

## ORIGINAL ARTICLE

**Gender Perspective in Motivation to Study Medicine and Option of Future Practice; A Cross-Sectional Survey in Two Medical Colleges of Karachi, Pakistan**SHEENA MUSTAFA<sup>1</sup>, MAHWISH SHAH<sup>2</sup>, SABA KHAN<sup>3</sup>, SADIA RASHID<sup>4</sup>, NAJMA BANO SHAIKH<sup>5</sup>, SAROSH-UL HASSAN<sup>6</sup><sup>1</sup>Gynecologist, Dr. Ruth K. M. Pfau Civil Hospital Karachi<sup>2</sup>Consultant gynaecologist, Dr. Ruth K. M. Pfau Civil Hospital Karachi<sup>3</sup>Assistant Professor of gynae and OBS, JPMC Karachi<sup>4</sup>Associate Professor of Gynae and OBS, Jinnah Medical and dental Hospital Karachi<sup>5</sup>Associate Professor of Gynae and OBS, LUMHS/Jamshoro<sup>6</sup>Resident of Anaesthesiology and critical care, Liaquat national Hospital KarachiCorresponding author: Sheena Mustafa, Email: [drsheena\\_memon@yahoo.com](mailto:drsheena_memon@yahoo.com)**ABSTRACT****Objective:** To access the reasons that are the driving force for joining the medical field, whether willingly, by parents' wish, or because clinicians are the role models and the career choice of the medical students,**Methods:** This cross-sectional questionnaire-based study was conducted at Jinnah Medical & Dental College and Dow University, Karachi, from May 2018 to November 2018. All the undergraduate medical (MBBS) students were randomly selected, choosing 40 students from each class in an equal number according to gender (20 female students and 20 male students), first to final years from both of the colleges. Consent to participation was obtained verbally from all of the individuals. A questioner was structured regarding demographic information along with reasons for choosing the medical profession and specialty choice for a future career. All the information was collected by using the questioner based self-made study proforma.**Results:** A total of 400 students were studied. The majority of the students 59.6% were aged 20–22 years, while 40.5% were 23–26 years old. According to the reasons for choosing the medical profession, 37.0% were due to personal interest and parental wishes, 6.8% said their parents are doctors and they are following them, 28.5% students choose the medical profession to serve humanity, 10.5% chose it for high income, 10.3% followed it as a role model, and 7.0% had multiple other reasons. Most common career choices were 26.5% medicine, 30.0% surgery, 5.3% gynaecology, and 7.5% public health, while 8.0% of students still had not decided. Reasons for choosing the medical profession were statistically significant according to age and gender ( $p = 0.001$ ).**Conclusion:** The choice of medical education in Pakistan is still affected by stereotypes thoughts with typical eastern influences. Parental wish is a strong and prevailing factor, followed by to serve humanity. Lack of career counselling and guidelines results in the health industry losing many future doctors every year, as well as loss of potential resources for their training.**Keywords:** Factors, medical profession, gender, career choice**INTRODUCTION**

The undergraduate medical education that students get is widely acknowledged as one of the most significant factors in determining their perspectives on primary care professions.<sup>1</sup> Currently, the world is dealing with a twofold challenge consisting of a shortage of health care workers and an unequal distribution of those professionals, particularly in middle-income and low-income countries.<sup>2</sup> Policymakers both domestically and globally are very concerned about undergraduate students' attitudes and the reasons they choose a particular career. Students at the undergraduate level have several career options, and it is frequently challenging for them to choose one specific field in the absence of adequate facilities for career counselling.<sup>4</sup> The decision-making process to select a career involves a number of supporting factors that include personal interest<sup>5</sup>, peer pressure, self-motivation, parental wishes, anticipated better quality of life after attaining qualification. A person's desire or excitement to achieve a specific goal, even though that doing so will require them to put in a lot of effort and make some adjustments, is an example of motivation.<sup>6</sup> A medical career is unique, as it is perceived to be very noble, providing an opportunity to serve fellow human beings more than any other career.<sup>7</sup> After completing medical education, numerous factors, including conventional motivators such as personality characteristics or the expectation of specialty-related earnings, personal time free from practice needs for pleasure, familial, and vocational activities, impact professional specialization selections. Concerns about the potential neglect of male patients in fields like urology and surgery, where it has been observed that doctors of the same gender and ethnicity are preferred, have been raised, especially in developed countries.<sup>8,9</sup> Although the influence of gendering on medical practice is not well acknowledged worldwide.<sup>8</sup> According to the publication, female doctors may be able to treat female patients more successfully than male

