students from third to final year MBBS participated in this study. Mean age of students is 22.15 ± 1.237 . The distribution of students according to the year of study is shown in Figure-1.

Out of these 453 patients, 22 (4.9%) females were married. 36 (7.9%) students were engaged whereas 79 (17.45%) were going to be engaged in next 12 months. Majority of the students ($n=316$, 69.8%) were neither married or engaged nor would be married or engaged within the next 12 months. When asked about the kids, 8 (1.8%) students already had children. 116 (25.6%) students were planning to have children in next 5 years, 147 (32.5%) had no intention of extending their family in next 5 years, and 153 (33.8%) were unsure about children in next 5 years. Only 29 students were dependent upon their husband and future in laws for future family extension in coming 5 years.

Majority of the student (73.1%) chose medical profession on their own wish. Parents or family forced 78 (17.2%) students to pursue medical career. A minority of students (5.3%) chose for the sake of economic security while social factors were the contributing reason for choosing medical profession in 20 (4.4%) students.

When enquired about future professional development, 436 (96.2%) females were planning to do house job and interestingly, out of these 436 students, 97.5% had already planned to pursue postgraduate training after house job (HJ). The distribution of post graduate specialities among female students is shown in Table-I. Regarding importance of others opinion, majority of the students found it somewhat important (34.4%),

important (26.7%), and very important (16.8%). Only 100 (22.1%) didn't consider it to be important. When asked about the influence of family on further career progression, 45% students had some influence, 25.6% considered a strong influence of family, 18.3% had minor influence and only 11% found no influence of family on further career progression. Responses against various opinions regarding career selection and professional/ social/ economic factors are shown in Table-II.

Majority of the students who were planning to acquire post graduate qualification were either unsure or had no plan of having children in coming 5 years. Only a quarter of medical students planned to pursue postgraduate training as well as family progression in the next 5 years (66.7% vs 25.7%). Current marital status, family extension in next 5 years, and reason for pursuing medical profession was found to be statistically significant, when compared to future career progression. This is shown in Table-III,IV and V.

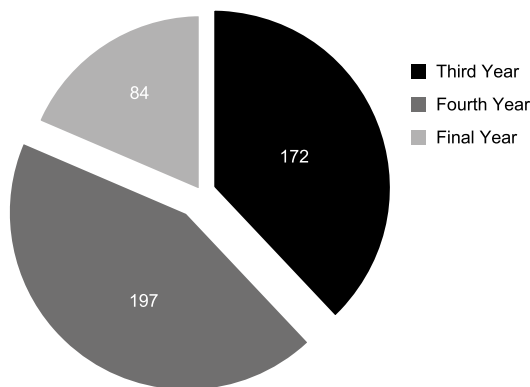


Figure-1. Distribution of students according to the year of study

Speciality	Frequency (n=453) (%)
General Surgery	55 (12.1%)
General Medicine	50 (11.0%)
Gynaecology & Obstetrics	27 (6.0%)
Pediatrics	26 (5.7%)
Sub-specialities of Surgery	50 (11.0%)
Sub-specialities of Medicine	70 (15.5%)
Basic Sciences	4 (0.9%)
Clinical Research	5 (1.1%)
Not decided yet	138 (30.5%)
*None	28 (6.2%)

Table-I. Distribution of specialities among female undergraduate students
*None= those students who are not acquiring any post-graduate training.

Opinion	Frequency (n=453)	
	Yes	No
	Frequency (n) (%)	Frequency (n)
Is medical profession best suited for females?	352 (77.7%)	101 (22.3%)
Career planning after graduation?	426 (94.0%)	27 (6.0%)
Influence of gender on speciality?	291 (64.2%)	162 (35.8%)
Attitude of seniors?	273 (60.3%)	180 (39.7%)
Change field of speciality?	310 (68.4%)	143 (31.6%)
Change of speciality because of current economical status?	149 (32.9%)	304 (67.1%)
Bright career of females in surgery?	359 (79.2%)	94 (20.8%)
Gynae/ Obs being the ultimate field of speciality for females?	54 (11.9%)	399 (88.1%)

Table-II. Responses of female students to various opinions regarding career selection & professional/ social/ economic factors

		Current Marital Status				P-Value
		Engaged	Will be Engaged in Next 1 Year	Married	Neither Married Nor Will Be Engaged in Next 1 Year	
		36	79	22	316	
Plan for Housejob	Yes (n=436)	30	76	18	312	0.000
	No (n=17)	06	03	04	04	
Plan for Postgraduate Training	Yes (n=425)	31	73	17	304	0.001
	No (n=28)	05	06	05	12	

Table-III. Cross-tabulation of current marital status with plan of doing housejob and postgraduate qualification

		Children Planning in Next 5-years					P-Value
		Yes	No	May be	Already Have Children	Depends on Husband/Future in Laws	
		116	147	153	08	29	
Plan for Housejob	Yes (n=436)	111	144	148	05	28	0.000
	No (n=17)	05	03	05	03	01	
Plan for Post-graduate Training	Yes (n=425)	109	137	147	04	28	0.000
	No (n=28)	07	10	06	04	01	

Table-IV. Cross-tabulation of children planning in next 5 years with plan of doing housejob and postgraduate qualification

		Reason for Choosing Medical Profession				P-Value
		Own Wish	Parents/ Family Pressure	Economic Security	Social Factors	
		331	78	24	20	
Plan for Housejob	Yes (n=436)	324	75	19	18	0.000
	No (n=17)	07	03	05	02	
Plan for Post-graduate Training	Yes (n=425)	319	70	18	18	0.000
	No (n=28)	12	08	06	02	

Table-V. Cross-tabulation of reason for choosing medical profession with plan of doing housejob and postgraduate qualification

DISCUSSION

The Subcontinent has always been a fertile ground for the medical profession, producing skilled medical professionals that have been catering for medical needs throughout the world. A great number of these medical professionals are serving in the West and contributing to overall development of the medical field. In recent years, there has been a radical change in the gender distribution of these fertile grounds i.e., medical colleges and a lot more female medical students are aspiring to become doctors. In fact, the gender ratio has reversed, and male medical students are now a minority. Keeping in mind this fact, priorities of females, their preferences, factors influencing their career choices and social pressures all need to be assessed and addressed comprehensively to get the best possible output from them and our study aims to precisely do that.

