



## A PATH TO SUCCESS: UNDERSTANDING PREDICTOR OF SUCCESSFUL ADMISSION IN MEDICAL COLLEGES

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### Abstract

*This study was designed to investigate the predictors of successful entry to medical colleges. It was a systematic effort to uncover the experiences of medical students they had gone through while choosing medicine as their career and their successful journey to get admission to medical colleges. A qualitative interpretative design was employed to understand the experiences of medical students when they secured admission to their respective colleges. Semi-structured interviews were conducted with medical students who were in different academic years of the study. The interviews were conducted until we reached saturation point in theme development and no more themes could be generated out of the data. So, the themes were saturated when the researcher interviewed 10 participants. After data collection, interviews were transcribed into Urdu language and then translated into English and retranslated into Urdu to compare with the original version of the interviews to void ambiguity in translated material. The translated data was analyzed using thematic analysis and themes were developed. The themes that emerged after data analysis were self-determined motivation, exam preparation academies, rigorous exam preparation, engaging with past papers, access to extensive and quality study resources, and a supportive family environment. This study uncovers major predictors of securing admission into medical colleges and can be significant students pursuing a career in medicine and mentors who can guide them through the process.*

**Keywords:** Medical Colleges, Admission, self-determined motivation

### Introduction

In Pakistan, the profession of a doctor is considered to be of high esteem. A large number of adolescents work hard for getting admission in medical school but only half of those students could become successful in taking admission after passing pre-medical exams and entrance tests. The number of students who want to be doctors has been increased in previous years. In 2021, almost 194309 students gave MDCAT (Medical and Dental Colleges Admission Test) (PMC, 2021). On the other hand, in 2015, 46885 students gave MDCAT. In the list of these candidates, there were such students who were appearing in this test for the first time and some students were appearing for the second time. Some costs are also associated with this desire of candidates. The students have to do constant and persistent attempts for preparing for the MDCAT. Usually, students could not pass the entrance exam on their first attempt and decide taking this exam for the second time (UHS, 2021).

A significant number of research studies have been conducted for examining the predictors of success during MBBS and after qualification. However, a clear gap exists in the literature on the availability of studies regarding predictors of successful admission to medical college. It is significant here what factors contribute to his successful admission. This study will provide a framework for students, parents, and schools for the preparation of students for this field by highlighting above mentioned issues.

Limited literature is available on the chosen topic. Available studies directed at issues in selection methods, challenges during studying at medical college, and after-education success in career. For instance, a study (Patterson et.al. 2016) explored the issues in the

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selection method of medical students. Several methods have been used for selection in medicine in the past 50 years. Previous academic record is one of the primary aspects of selection and is examined often at the initial screening phase (Coates, 2008). Typically, academic indicators are taken as the bases of initial decisions regarding the shortlisting along with personal statements, references, or aptitude tests after which interviews are conducted at the final phase for supporting the decisions of selection. However, there are some concerns associated with this approach. First of all, past reviews have reached the conclusion that academic performance is good but not perfect for predicting performance which makes up almost 23% of the variance in performance in undergraduate medical training and 6% in post-graduate performance (Trost et.al., 1998). An argument is given that academic capability is important but not enough condition for ensuring that trainee will become a competent clinician and it is required to enhance the focus on non-academic characteristics for the upcoming 50 years which are necessary for clinical practice success and for developing and evaluating tools which examine these qualities.

Secondly, academic achievement is regarded to be one of the good predictors of performance in medical school (Halpenny et.al., 2010) but in the past times, lesser attention is given to research methods that consistently evaluate crucial non-academic personal traits, interests, and motivational characteristics. It cannot be considered that students having high academic capability alone can become competent physicians after completing their training because other particular skills and potentials might also need to be present from the initial stage (Patterson & Ferguson, 2002).

The process of admission and selection for medical school and specialized training seek attraction of public interest and is often criticized for its fairness (Prideaux et.al., 2010). There is an urge of reviewing pieces of evidence on how best selection methods can be combined with a valid designed selection system for guiding selectors in the future, for instance, relative weightage assigned to academic and non-academic indicators for making valid decisions regarding the selection.

Studies have also investigated the stress factors for medical students during their studies. This stress leads to psychological pressure on students in the future because it is accompanied by some psychological aspects. One of the main consequences of this psychological pressure is the stress. Stress includes the body's response in turn to demands from the surrounding environment. The nature of these responses might be physical, psychological, or emotional. Different psychological impacts are created due to stress and depression is one of those impacts (Naseem & Munaf, 2017). Adolescents are the developmental group that is most vulnerable to depression (Prasla, 2012). The chances of being depressed are higher among girls (Bansal & Yamuna 2012). Almost 34% of the overall Pakistani population is subjected to stress and depression (American Psychiatric Association, 2013).

