ORIGINAL ARTICLE

Students' perceptions of factors for academic failure in pre-clinical years of a medical school

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Abstract

Objective: To identify and explore medical students' perceptions about their academic failure.

Method: The qualitative study was conducted at Shifa College of Medicine, Islamabad, Pakistan, from December 2016 to January 2017, and comprised medical students. Two focus group discussions and 5 semi-structured interviews were conducted with students who had obtained <50% marks in their first professional examinations. Key words and important points in the written text were highlighted, coded, themed and categorised. Data was analysed manually.

Results: There were 22 students in the two focus group discussions; 13(59%) males and 9(41%) females. Of the 5 interviewees, 3(60%) were males and 2(40%) were females. Variable factors related to failure ranged from curriculum, assessment, environment, educators and personal factors to issues relating to stress and time management, learning resources, financial support, living away from home, poor attendance, peer pressure during small group discussions and indoctrination by parents.

Conclusion: Both personal and environmental factors were found to be affecting academic performance of medical students.

Keywords: Risk factors, medical students, Pakistani, perceptions, academic failure.

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Introduction

A mushroom growth of private medical colleges in Pakistan has led to poor quality of student intake along with an increase in students who are unable to cope with the rigors of medical studies.[1] This has led to confidence lack, decreased motivation, repetitive underperformance and, ultimately, exhaustion of mental abilities. Some students drop out of medical college consequently.[2] These traumas can produce unproductive and unsafe physicians. For success, students need an uneventful smooth journey through medical school, completing their course work in limited time and budget.[3]

Underperformance, burnout and failure leads to loss of time, money and affective wellbeing. Such students need to be identified, and their perspective understood so that suitable pre-emptive strategies can be implemented to help them.[2,3]

Academic failure stems from frequent absence from classes, dropping out, repeating the grade or low educational quality.[4] Risk factors affecting academic performance can be cognitive[4] (previous academic ability), noncognitive (personality, learning styles)[3] and demographic factors (age, sex, ethnicity).[5]

Perceptions of students on causes of failure differ from those of faculty. Students usually attribute their failure to teachers, curriculum and assessment. They rarely recognize role of poor time management and improper study skills in failure. Students who blame others for their underperformance find it difficult to succeed. It is vital to modify this thought process.

Al Amri[6] concluded that students attribute failure to teachers, curriculum and information overload. Various studies signify that female students blame external factors while male students attribute internally and accept problems with English and time management. A study at Army Medical College showed poor time management, information overload, low grades in written assignments and lack of motivation as significant factors.[7] In another study at Bahria Medical and Dental College, interesting gender differences in attributes were observed. Females were found to be strategic learners and better at time management. They knew more about assessment demands and scored better in areas where ideas were interrelated.[8]

An Iranian study showed significant relationship of

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students' scores with prior schooling, marital status, gender and residential status.[9] In various studies in India and Bangladesh, unsatisfactory English comprehension, male gender, increased age and low preadmission caliber, lack of concentration, socio-cultural disparities, unfamiliarity with new terms and drug names were prevalent factors.[10,11]

It is imperative to identify these factors in our own set up to take immediate corrective measures to improve students' performance.

Subjects and Methods

The qualitative study was conducted at Shifa College of Medicine, Islamabad, Pakistan, a private sector institution, from January 2016 to January 2017, and comprised medical students of preclinical years. A phenomenological approach was adopted to obtain qualitative data. The study required open-ended responses with gentle probing for clarification and in-depth analysis.

After approval from the institutional ethics review committee, purposive sampling was used and students who had obtained <50% marks in the first professional examination were approached. Amongst these students, those who volunteered to take part in the study were given appointments for focus group discussions (FGDs), whereas all those who had scored ≥50% marks in first professional examination or those who were reluctant to participate were excluded.

