

# Major Factors Causing Uncertainties in Career Selection Among Medical Students of Gujranwala Medical College



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## Abstract

**Background:** Diverse factors influence the career choice of medical students. This study was carried out to identify career preferences and factors influencing specialty selection among undergraduate medical students of Gujranwala Medical College which has students from multiple cities including Lahore, Rawalpindi, and Faisalabad to name a few. Hence this study will be valuable for the medical education sector because understanding career uncertainty at Gujranwala Medical College will also provide ways of developing better tools and counseling programs to help medical students throughout Pakistan prepare for their future.

**Methods:** A descriptive cross-sectional study was conducted among students of Gujranwala medical college. As the sample size for this study was not too large and the targeted audience had close physical proximity, a structured paper questionnaire was used containing multiple-choice questions, dichotomous questions as well as scaling questions with content ranging from their career preferences after MBBS to assessing possible factors that may have influenced their choice of specialty. All information gathered was on a volunteer basis. Anonymity and confidentiality were maintained. The study was approved by the college ethical review committee. A pilot study was done on 20 participants and no discrepancies were found.

**Results:** Out of 218 students, 85 (36%) were male and 133 (61%) were female. Out of the 85 male students, 74 students were undecided about career preference. Out of the 133 female students, 94 students were undecided about career preference. Regarding factors influencing career choice, year/level of study was proven to have a significant association with career choice (p value-value: 0.001). 2nd Year students reported the highest uncertainty (89%), 4th Year students reported the second-highest uncertainty (85%), 5th Year students reported the lowest uncertainty (51%). Career uncertainty also had a significant association with how often students thought about changing their career (p-value: 0.002). The ones who often or always thought about changing careers reported the highest uncertainty (100%), while the ones who never thought about changing careers reported the lowest uncertainty (57%).

**Conclusion:** Study The study has shown that a significant number of medical students are uncertain about their career intentions. Year of study, gender, and general satisfaction with the medical field was proven to be major factors in causing such uncertainty about career choice after MBBS. Final year students were most certain about career intentions along with those who never thought about changing careers. While results were consistent with several national and international studies, variability in said results across different studies was also noted.

**Keywords:** Medical students, career, specialty selection

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## Introduction

Choosing a clinical specialty after medical education is one of the most important decisions a medical student comes across in his life. It is a choice that dictates how a graduate medical student will excel in his career, be successful and contribute to society and the nation. Medical career preferences are influenced by a multitude of factors. Studies all over the world have related career choices with factors such as controllable lifestyles (10), gender (2), desirable income, student values, personal interest (3,4) and even positive experiences surrounding interpersonal relations and clinical practice (5).

It has also been observed that many medical

students stay uncertain about their career choices throughout the course of their studies (6). Again, such uncertainty can be attributed to many factors. Studies have been conducted to attribute uncertainty to factors such as burnout and increased levels of stress in the medical field (7). One study even reported that students preferred clinical sciences over basic sciences (8). The wide variety of factors reported across different studies shows that a lot goes into selecting a specialty. However, it is important to note that studies have concluded with the need for a greater understanding of career-decision making among medical students.

Our study aims to develop a concise framework of the major factors that cause uncertainty in career

selection among medical students of Gujranwala Medical College. In this study, we developed the questions with a special focus on understanding how a college environment affects a student's career choice after MBBS and if that has something to do with a student being uncertain about their career. These effects could be through one's academic experience or through social interaction with colleagues and peers across a span of five years as one study reported that exposure to specialties and the timing of this exposure appears to be crucial to career choice (9). Such decisions are entirely up to the college body to decide, hence through this study, we could find other possible ways a college environment affects career choice. One other way a college affects a student's career is through career counseling programs and such programs have been proved to be useful for career success and planning by multiple studies (10-12). With increasing stress about professional examinations and the introduction of the national Licensing Exam (NLE), we hope to use this study to understand and help medical students of Pakistan who are uncertain about their future.

## Methodology

The descriptive cross-sectional study was conducted on students of all years of Gujranwala medical college. These students were provided with a structured paper questionnaire form regarding career preferences after finishing medical school and form the reason for choosing a specific specialty. A convenience non-probability sampling technique was used. The sample size was calculated taking a confidence interval of 95% and a margin of error of 5%. The sample size came out to be 218. Convenience sampling was used for data collection. Those students who are still indecisive were asked about the reason. All information gathered was on a volunteer basis. Students not interested in filling out the questionnaire and those who did not give consent for the study were not included in the study.

The structured questionnaire was developed after an extensive literature review. Senior faculty members from our department reviewed the questionnaire for judging content validity. After revision irrelevant items were removed, and some questions were also rephrased to make it convenient for participants. The final version of the questionnaire was piloted on 20 participants and no discrepancies were found.