doctors.<sup>10</sup> The largest users of health care services globally have been found to be women. Because the biological function of men has been represented as that of defenders and breadwinners, whereas that of women has been shown as that of nurturers, homemakers, and caregivers, gender and gender domination, as the most prevalent stereotypes throughout most countries, have been preserved.<sup>8,11</sup> Recently, it has been reported that the female medical students are more motivated because they have more social reasons for selecting a career in medicine than their male colleagues, and further studies are also recommended at the local level.<sup>12</sup> However, this study has been conducted to determine the gender perspective on motivation to study medicine and the option of future practice.

**MATERIAL AND METHODS**

This cross-sectional questionnaire-based study was conducted at Jinnah Medical & Dental College and Dow University, Karachi, from May 2018 to November 2018. A sample of 400 undergraduate medical (MBBS) students was randomly selected by choosing 40 students from each class in an equal number according to gender (20 female students and 20 male students), first to final years, from both of the colleges. All the postgraduate students, dental students, and those who were not agreeing to participate in the study were excluded. Ethical approval was obtained from the authorities of both medical colleges before data collection. All the students were briefed regarding the aims of the study, and we reassured them that all of their information would be kept confidential. Consent to participation was obtained verbally from all of the individuals. A questioner was structured to provide demographic information along with reasons for choosing the medical profession and a specialty choice for a future career. All the information was collected by using the questioner-based, self-made study proforma. SPSS version 26 has been used to analyze

the data. Chi-square test was used to find out associations and a p-value <0.05 was taken as significant.

## RESULTS

A total of 400 students were studied. The majority of the students 59.6% were aged 20 to 22 years, while 40.5% were 23–26 years old. Parental occupational status is shown in table 1.

Table 1: Demographic information of medical students

Variables		Frequency	Percentage
Age groups	20-22 years	238	59.6%
	23-26 years	162	40.5%
Gender	Male	200	50.0%
	Female	200	50.0%
Father's occupation	Doctor	100	25.0%
	Engineer	77	19.5%
	Health worker	11	2.5%
	Accounting	34	8.5%
	Business	119	29.8%
	Others	59	14.8%
Mother's occupation	Doctor	62	15.5%
	Engineer	18	4.5%
	Health Related Field	14	3.5%
	House Wife	251	62.8%
	Accounting	13	3.2%
	Business	5	1.2%
Others	37	9.2%	

On the clinical side, 26.5% chose medicine, 30.0% chose surgery, 5.3% chose gynaecology and OBS, 3.5% chose radiology, 7.5% chose paediatrics, and 0.5% chose pathology,

while on the non-clinical side, teaching accounted for 4.0%, research accounted for 6.5%, hospital administration accounted for 2.8%, public health accounted for 1.5%, CSS accounted for 3.0%, and 0.5% had multiple choices. Table.2

According to the reasons for choosing the medical profession, 37.0% were due to parental wishes, 6.8% said their parents are doctors and they are following them, 28.5% chose it to serve humanity, 10.5% chose it for high income, 10.3% followed it as a role model, and 7.0% had multiple other reasons. Although the results were statistically significant by age and gender ( $p = 0.001$ ). Table. 3

Table 2: Specialty choice for future career (n=400)

Specialty choice	Frequency	Percent
Clinical	295	73.75%
Medicine	106	26.5%
Surgery	122	30.5%
Gynae/ Obs.	21	5.3%
Radiology	14	3.5%
Paediatrics	30	7.5%
Pathology	2	0.5%
Non-Clinical	73	18.25%
Teaching/ Educationist	16	4.0%
Research	26	6.5%
Hospital Administration	11	2.8%
Public Health	6	1.5%
CSS	12	3.0%
Other	2	0.5%
Not decided	32	8.0%

Table 3: Cross tabulation of reason for choosing medical studies with age and gender.