Academic stress including preparing for the MDCAT is a reason for depression among candidates (CDCP, 2019). Depression is a type of mental disorder and is associated with low or sad mood along with the feeling of losing hope and affected psycho-social presence (Krishna, 2005). In adolescents, suicide attempts are the most common and dangerous outcome of depression (Daily Times, 2010). Suicide is one of the devastating behaviors which range from suicide idea, thought, wish, and communication which then leads towards attempt suicide and might result in suicide (The News International). Adolescents harm themselves due to academic stress (Thapar et.al. 2012). There has been an increase in suicide ideas among the



students of Pakistan since 2010. There are different factors that contribute to enhancing the trend of suicide among students. Such factors might include:

- Competitiveness
- Academic stress and pressure
- Exam stress and anxiety
- Poor academic achievement (Consoli, 2013)

Suicidal notions manifest stress, nervousness, and depression in students (Naseem & Munaf, 2017). Besides these challenges, there are several factors to be explored and that is the major objective of the study. There is very limited literature available on the given topic. The previous literature focuses very less on predictors of successful admission to medical colleges and the challenges students face during their journey to get admission. The research will focus on the predictors of successful admission to medical college and the challenges they face during this time period. This study would fill a grey area in contemporary literature with the in-depth exploration of a very important phenomenon.

### **The Rationale of the Study**

This study aimed to investigate the predictors of successful admission to medical colleges. Securing admission to medical colleges in Pakistan is not an easy feat and students need to work hard for four years and then give their best efforts during the entrance test. If students fail to secure admission or fail to get good marks in MDCAT, it may result in severe depression, stress, burnout, and psychological pressures among students. Thus, it was important to find out the predictors of successful admission to medical colleges. Several factors play an important role in predicting the success rate of students in securing admission to medical colleges.

The overall goal of this study is to examine the predictors of success and the difficulties that students encounter when applying to medical colleges and to offer insights that can guide policy decisions, motivate changes to the application procedure, and promote a more welcoming and encouraging environment for future medical professionals.

### **Research Question**

1. What factors contributed to the successful securing of admission to medical college?

#### **1.5. Theoretical Framework**

Self-determination theory is employed as theoretical framework for this study. It is expected that students with strong determination and motivation self-regulate themselves and work hard to achieve success in securing admission to medical colleges. The explanation of the theory is given below.

#### **Self-Determination Theory (SDT)**

According to Ryan and Deci (2000), self-determination (SDT) is a metatheory in which the subject is human motivation and the development of personality. A metatheory is one whose subject is a theory itself. So self-determination is said to be a metatheory as it consists of many “mini-theories”. All these theories are combined to give a thorough understanding of motivation and functioning in humans. This theory (SDT) is based on the prime humanistic concept that humans naturally grow toward development and self-organization. To say it more explicitly, individuals try to get a broad understanding of themselves by having innovative experiences through the persuasion of their needs, desires and interests, plus by developing connections with other individuals in the external world. On the other hand, SDT also maintains that people can be controlled, divided and estranged if their psychological needs for autonomy,



competency and relatedness are not satisfied due to a lacking social environment. So it must not be assumed that they will always move towards natural growth. It can also be inferred that SDT is based on the idea of people getting involved in the dynamic interplay with society; responding to both the supporting and non-supporting environmental factors and at the same time striving to satisfy their needs. As a result of this dynamic interaction, people either get occupied, inquisitive, associated and whole, or discouraged, unproductive and detached. The six mini-theories of which SDT is constituted are its fundamental elements, they are working (Fernet 2013), education (Reeve and Lee 2014), relationships (La Guardia and Patrick 2008), religion (Soenens et al. 2012), sports (Pelletier et al. 2001), health (Russell and Bray 2010), and even stereotyping and prejudice (Legault et al. 2007); all of these theories provide a comprehensive overview of human behavior in different domains of life.

### **Self Determination Theory (STD) and the career choices of students**

According to some researchers, the career aspirations of science students depend on factors like socioeconomic status, expectations and occupations of their guardians and demographics (Berríos- Allison, 2005; Wigfield et al., 2002). The students who don't have any aspirations do not do much in their academics and their academic success is jeopardized (Berríos-Allison, 2005), the academic success depends on many factors like socioeconomic status, age group, gender, score in the entrance exam, and English Language level (Messinis & Sheehan, 2015). With reference to several testing mechanisms in different countries, we will explain the role of SDT in entrance test scores and career choices of biology students.

### **Methodology**

The researcher selected to conduct an entirely qualitative study because their interest was to understand the predictors of the success in securing admission to medical.

### **Setting**

The setting of the research included students who were in different academic years of their MBBS. The students included were from 2nd year to 5th year, both male and female, and belonged to urban and rural areas.

### **Sampling and Respondents**

Students who had successfully secured admission in MBBS were key respondents for this study. Students have struggled hard for their admission during this journey. Therefore, they can provide in-depth information regarding their journey to success. Purposeful methods of sampling were used. Purposeful means that it might give an opportunity for sample selection which has common specific criteria and meet the aim of study. Researcher gained access to a specific student to participate in the study who shared similar characteristics.