The questionnaire had 23 questions in total. The questions included multiple-choice questions, dichotomous questions as well as scaling questions. The data was entered and analyzed using SPSS statistics software. Frequencies were calculated and the chi-square test was applied to determine p-value to check for significance. The question asking career choice/uncertainty was kept as the dependent variable in the Chi-square test and cross-tabulated with other variables. Anonymity and confidentiality were maintained. The study was approved by the ethical review board of Gujranwala Medical College.

## Results

### Study Demographic

The study was conducted on students of Gujranwala medical college, 218 students took part in the study. Out of these 85(39%), students were male and 133 (61%) were female. The students were asked about the specialty they prefer and the factors influencing their choice of specific specialty. Out of these students 33(15.1%), students were from the first year, 47(21.6%) students in second year, 35 (16.1%) in third year, 60(27.5%) students in fourth year, and 43(19.7%) in final year. Of all these students 37(17%) belong to a rural area and 181(83%) belong to urban areas. Year of study and gender was shown to have a significant association as the p-value came out to be less than 0.05. Final year students reported the lowest uncertainty (51%) and male students reported the highest uncertainty (85%) while female students showed 73% uncertainty.

**Table 1: Study Demographics**

Variables	Categories	Frequency (n)	Percent (%)
Gender	Male	85	39
	Female	133	61
<b><i>P value: 0.024 (&lt;0.05) Significant Association</i></b>			
Year/level of study	1 <sup>st</sup>	33	15
	2 <sup>nd</sup>	47	22
	3 <sup>rd</sup>	35	16
	4 <sup>th</sup>	60	27
	5 <sup>th</sup>	43	20
<b><i>P value: 0.001 (&lt;0.05) Significant Association</i></b>			
Accommodation	Rural	37	17
	Urban	181	83

### Career Preference of medical students

Among 218 students, 168 (77%) students were undecided about their career choice. The remaining students who did choose a career had widespread responses with Cardiology and medicine ranking first with 3.7% students each. Surgery ranked second with 3.2% of students. Specialized fields such as ophthalmology, Gastroenterology, oncology, and nephrology ranked last with 1 student each.

**Table 2: Career Preference of medical students**

Specialty choices	Frequency (n)	Percent (%)
Cardiology	8	3.7
CSS	1	0.5
Dermatology	2	0.9
Gastroenterology	1	0.5
Gynecology	5	2.3
Medicine	8	3.7
Nephrology	1	0.5
Neurology	6	2.8
Oncologist	1	0.5
Ophthalmology	1	0.5
Pediatrics	5	2.3
Professor	2	0.9
Psychiatry	2	0.9
Surgery	7	3.2
Undecided	168	77.1

**Possible factors influencing career preference of students**

Students were asked their reason for choosing medical field. 121 (55.5%) chose personal choice as primary reason, Parents opinion was listed as primary reason by 78 (35.8%) students. When asked about their inspiration for becoming a doctor, 107 (49.1%) students listed humanity service as their inspiration and advice of family members was chosen by 59 (27.1%) students. Financial Matters came in third with 38 (17.4%) students choosing it as their inspiration. Majority of students (64.7%) believed that their university was not working to increase their career awareness and an overwhelming majority of students (80.3 %) responded that their university had no effective career planning courses for their benefit. These factors were considered to possibly contribute to career uncertainty among the students, however no significant association was reported as p value came out to be greater than 0.05.

**Table 3: Possible factors influencing career preference of students**

Variables	Frequency (n)	Percent (%)
<b>Why did you choose medical?</b>		
Personal choice	121	55.5
Peer pressure	5	2.3
Parent's opinion	78	35.8
Altruistic approach	8	3.7
Other	6	2.8
<i>P value: 0.789 (&gt;0.05) No significant association</i>		
<b>what inspires you to become a doctor?</b>		
Humanity service	107	49.1
Financial matters	38	17.4
Advice of family members	59	27.1
Other	14	6.4
<i>P value: 0.892 (&gt;0.05) No significant association</i>		
<b>Do you think your institution effectively works to increase your career awareness and readiness?</b>		
Yes	29	13.3
No	141	64.7
Maybe	48	22
<i>P value: 0.411 (&gt;0.05) No significant association</i>		
<b>Are there any effective career planning courses in your institution?</b>		
Yes	43	19.7
No	175	80.3
<i>P value: 0.529 (&gt;0.05) No significant association</i>		

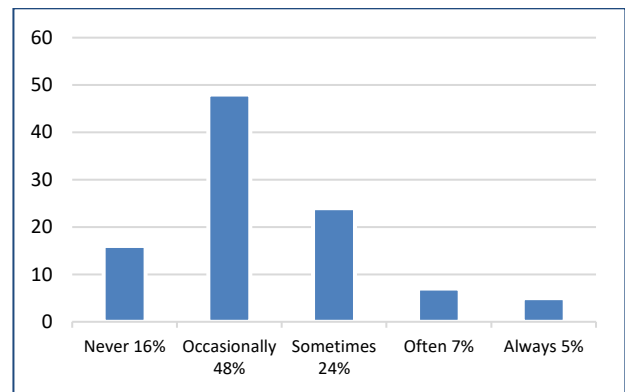
**Questions to measure General satisfaction with medical field**

Multiple questions were asked to assess the student's satisfaction with their chosen field whether it be due to academic stress or other reasons and to understand whether these have influence on career uncertainty. Among these questions, two questions were shown to have significant association with career uncertainty.