Two FGDs were conducted and they lasted till data saturation. Triangulation of data was done by conducting 5 semi-structured interviews. Each FGD lasted about 40 minutes and each interview about 10-13 minutes. Interviews and FGDs were conducted using a semi-structured guideline consisting of open-ended questions.[12,13]

English was the language of communication. Any phrases spoken in Urdu were translated and verified. All transcripts were assigned unique identification numbers. FGDs and interviews were recorded, transcribed verbatim and coded. Themes and sub-themes were identified. Themes were developed inductively from the data after thorough reading of each verbatim transcript and highlighting the key statements, assigning open codes and comparing transcripts. The findings were presented to other participant to modify or suggest changes to data interpretation. Their suggestions were incorporated so that key points in summary could accurately reflect the data.

ANNEXURE-A

FOCUS GROUP AND SEMISTRUCTURED INTERVIEW PROTOCOL

Project: Students' perceptions regarding potential risk factors related to academic failure in first two years of medical school; a qualitative study

Time of interview:

Date: **Place:**

Interviewer: **Interviewee:**

Position of interviewee:

Explain the interviewee the following:

- *Identify the reason/s related to his/her failure which may be personal, environmental, demographic etc.*
- *The information will be collected from volunteer students like you.*
- *Your confidentiality will be protected.*
- *Your views will not affect/harm your career or marks.*
- *The interview will last for maximum 15 minutes.*

Questions

Q1. What, in your opinion, is/are the reason/s you failed?

Q2. Do you come in this profession by your own choice?

Q3. Are you a hosteller?

Q4. Did you avail counselling services available in the college?

(Thank the student of his/her participation. Assure him/her of confidentiality and potential for further interviews)

NOTE: Each student was provided with juice and chocolate/biscuits before beginning of session.

Results

There were 22 students in the two FGDs; 13(59%) males and 9(41%) females. Of the 5 interviewees, 3(60%) were males and 2(40%) were females. There were 7(32%) students in the first year FGD, and 15(68%) in the second year FGD.

After data analysis, student's perceptions about potential factors of their failure were divided into personal and environmental factors. These two main themes were formed after conjuring up 15 sub-themes (Table).

Personal factors were related to academic self-concept, lack of motivation, coping mechanisms, study skills, personal burdens and life events.

Environmental factors were related to curriculum, assessment, learning environment, educational guidance, institutional ethnography/teaching methodology, hostel living, social support, ethical conflicts with peers and teachers, non-medical background, indoctrination by parents.

Regarding personal factors, the students were having difficulty in coping with curricular pace, regular studies and self-directed learning. Being previously spoon-fed by parents and teachers and learnt through didactic teaching methods, the concept of self-directed learning was alien

Table: Themes and subthemes derived from focus groups and interviews.

Sr #	Themes	Sub-Themes
1	Personal Factors	Academic self-concept
		Lack of motivation
		Coping mechanism (in terms of time, grades and workload)
		Study skills
		Personal burdens (health, finance)
		Life events (death, divorce, separation).
2	Environmental Factors	Curriculum
		Assessment
		Learning environment
		Educational guidance and Ethical conflicts with peers and teachers
		Institutional ethnography/teaching methodology
		Hostel living
		Social support
		Non-medical background
		Indoctrination by parents

to them. Hostel life was an additional burden. They received multiple advices regarding choice of books and other study resources, making it more difficult to devise their learning plan. Their study skills were not efficient enough to imbibe the content. They didn't summarise lessons and were not good at making concept maps, flow-sheet diagrams, schema etc. They were advised by senior peers who may not be efficient learners. When they failed their exams or could not contribute to SGDs, they got demotivated and lost interest. One student said that *"my scores don't reflect on how much effort I put in. So that's quiet disheartening and it is also demotivating."* Continuous study using faulty learning strategies led to exhaustion and burnout, causing loss of confidence and low self-esteem and making them see themselves as misfits. One of the students said, *'I do not belong here, this place is not for me!', while another said "I couldn't make my head into that, into that entire context. I find it very boring". One female perspective was: "people in my SGDs always had a better understanding and more intellect; it seems to me that people around me knew what to study. They kind of did selective study and I did not. I focussed on the wrong things, I suppose. I had lack of motivation, especially towards the end of year… in the start I passed everything and towards the end I started failing".*