Pseudonyms were given to all research participants ranging from alphabets A to J. Following table describes the demographic characteristics of respondents.

**Table 1: Details of research participants**

Participant	College Year	Gender	Locality
A	5 <sup>th</sup>	Male	Urban
B	2 <sup>nd</sup>	Male	Urban
C	3 <sup>rd</sup>	Male	Rural
D	4 <sup>th</sup>	Male	Rural
E	3 <sup>rd</sup>	Male	Urban
F	2 <sup>nd</sup>	Male	Rural
G	3 <sup>rd</sup>	Male	Urban
H	2 <sup>nd</sup>	Female	Urban

I	4 <sup>th</sup>	Female	Rural
J	5 <sup>th</sup>	Female	Urban

### Methods of Data Collection

This study used semi-structured interviews. The researcher structured an interview protocol to elicit discussions on factors that contributed to successfully securing of admission to medical college. Participants were given written informed consent prior to their participation in the study. Interview was recorded and transcribed. Each transcript was reviewed against audio recordings to verify it for accuracy. Each interview transcript was analyzed separately. After analysis of each transcript, emergent themes were given to participant in a member-checking session.

### Results

The research question was intended to investigate the predictors and support systems that help students to secure admission to medical colleges. When students embark on their journey to become doctors, the first challenge is securing admission, which constitutes several steps. The primary step is the Medical and Dental College Admission Test (MDCAT). For some participants, securing excellent marks in Matric was also among the significant factors that laid the foundation for becoming a doctor; however, for the last couple of years, according to the new policy, matric marks are not accounted for admission aggregate. Our participants belonged to both categories, so we have a mix of themes. After a careful data analysis process, the following themes emerged:

**Table 2: Themes**

Themes (Predictors of Successful Admission)	Participants	Frequency
Self-determined Motivation	B, C, D, F, H, and I	6
Exam Preparation Academies	A, B, D, E, and H	5
Rigorous Exam Preparation	B, C, H, and I	4
Engaging with Past Papers	A, B, C, D, E, F, G, H, I, and J	10
Access to Extensive and Quality Study Resources	A, E, G, H, and J	5
Supportive Family Environment	A, B, D, I, and J	5

The explanation of these themes considering quotations from our respondents is as follows:

#### 1. Self-determined Motivation

The journey toward successful admission to medical colleges in Pakistan requires intense effort, hard work, dedication, self-regulation, and self-determined motivation. This theme would explore the in-depth role of self-determined motivation in driving students to work hard, secure competitive grades in the Matric, Intermediate, and MDCAT, and ascertain their admission to a medical college. Self-determined motivation is a characteristic that empowers students to take control of their learning, set achievable targets, and persevere through obstacles by self-regulation, ultimately boosting their chances of admission to a medical college.

Individuals with a strong determination to succeed in their careers have an intense internal drive and ambition to perform well in all aspects of their lives. They have clear orientations and recognize the importance of the hard work required to enter a medical college and thus put their best efforts into the process. This internal drive makes them go beyond their limits and prosper in education.

As Respondent B said,

*"I wanted to become a doctor since my childhood. The ambition to make a difference in people's lives fueled my determination to work extra hard. During my F. Sc. and entry test examination; the determining force that drove me to put my best online to secure excellent grades. I regulated my time and routine activities and gave extra hours to study. In the end, it all paid off".*

After carefully examining the data obtained from respondents, we also found that self-determined students express effective goal setting and dedication to their studies. They set specific and attainable targets and goals and develop strategies to record their activities. Such students prioritize their studies, manage their time effectively, and make sacrifices to provide the necessary time to test preparation. In Pakistan, a joint family system prevails. Most respondents indicated that they had to cut off their family hours and needed to give more time to family things and instead focused on preparing for their study materials during MDCAT. This indicates their strong desire to achieve the best possible results leaving no room for failure. As Participant C stated,

*"I set daily, weekly, and monthly goals to cover my syllabus for tests. I began preparing for a test right after my Intermediate examination. A few of my family members went to my grandparents, but I missed the trip even after two years of hard work in my previous class. I did not want to waste a minute, so I carried on with my schedule and did not leave a day's work on the next. That time changed for the life to come, and I developed self-regulation abilities that are still functional in me."*

The journey toward medical college admission is filled with obstacles and setbacks, and students must face rejections and apply next year. Moreover, several of our respondents who attempted their MDCAT during COVID-19 faced more significant challenges regarding access to preparation resources and a new online mode of the test. They could not attend physical classes as all the academies and coaching centers were closed because of the pandemic. During challenging times, self-determined students expressed remarkable perseverance and resilience to overcome challenges and secure admission. One respondent failed in the first attempt to secure admission in 2020. However, he returned stronger in 2021 and secured admission on the second attempt. He remained persistent hopeful and, worked hard for the next year, and became successful. The participant stated that,