**How often do you think about changing careers?**

When asked how often students thought about changing their careers, 48% of students chose "occasionally" with 24% choosing "sometimes". Only 16% of students never thought of changing their careers. A significant association is

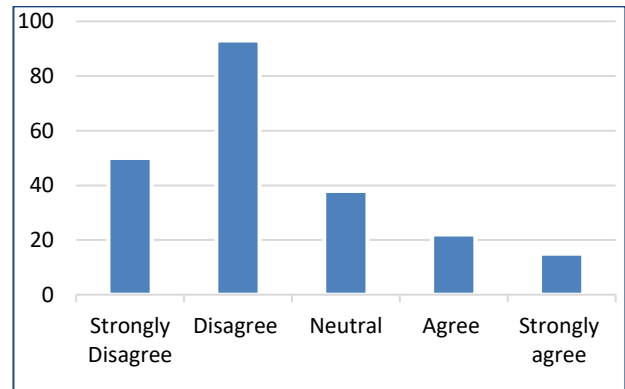
reported as 100% of students that chose 'Often' and 'Always' were uncertain about career choices. The students that chose 'Never' reported the lowest level of uncertainty at 57%.



**Figure 1: How often do you think about changing careers?**

**Do you feel you are wasting your potential in this field?**

The majority of students chose 'Strongly Disagree' and 'Disagree' and these students also showed the lowest uncertainty at 18% and 33% respectively. The students that chose 'Agree' and 'Strongly Agree' showed the highest uncertainty at 95% and 93% respectively.



**Figure 2. Do you feel you are wasting your potential in this field?**

**Discussion**

The degree of uncertainty in career selection for medical students and the factors involved in making such choices are of great significance for helping healthcare authorities to eliminate this uncertainty.

In our study, the majority of the students (77%) were uncertain about their career specialty. This was in line with an international study that concluded that medical students delay choosing their specialty<sup>6</sup> as well as a study was done in Riyadh in which more than half of the students did not show a future specialty preference (13).

However, this uncertainty was not in line with studies done at the national level that reported the majority of respondents chose a specialty preference (14-16). However, it is to be noted that none of these studies reported a 100% response rate indicating a variable level of uncertainty present. This also indicates that possible factors such as

different institutions could contribute to different findings as was indicated in a study done in the UK to compare career preferences of students of four different medical schools (17). Another study was done in the UK to determine why medical students change their career preferences and also shows some degree of uncertainty present (18).

When trying to determine possible factors that could lead to students being uncertain about career choices, it was reported that this medical college lacked effective career planning courses as was said by 80% of the students. However, no significant association was found between the absence of career planning courses and a high percentage of uncertainty. It is to be noted that multiple international studies have reported that career planning courses do increase career readiness (10-12).

The Year of the study was found to have a significant association with career uncertainty with final year students reporting the lowest uncertainty. This can be attributed to better exposure of senior classes to different clinical fields as they spend more time in hospital as compared to first and second-year classes. This experience allows them to more confidently decide on a specialty choice. This finding was in line with a study done in Kuwait that reported Students in the clinical phase of their studies were more likely to report on their decision regarding a future specialty as compared to students in the basic sciences phase (19).

Among the questions used to assess students' general satisfaction with their medical career, two questions were found to have a significant association with career uncertainty. This shows that students' uncertainty may not have anything to do with the characteristics of certain medical specialties but rather how well adjusted or happy they are with the field of MBBS. One international study also reported that one-third of students were dissatisfied with the curriculum and expressed that they would not pursue the course if given a second chance (20). Another study in Delhi reported that one-fourth of students were dissatisfied with their lives in general (21).

In addition to these factors, gender was also found to have a significant association with career uncertainty with male students reporting higher uncertainty. While a study was done to show how gender affected specialty choice (2), another study showed that men and women chose similar specialties (22). No study was found that directly related gender differences with the level of career uncertainty, however, studies have shown that females are more likely to choose uncontrollable lifestyles than men (2).

### Limitations

Although our study reported a considerable uncertainty in specialty choices, however, the sample size was relatively small compared to other studies related to ours and restricted to only one medical college. For better results and to draw a more comprehensive conclusion, further prospective study with larger sample size and one that targets multiple medical colleges with different socio-demographics should be done.

### Conclusion

The study has shown that a significant number of medical students are uncertain about their career intentions. Year/level of study, gender, and general satisfaction with MBBS were shown to be important factors causing career uncertainty. This study will be valuable for the medical education sector because understanding career uncertainty at Gujranwala Medical College will also provide ways of developing better tools and counseling programs to help medical students throughout Pakistan prepare for their future.

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