Age in years	Reason for choosing medical studies						Total (n)	Statistical analysis
	Parents' wishes and personal interest	Parents Doctors	Serve Humanity	High income	Follow a role model	Other		
20	42	21	21	11	4	1	100	Chi square test statistic = 90.616 P- value < 0.001
	42.0%	21.0%	21.0%	11.0%	4.0%	1.0%	100.0%	
21	26	3	27	8	7	7	78	
	33.3%	3.8%	34.6%	10.3%	9.0%	9.0%	100.0%	
22	3	1	2	4	0	0	10	
	30.0%	10.0%	20.0%	40.0%	0.0%	0.0%	100.0%	
23	8	1	7	8	8	2	34	
	23.5%	2.9%	20.6%	23.5%	23.5%	5.9%	100.0%	
24	47	0	39	6	17	10	119	
	39.5%	0.0%	32.8%	5.0%	14.3%	8.4%	100.0%	
>25	22	1	18	5	5	8	59	
	37.3%	1.7%	30.5%	8.5%	8.5%	13.6%	100.0%	
Total	148	27	114	42	41	28	400	
	37.0%	6.8%	28.5%	10.5%	10.3%	7.0%	100.0%	

  

Gender	Reason for choosing medical studies						Total (n)	Statistical analysis
	Parents' wishes	Parents Doctors	Serve Humanity	High income	Follow a role model	Other		
Male	81	16	48	26	21	8	200	Chi square test statistic = 12.641 P- value = 0.027
	40.5%	8.0%	24.0%	13.0%	10.5%	4.0%	100.0%	
Female	67	11	66	16	20	20	200	
	33.5%	5.5%	33.0%	8.0%	10.0%	10.0%	100.0%	
Total	148	27	114	42	41	28	400	
	37.0%	6.8%	28.5%	10.5%	10.3%	7.0%	100.0%	

## DISCUSSION

Awareness of the career opportunities that medical students are considering is becoming an increasingly concerning issue as the proportion of female students in the student population continues to rise. The implications of having a student population that is becoming increasingly female have not been explored.<sup>13</sup> There are a lot of different things that went into making the decision, and the whole thing seems quite complicated. The purpose of this study is to bring some concern to the factors that influence a student's choice of medical subspecialty, such as the student's gender and where they are in their life at the time of their education. In this

study, according to the reasons for choosing the medical profession, 37.0% of students chose it due to parental wishes and personal interest, 6.8% of students said their parents are doctors and they are following in their path, 28.5% of students chose the medical profession to serve the community, 10.5% of students chose it for high income, 10.3% of students followed it as a role model, and 7.0% of students had multiple other reasons. Although the results were statistically significant by age and gender ( $p = 0.001$ ). In the comparison of this study, Zayabalaradjane Z et al<sup>14</sup> reported that 28.3% of medical students decided to pursue a profession in medicine, because of their appreciation for the

important role that doctors play in society and their desire to be of service to others. According to Ramya MR et al.<sup>15</sup>, 23% of students fulfil their parents' preferences, 1% choose it due to parental pressure, and the remaining 76% choose it due to personal interest. In other studies, carried out by Jothula et al.<sup>16</sup> and another that was carried out by Radhika et al.<sup>17</sup>, most of the subjects responded that self-interest had been the motive for selecting the MBBS and medicine as a career, respectively. According to research done by Tiwari et al.<sup>18</sup> reported that the 1st year MBBS candidates' motivations for deciding to pursue a career in medicine include a desire to assist the less poor, make money, further their own self-improvement, and be inspired by a few relative doctors. These have been identified as important considerations to make when deciding whether or not to enrol in a medical field.