*"I faced numerous obstacles during the first year of my preparation. I faced financial difficulties because our business was shut down due to COVID-19, and I could not afford expensive online classes and preparation materials. But the next year, I returned stronger with excellent preparation and aced the exam. Self-regulation and motivation are the most important thing that carries you forward through difficult times".*

Another fact we found is that self-determined students are strongly determined to succeed in entering a medical college. They express a 'never give up' behaviour and put necessary efforts into preparing for their exams. They put aside other useless activities, such as going to parties or family functions, to waste their time rather than study hard and succeed. Most students lose track after the intermediate examination and develop sluggish and jolly behavior. This hunts them during their entry test, and they get competed by other students

focused on their studies during this time. The period after the inter exams is most important as it is short and up to almost three months. Many students go to visit their families far away and waste quite a lot of time, and others just sit home and watch movies, sit at home and sleep, and play video games. However, motivated students who are determined to become doctors don't waste any time and start preparing for tests right after the F. Sc. exams. They move one step ahead of other fellows and thus score better.

Participant H stated,

*"While my friends and cousins were chatting about trips, sleep schedules, and movies to pass the time at home, I was focused on developing my strategies to earn admission into a top-ranking medical college over the next three months. This difference in priorities has had a significant impact on where we all are now. I believe that self-regulation and hard work during the critical time after Inter exams is the determining factor for entering a medical college."*

It indicates that successful candidates had a prior strong determination to succeed at higher levels and thus worked hard for it. These students motivate themselves by setting rewards for achieving specific study milestones. They practice self-discipline by eliminating distractions and creating conducive study environments.

In conclusion, self-determined motivation plays a critical role in the successful admission of students to medical colleges. Internal drive, self-regulation, passion, hard work, proper schedule, goal setting, perseverance, self-discipline, and determination to succeed are vital attributes that enable individuals to work hard, secure excellent marks in exams, and boost their chances of getting admission to top-ranked public medical colleges.

## **2. Test Preparation Academies**

The path to successful admission to a medical college is filled with competition, and students seek external support from different sources to enhance their exam preparation. For this purpose, they tend to visit and enroll in exam preparation academies specifically made for entry tests preparation and other coaching centers. These academies have a long-term reputation and compete to provide quality study to students for entry into a medical college. This type of competition is also essential for students because academies pay proper attention to delivering quality content to students to stay functional in competitive markets.

Exam preparation academies and three-month entry test preparation sessions, courses, and short workshops play a significant role in providing guidance, resources, structured approach, content, and preparation materials to help students secure excellent marks in entry test and increases their chances of admission. This theme explores the crucial role of such academies in pursuing medical education and their impact on students' performance and success in entry tests.

Test preparation academies have specialized guidance and expert faculty members to prepare students for the test. The vast experience of such faculty members is important because they are familiar with the test pattern and teach students accordingly. Moreover, they also possess in-depth knowledge of the medical entrance exams and provide clear concepts. These academies also offer comprehensive study materials, mock tests, key books, and practice question papers to help students understand the exam format, syllabus, and better scoring patterns, enabling them to score higher in real exams.

Participant B stated,

*"Academies play a significant role in preparing us for the test. Most of the academies begin their session right after the inter-exams. I joined the academy immediately, which was the best decision. Every teacher was an expert in a particular subject, and their guidance helped me gain a deeper understanding of the concepts of different books. The test pattern usually differs from inter exams, and we must prepare the books differently. The teachers helped us greatly in this regard, which resulted in our success in scoring high marks on the test."*

Another participant, D said,

*"I joined the academy when I was in 9<sup>th</sup> grade. I went to school and then to the academy in the evening. It was a branded academy in our city. I continued to study there even during my college days. As soon as I completed my F. Sc., I joined the same academy for test preparation. I would say this academy has played the most important role in preparing me for securing admission to a medical school."*

Another critical aspect in which academies play a crucial role in students' journey to securing admission to a medical college is that these institutions have access to resources and mock tests. These academies prepare self-made mock tests, reference materials, key books, handwritten notes, online portals, and question banks. These materials are prepared by the most experienced teachers with knowledge of exam patterns, and each subject material is prepared by a specialist. Academies conduct regular assessments and mock tests that stimulate the actual exam environment, enabling students to gauge their preparedness and identify areas of further improvement.

We also found that academies help students by creating an atmosphere fostering peer learning and healthy competition. Interacting with fellow students with the same ambitions and career aspirations provides motivation and opportunities to exchange knowledge and study strategies. This collaborative atmosphere encourages students to push their boundaries and strive for excellence and better scores after each test. Also, academies use a reward system, conduct full-length mock papers, and provide handsome prizes to winners. This instills a sense of sheer competition among students, and the desire to win prizes motivates them to work even harder and outshine their fellow students.