This study comprised of medical students from 3rd to final year with a mean age of 22.15 ± 1.237 . Majority of the females of this age group were unmarried and unengaged and did not plan for engagement in the next 12 months (n= 316, 69.8%) which shows that contrary to popular belief, female medical students in Pakistan do

not have marriage as their priority.⁴ Moreover, in recent times, more and more female doctors are becoming career oriented with social responsibilities, not being the top priority. This also proved the limited role of husbands/ in-laws in decision making, at least during the early phase of the careers of female medical doctors. This fact is also proven by other surveys published elsewhere.^{3,4}

Majority of our female students in this study aim to pursue their careers going for house job and even training (96.2% and 97.5% respectively) regardless of their social or economic status. This is contrary to popular belief propagated by media and social entities that female doctors do not prioritize their careers. This finding is also in conformity with the findings of Masood et al report on career trends among females.³ Another astonishing observation in our study is that this trend of pursuance of career does not change with increasing age and social responsibilities. Interestingly, majority of our study population do not plan to have children in the next 5 years or are not sure about it (66.3%) which shows that there is some effect of this social responsibility on career planning.

An interesting and peculiar finding in our study was that majority (n = 138, 30.5%) of the study participants have not decided their specific specialty for post-graduation. Those who had chosen to pursue postgraduate training picked general surgery as the majority (n = 55, 12.1%). To our amaze, only 6% females chose Obstetrics & Gynecology, with 11 % choosing general medicine for future training. These findings show recent changes in trends in career choices among females and many more females are choosing surgery than ever before. These findings are in contradiction to other similar studies carried out previously in Pakistan, with general medicine and pediatric medicine being on top of the list for female doctors.^{3,7} Nevertheless, in these studies, gynecology was never a top priority among females. In fact, this specialty failed to be one of the top three most popular specialties.^{6,8} The reasons can be manifold. One of the most common reasons is awareness among medical students which wasn't present before. More and more female students think of gynecology as a hectic field and carries more strain than other specialties. Current generation of female doctors are more confident in pursuing careers in more challenging fields of surgery and its sub-specialties. According to Zaheer et al, the reason for choosing surgery given by the students themselves were academic interest in the field, practical application of skills and a higher income.⁹ While these reasons may be debatable, but they depict the mindset of the students and their priorities.

When compared our results with studies carried out in other parts of the world, it was found that demographics and ethnicity has a very significant role.⁵ A study carried out in Taif University, Saudi Arabia by Muhammed Eid et al showed that there was not any significant difference between career choices among male and female medical students, with family medicine and ENT being the most preferred specialties.¹¹ Similar study carried out by Alshahrani et al at King Fahad university Saudi Arabia showed that females prefer internal medicine and family medicine as careers.¹² Nationwide surveys compiled by Fay Smith et al in the UK regarding career choices

among doctors showed that more females than males preferred to have "a career with acceptable working hours" (61% vs 44%) and "career that fits their domestic environment" (36% vs 23%). This shows that gender still is a factor in UK for choosing a medical career.¹³

According to the study carried out by Scott et al., South African medical students preferred surgery as their career choice, regardless of their gender.¹⁴ This shows that trends among doctors vary a lot according to their place of residence, as every country has a different health system and likewise working hours and environment of each specialty also vary vastly among countries. This has a significant effect on the ultimate career decision of medical students.¹⁵

It is an established fact that female medical students far outnumber male students in all medical colleges of Pakistan. They are indeed the future of medical field, and according to our study, they are more than willing to work. All that is required is social support, government led incentives and general acceptance by colleagues and seniors in respective fields.

CONCLUSION

Female medical students in Pakaistan are becoming more independent and career oriented these days. Unlike past, marriage is no longer a top priority for them. They are determined to build their medical career after graduation and are taking limited influence of husband/in-laws or other social factors in deciding their future medical preferences. Other than gynecology and obstetrics, females doctors are now showing more interest in surgery, which was once considered as male dominant field.






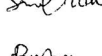




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AUTHORSHIP AND CONTRIBUTION DECLARATION

No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Sayyam Fatima	Conception and design, Drafting of the article.	
2	Hafiz Abu Safian	Analysis and interpretation of the data.	
3	Syed Waqas Hasan	Analysis and interpretation of the data.	
4	Jahangir Sarwar Khan	Final approval and Guarantor of the article.	
5	Noshaba Akram	Collection & Assembly of data.	
6	Hafiz Muhammad Sanaulah	Collection & Assembly of data.	
7	Bushra Shabana	Collection & Assembly of data.	
8	Sumaira Nawaz	Collection & Assembly of data.	
9	Gohar Rasheed	Statistical expertise.	
10	Usman Qureshi	Critical revision of the article.	
11	Abeera Zareen	Critical revision of the article.	