In this study, according to the specialty chosen for a future career, 26.5% of students chose medicine, 30.0% chose surgery, 5.3% chose gynaecology and obstetrics, 3.5% chose radiology, 7.5% chose paediatrics, and 0.5% chose pathology on the clinical ground. On the non-clinical ground, teaching accounted for 4.0% of students, research 6.5% of students, hospital administration 2.8% of students, public health 1.5% of students, and CSS 3.0% of students. 0.5%. The term "responsibility" refers to the act of determining whether or not a person is responsible for his or her own actions. The two medical specializations that were chosen the most frequently were cardiology (25%) and paediatrics (24.2%). The next most popularly chosen fields of medicine were general surgery, gynaecology, and dermatology, with respective percentages of 21.8%, 18.5%, and 17.7%. Furthermore, histology (0.3%) and forensic medicine (0.3%) were the disciplines that received the fewest applications.<sup>19</sup> Consistently, Akhund S et al.<sup>20</sup> also reported that the surgical specializations (31%), medicine specializations (23%), and pediatrics (18%) were the most common choices of the medical students.

In this study reasons for choosing medical profession were statistically significant according to age and gender ( $p < 0.05$ ). Shahab F et al.<sup>21</sup> also reported that there was a big difference in motives behind the selection of the medical profession according to gender as 37 males and 23 females said due to fulfil their parents' wishes, 5 males and 10 females said due to the addition of doctor with their names 20 males and 4 females said they wanted to earn a lot of money, while 31 males and 40 females wanted to serve ailing humanity, and 7 males and 14 females had other reasons. On the other hand, Kunanithaworn N et al.<sup>22</sup> reported that the extrinsic motivation was found to have a favourable association with being female, having a personal preference for studying medicine, and having a good grade average in high school, according to the results of a path analysis. There was a correlation between intrinsic drive and the perception of receiving assistance from the family, individual preferences for pursuing a medical education, and the quality of being determined. Being male, making a choice for oneself, and despair were all linked to a lack of motivation. Although there was a correlation between extrinsic and intrinsic motivation, there was no correlation with self-efficacy.<sup>22</sup> A significant factor, in addition to the students' gender, seems to be the stage of life they are currently in.<sup>23</sup> Because the majority of the students are still relatively young, it's possible that they are less likely to have a long-term relationship. Being with a partner, on the other hand, is likely to have some influence on the decisions that are made for the future.<sup>23</sup> The suggestions of the partner and the points of view of striking a balance between work and family will, to a certain level, impact options in specializations. Additionally, the suggestions of the partner and the perceptions of striking a balance between work and family may influence the significance of several strong motivational elements for the selection of a specialty.<sup>13,23</sup> The desire of a medical student to continue with medical study in spite of emotional exhaustion, interruptions, or other impediments to professional growth is considered to be the motivation that drives them.<sup>24,25</sup> As a result, picking the appropriate line of work is one of

the most important factors in determining the kind of future one might expect. Furthermore, because there is a shortage of professional career guidance, bright students are typically drawn to the medical area due to the high pay advantages and social reputation of the field, as well as a lack of understanding regarding alternative fields.<sup>24</sup> In addition, the world is dealing with a major shortage of medical workers, which has resulted in a notable distribution of the doctor to patient ratio in the medical area.<sup>24,26</sup>

## CONCLUSION

The choice of medical education in Pakistan is still affected by stereotypes with typical eastern influences. Parental wish is a strong and prevailing factor, followed by to serve humanity. Lack of career counselling and guidelines results in the health industry losing many future doctors every year, as well as potential resources for their training. The shifting of medical education preference trends must be carefully and thoroughly explored in future studies.

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