Participant H stated,

*"We love competition. Even as kids, we compete with other kids. Academies adopt a similar strategy. All students are highly skilled and talented. Only the top students from different colleges desire to become doctors and attend coaching academies. This creates an environment where all students have equal chances of getting admission. The only thing differentiating them would be the coming two or three months. The positive interaction with these students provides opportunities to learn from and convey your techniques to others. This knowledge-sharing environment is necessary for proper growth of concepts."*

To conclude, academies and coaching centers are crucial in training students to secure higher marks and increase their admission chances. Their special guidance, experienced

faculty, well-managed structured study plans, access to many resources and study plans, peer learning, healthy competition, and confidence-building strategies contribute to students' overall preparation for the entrance test.

### **3. Rigorous Exam Preparation**

The time between the end of the F. Sc. examination and the final entry test is short, and students have to prepare their textbooks in a completely different style. It has already been discussed that students tend to waste time doing unnecessary activities, which deteriorates their performance in entrance tests. Rigorous exam preparation plays a significant role in predicting successful admission to a medical college. The environment is highly competitive, and all the top students enter to become medical students; thus, they cannot waste a minute after completing their F.Sc, let alone many days. This theme explores the experiences and perspectives of students who focused on preparing for exam with sheer effort and ultimately secured admission to medical college. By analyzing data obtained from our participants, we can delve deeply into the role of rigorous exam preparation in predicting success.

MDCAT is highly competitive and tough compared to F.Sc, so it requires greater effort in a short time; thus, students must set high standards and goals which drive them to work diligently towards achieving them. By aiming to score the highest, students are motivated to invest significant time and effort in their studies, ensuring a comprehensive understanding of the core concepts of different subjects. These concepts are to be memorized that require intense effort on the part of students. Students should maintain focus and discipline throughout the exam preparation process and not waste time on other activities.

As Participant B stated,

*"This test is the final step in four years of hard work. I set high standards and established almost unachievable goals. But I worked day and night to achieve them. I read through books, key books, and online materials provided by the academies and practiced uncountable mock tests. I had lower marks in F.Sc, so I had to work extra hard to fill the gap. I believe students should start preparing for this test right after their inter and then do rigorous training to stay in the competition. Lack of effort cannot be filled by sheer talent, and many talented students lose the race to admission when it comes to giving their best for exam preparation."*

Our participants indicated several steps of rigorous exam preparation that are key in setting the tone for scoring higher. The first and foremost is a comprehensive understanding and thorough coverage of the syllabus. During the preparation, students did not leave a single topic unexplored. Students allocated sufficient time to every topic and subject depending upon the percentage of marks from each subject. Since this test requires students to develop analytical and critical thinking skills for solving questions, they need to practice all the methods available to solve any question. Moreover, the syllabus for the test is systematically divided by the testing authority (University of Health Sciences, UHS), and each topic from every book holds a particular weightage in the test so students cannot miss a single line.

Another important aspect of rigorous exam preparation is the implementation of structured study plans and timetables. By organizing their study sessions, students can allocate the necessary time to each subject and topic, ensuring a balanced syllabus coverage. This timetable and structured study plans are prepared by the experts from the academies, so students who attend academies have the opportunity to follow the schedule prepared by

experienced teachers. However, students who do not attend any academy and rely on themselves for preparation must develop their own structure study plans and keep motivating them to follow those plans. These students are most prone to losing focus and divert from the track, which could negatively impact their performance. This type of systematic approach assists in maintaining consistency and discipline throughout the preparation phase.

One of the respondents (I) did not attend any academy. The respondent stated,

*"The syllabus is too lengthy. The materials to be studied are vast and too long. We can easily lose focus and miss out on important things and topics. It is important to keep a systematic schedule and keep yourself organized. I created detailed study plans with specific time slots for each subject and topics to be covered. This helped me to stay focused and organized. I covered all topics systematically and passed the test with handsome marks without attending any academy. I also managed to secure admission to a medical college."*

In conclusion, through self-determined motivation, thorough coverage of the syllabus, structured study plans, past papers, practice tests, mock tests, effective time management, self-discipline, utilizing effective study techniques and strategies, seeking guidance, building resilience, and giving extensive time to exam preparation, students improve their chances of getting higher marks in the entrance test.

#### **4. Engaging with Past Papers**

As has been discussed before, rigorous exam preparation is the major predictor of successful admission to medical college. Similarly, engaging with past papers, solving them, practicing on them, and getting familiar with real exam format is also important to score higher in MDCAT. This is one of the most important aspects of medical entry test preparation, as all of our respondents indicated that solving the past papers enhanced their chances of scoring handsomely in real tests. Engaging with past papers is a valuable strategy and has been recognized as one of the most important predictors of admission to medical colleges. Past papers assist students in understanding the exam format, question types, and level of difficulty they can expect in the exam. This theme explores the experiences of students with past papers and how they helped them secure good marks at the important stage.

Past papers provide help in different ways. Some of the major assistances derived from past papers have been indicated by our participants. Solving past papers help students get familiar with the exam format and level of difficulty of questions. MDCAT has a specific format, and every subject has a specific weightage in the test. Moreover, every topic has specific marks distribution. Solving past papers allows students to understand the marks distribution among different topics and subjects. Moreover, by reviewing past papers, students gain insights into the structure of the entrance test, including the number of sections and the time allocated for each section. This familiarity trains students to take real tests confidently.

As Participant A stated,

*"I have been using past papers to prepare for exams all my life. I prepared mostly past papers during my Matric and F.Sc. That helped me to secure higher marks. Preparing only 5 years' papers should be enough to score more than 90%. Similarly, during the entrance test, we used to practice on past papers. Although, in the entrance test,, all questions are not rep, you can clearly understand*

*and the type of questions to appear in the test so you can prepare accordingly. Indeed, it helped us a lot during our preparation."*

Another important finding is that structure of entry tests is very different and difficult compared to Matric and intermediate exams. It only comprises Multiple Choice Questions (MCQs), which are very conceptual. Solving past papers helps students understand the exam pattern and get familiar with each subject's type of questions. Students solve questions from past papers and develop a deeper understanding of the concepts and topics frequently tested in the papers. This exposure is important in identifying common themes, allowing for more targeted preparation.

This is important because simultaneously managing speed and accuracy can be difficult. Regular practice improves speed and accuracy in solving questions. Some questions require only two seconds to solve, while some lengthy numerical would require 4 to 5 minutes to solve. Students can understand the time distribution for increasing speed and develop innovative methods to solve numerical problems quickly.

*"It is all about practice. Many students lost their temper during the test and failed. I had enough practice to not panic at longer questions. I attribute this to past papers"*

In conclusion, engaging with past papers is crucial in predicting successful admission to medical college. It provides familiarity with the test format, exposure to a variety of questions, self-assessment and feedback opportunities, time management skills, identification of high-yield topics, confidence building, and development of effective exam-solving strategies. Moreover, it enhances speed and accuracy, exposes students to challenging and difficult questions, and enables them to benchmark their performance. By incorporating past papers into their test preparation, aspiring medical students can optimize their chances of securing good marks and ultimately achieving successful admission.

### **5. Access to Extensive and Quality Study Resources: Role of the study background**

There is a strong inequity in the distribution of resources in Pakistan. Most students belong to poor or lower-middle-class families and cannot access vast resources for entrance test preparation. For instance, the academies and test centers are expensive, and many talented students cannot afford such academies. Moreover, the books, key books, ebooks, written notes, online resources, mock tests, flyer programs, and experienced mentors are expensive. Many students cannot even buy important key books for test preparation. However, on the other hand, some students can afford all these facilities, and ultimately these resources play a critical role in their success.

Medical entry test is highly competitive, and students need to understand various subjects, concepts, and topics, develop critical thinking skills, and stay updated with the latest medical knowledge. This theme explores how access to extensive and quality study resources predicts the success of the candidates in securing admission to a medical college. The first vital resource that plays a key role in predicting the success of candidates during the entry test is background education and schools and colleges that students attend. The quality of education differs a lot in different schools and colleges in Pakistan. For instance, Participant A stated,

*"I had the privilege of studying top schools and top colleges for my F. Sc. medical. The level of education imparted in these institutions greatly differs in quality compared to other public sector schools and colleges. Although I got 90% marks in my F. Sc., and many students from government colleges would have got 90% in their F.*

*Sc. as well, but their level of critical thinking skills, analytical abilities, confidence level, and English proficiency could not match mine. I always had the upper hand in entry tests, even with equal marks in previous degrees. The privilege of having access to quality secondary and higher secondary education creates big margins in admission percentage of students studying from public colleges."*

Another point where access to quality resources indicates the success of students during entry tests is coaching centers and academies that cost too much and are quite unaffordable for poor or middle-class students. Students come to the testing phase with weak concepts and no practice with this new module. Although self-dependent learning may allow them to succeed in general, self-learners are at a disadvantage. Academies provide hands-on training and build students' confidence to solve the exam questions and score higher. Thus, more students who went to academies during the free period succeeded in getting admission, while fewer self-learners got admission.

Besides academics, students who have extra money can buy many key books and practice papers, access online study materials, and have online tutoring. These materials come in handy for the preparation of the test. Past papers and mock tests conducted by the academies train students for the real test. The key books are systematically designed and have conceptual questions that train students to get familiar with the new pattern. The students who don't have access to such resources are at a disadvantage.

Considering the above discussion, it can be derived that having access to quality study resources predicts the success of students seeking admission to medical colleges. Even though self-determined students may get admission by attending academies, they cannot do this with access to quality resources because the test differs greatly in structure compared to Matric and F. Sc.

Conclusively, having quality resources significantly contributes to the success of the entrance test. The availability of key books, academies, written notes, complex concepts and their explanation, practice and mock questions, past papers, relevant information, guidance from peers and experts, personalized learning experiences, access to supplementary materials, peer collaboration, and confidence building resources collectively boost the student's chances of securing excellent marks in the entrance test and ultimately predicting their success in getting admission in medical college.

## **6. Supportive Family Environment**

Among many factors that affect students' success in getting admission to a medical college, a supportive family environment is also a significant factor and contributes greatly to the overall success of medical aspirants. This theme explores how a supportive family environment plays a crucial role in assisting students in preparing for entrance tests and getting admission to a college. Moreover, this theme would also explore the long-term family environment that has continuously supported students during their matriculation, intermediate, and now entrance test. There are specific ways in which families can support students and help them succeed in their ambitions.

The journey to becoming a medical student is highly competitive and long. It requires 6 years of consistent hard work, and students would suffer from mental breakdowns on many occasions. A supportive family environment provides emotional support and encouragement to students and praise them for their efforts. They help them control their emotions during a dead phase and get back to their original form. Family members should understand the

challenges and pressures of matriculation, intermediate, and entrance exams. They should offer a safe space for students to express their concerns, fears, and aspirations. They should provide reassurance and motivation and boost the confidence of their kids. As a participant, I indicated,

*"My family could not afford expensive schools, colleges, and academies for exam preparation, but they stood by my side through thick and thin. My parents never said anything pessimistic and always encouraged me. They believed in me and always told me that I would get through this. It has been one of the biggest supports that they could ever provide. The feelings being believed and recognized by parents motivates us, and we get even more determined to do something extraordinary and bring some positive change in their lives.*

Another part where the role of a family comes in is academic guidance and mentorship. Certain families are notorious for their high-quality educational background, and all their members are qualified. These families sometimes become torturous, while on many occasions, they provide guidance to their kids at every step of their journey. From the selection of a career to succeed in that particular career, they support the students. Since one of our participant's families was comprised of doctors, he got guidance and mentorship specific to the field. The members of such families assist students in navigating the complexities of the admission process, provide information about relevant and important resources, and offer advice on effective study techniques.

Besides these, financial and material support is also an important aspect of a supportive family environment. At inter level, students are generally dependent on their parents, and it is the responsibility of the parents to provide study resources to the kids. Parents understand their children's financial needs and medical education expenses and strive to fulfill the necessary requirements. They spend a lot of money on quality study materials, review books, and practice resources to increase the children's preparation for the entry test. They also pay for expensive schools, colleges, academies, and coaching centers. Respondent J stated,

*"My family spent a significant amount of money on my studies. I went to private schools and private colleges. Then I attended an expensive academy for entry test preparation and bought all the necessary materials that cost a lot. But my parents never hesitated to spend on my study. This motivated me to work even harder and secure my admission. I did not want to ruin their hopes by failing even after they did so much for me. This type of support from parents is invaluable and strengthens our determination to achieve greater heights."*

This theme of a supportive family environment emerges as a crucial indicator of students' admission to medical colleges. Families can provide emotional support, mentorship, guidance, an irritation-free environment, financial support, and training for better preparation for exams. A supportive family environment is the core of all other predictors of successful admission to medical college because an unsupportive environment at this stage could leave the students in a disastrous situation.

### **Discussion**

The research question focuses on the predictors of successful admission to medical college. The results indicate that several factors such as self-determined motivation, self-



regulation, rigorous exam preparation, academies and coaching centers, learning resources, and supportive family environment played a crucial role in predicting the success of students in securing admission to the colleges. The most prominent of these themes is the presence of self-determination, motivation, and self-regulation. Utilizing these forces, students can push themselves beyond their limits and can perform excellently in exams and tests to secure admission. Individuals with a strong determination to succeed in their careers have an intense internal drive and ambition to perform well in all aspects of their lives. They have clear orientations and recognize the importance of the hard work required to enter a medical college and thus put their best efforts into the process. This internal drive makes them go beyond their limits and prosper in education.

According to some researchers, the career aspirations of science students depend on factors like socioeconomic status, expectations and occupations of their guardians, and demographics (Wigfield et al., 2002). The students who don't have any aspirations do not do much in their academics and their academic success is jeopardized (Berríos-Allison, 2005), academic success depends on many factors like socioeconomic status, age group, gender, score in the entrance exam, and English Language level (Messinis & Sheehan, 2015). With reference to several testing mechanisms in different countries, we will explain the role of SDT in entrance test scores and career choices of biology students. Rayner & Papakonstantinou (2020)'s research has found that more than 84% of biology students were clear about their aspirations and career goals. The findings of this study also align with Krause et al. (2005). According to these researches, at least 67% of the 1<sup>st</sup> year students in Australia had clear objectives for their post-graduation, over 1994-2004. A limitation of this agreement is that Krause et al.'s research was multi-disciplinary and multi-institutional. To improve the curricula and employment opportunities in different industries to increase the chances of employment for the students, a good and subtle understanding of students of BSc and especially those with subjects with a low rate of employment is quite useful (Norton, 2017). The revision of curricula may endorse the aspects of students' determination which are autonomy, relatedness (e.g. major subjects), and competence (e.g. WAM) if the career goals are intrinsic motivation (Deci et al., 2006).

These studies clearly indicate that students who have a strong determination to achieve goals have clear career aspirations. Our participants were clear about becoming doctors so they expressed high levels of self-regulation and achieved their goals. The journey toward medical college admission is filled with obstacles and setbacks, and students must face rejections and apply next year. Moreover, several of our respondents who attempted their MDCAT during COVID-19 faced more significant challenges regarding access to preparation resources and a new online mode of the test. They could not attend physical classes as all the academies and coaching centres were closed because of the pandemic. During challenging times, self-determined students expressed remarkable perseverance and resilience to overcome challenges and secure admission. One respondent failed in the first attempt to secure admission in 2020. However, he returned stronger in 2021 and secured admission on the second attempt. He remained persistent hopeful and, worked hard for the next year, and became successful.

Moreover, there were important indicators as well such as coaching centres and rigorous exam preparation. These played a significant role in students' success as academies provide experienced and trained faculty staff to enhance students' preparation for the test and enable them to score enough for getting admission to a college. Test preparation academies have specialized guidance and expert faculty members to prepare students for the test. The vast



experience of such faculty members is important because they are familiar with the test pattern and teach students accordingly. Moreover, they also possess in-depth knowledge of the medical entrance exams and provide clear concepts. These academies also offer comprehensive study materials, mock tests, key books, and practice question papers to help students understand the exam format, syllabus, and better scoring patterns, enabling them to score higher in real exams through self-determined motivation, thorough coverage of the syllabus, structured study plans, past papers, practice tests, mock tests, effective time management, self-discipline, utilizing effective study techniques and strategies, seeking guidance, building resilience, and giving extensive time to exam preparation, students improve their chances of getting higher marks in the entrance test (Li & Dockery, 2015; Mills et al., 2009).

Another important finding of this question is that engaging with past papers and having access to similar resources of preparation helps students to prepare better for the entrance test for admission. Thus, they have better chances of admission. Engaging with past papers is crucial in predicting successful admission to medical college. It provides familiarity with the test format, exposure to a variety of questions, self-assessment and feedback opportunities, time management skills, identification of high-yield topics, confidence building, and development of effective exam-solving strategies. Moreover, it enhances speed and accuracy, exposes students to challenging and difficult questions, and enables them to benchmark their performance. Additionally, having quality resources significantly contributes to the success of the entrance test. The availability of key books, academies, written notes, complex concepts, and their explanation, practice and mock questions, past papers, relevant information, guidance from peers and experts, personalized learning experiences, access to supplementary materials, peer collaboration, and confidence building resources collectively boost the student's chances of securing excellent marks in the entrance test and ultimately predicting their success in getting admission in medical college.

Besides these, one unique finding of our study is that family environment plays a crucial role in the success of students in getting admission. The Role of Family in the high academic achievement of Students has been discussed widely in literature (Henderson, Anne, & Berla, 1994; Zhang, Jiang, Ming, Yang, & Huang, 2020; Dings & Spinath, 2021). The journey to becoming a medical student is highly competitive and long. It requires 6 years of consistent hard work, and students would suffer from mental breakdowns on many occasions. A supportive family environment provides emotional support and encouragement to students and praises them for their efforts. They help them control their emotions during a dead phase and get back to their original form. Family members should understand the challenges and pressures of matriculation, intermediate, and entrance exams. They should offer a safe space for students to express their concerns, fears, and aspirations. They should provide reassurance and motivation and boost the confidence of their kids.

### **Recommendations**

1. This study comprises participants from different academic years of MBBS. The sampling was independent. Future researchers are recommended to carry out a longitudinal study to monitor the long-term outcomes of students who get admission to medical colleges as the research is centered on interviews and qualitative analysis. This would offer insightful information about their professional experiences and level of job satisfaction. They should collect data from students at the beginning of their F. Sc. and then during the MBBS.
2. Additional research might look into geographical variations in the difficulty's applicants to medical colleges encounter. Researchers should carry out geographic-based



studies and explore students' motives, predictors of success, and challenges they face while securing admission to a medical. Developing targeted interventions and support systems can benefit from an understanding of the distinctive conditions and dynamics in various places. These factors may vary from place to place and students' opinions could differ based on their locality.

3. We found out that online learning technology had a significant impact on student's performance on the entrance test. With the development of technology in education, future studies may examine how online learning platforms, mobile applications, and digital resources affect students' readiness for entrance exams for medical colleges. Learning about these technologies' efficacy and accessibility can help to guide educational policies and practices.

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