It can be deduced that these students were crammers. They usually studied overnight before the exams. They had superficial knowledge. They usually came unprepared and considered SGDs as a waste of time. Instead of focusing on concepts, they tried to compete with other students. They did not fit easily into institutional ethnography. They thought SGDs were meant to humiliate students like them. One female student said, *"We have that peer pressure around us all the time during the SGDs, the class lectures and all the time. It's like you get treated as a second-grade student."* A male student said, *"You know SGDs are like competition most of the time. Nobody really focuses on understanding".* Another one said, *"I didn't think SGDs or lectures either way give you the concept. It was always like I was going to read the book and explain it".*

One of the strong reasons of failing was a previous failure in final exam. Students spent time preparing to pass the exam; they missed classes, lagged their peers in the modules and thus could not compensate for the backlog. A male student said, *"I was preparing for 'supply' during the whole of my second year. So, this is the reason that I piled up a lot of content. I missed classes in the beginning 2-3 weeks of the second year."*

Some students held some of their teachers responsible, who either came unprepared for SGDs or did not have clear concepts. Every teacher suggested a different book which confused them further. Some teachers negatively evaluated them in return against their own negative feedback by the students. A male student said, *"They have cornered me and ask me if I was the one who gives this feedback. I said yes it was me and ever since then whenever I had SGD with them, I get poorer marks than my colleagues".* One student suggested, *"Facilitator should take a little bit of more active role in SGD".* A female student added, *"teachers should be clearer with their own concepts and they should (stressing) help you out".*

Few students experienced real-life events during module days/exams, so their attendance got poor. The phrases they uttered were: *"My parents got separated", "My mom also got diagnosed with schizophrenia so ...ah...it was... I don't know I just...wasn't very…focussed".* Some students had financial difficulties and spent their time earning and finding less time to study. They got overworked and exhausted. One female student said, *"ahn…my ...family...does not... pay for my fee completely and I have to contribute to it at least for half of it. And that's the deal with my parents. I... I work freelance. I write articles. I…I make…I make brochures for... ahh… Steel Mills and other companies. So sometimes I have to go there, sometimes I have to work pretty late at night and especially towards the end of the year because the 'Prof' fees come at the end of the year!!!"*

With respect to environmental factors, learning environment had significant relationship to students'

wellbeing and success. If encouraged and helped by their seniors and teachers, they readily adjusted with a positive impact on performance. Good relationship with peers prevented exhaustion and burnout, especially in contemporary curriculum where SGDs were conducted daily and there was regular feedback. A novice could be negatively affected. Academic stress was overwhelming for first-year students and increased manifold in a learner-centred integrated modular system

Our socio-cultural environment doesn't favour co-education in most primary schools. Few male students from Khyber Pakhtukhwa (KP), a province with traditional Pakhtoon culture, found the environment very 'open' and had difficulty in accepting the culture of discussions in mixed-gender batches. They said, *"We came from another education system and here it is all different. There we do Short Essay Questions (SEQs) and here we must attempt MCQs. In SGDs we are too shy to speak. Even if we speak a little, other students laugh, and we get more depressed."* Another student reinforced, *"In Peshawar, our education system was different. There we had absolutely no idea about studying in co-education and here in classes ... SGDs … in front of girls ... meaning shyness ... so this is the problem."* English language comprehension was also a major problem for these students.

Most of the failed students held external influences responsible. They were dissatisfied with the education system. They objected to the significance of internal evaluation. A female student reflected, *"I had no knowledge of the system how it worked. I had no knowledge of how internal examinations corresponded at the end of the year to be added to the professional examinations. Because I was lacking in this knowledge, I was very relaxed and I thought it was OK to have poor examination scores in the internals, being completely unaware that it would have such a significant effect (stressing) on my professional examination.* A few students realised the effectiveness of assessment system, *"the weighing of 30% is what actually forces us to study".* A female student endorsed, *"I believe that internal examinations are an excellent help and an aid for a medical student if they properly understand its importance. However, its importance was not properly stressed to us."* The failed students usually did not consider formative assessments vital for learning. They either did not attempt them or did so half-heartedly. They believed that *"formatives are much more tiring and distressing than professional exams. Formatives are usually pretty straightforward and direct questions and when you come to the 'prof' they are asking you indirect questions and you don't know how to apply your knowledge."* If students come from non-medical background, they get completely overwhelmed by the amount of content and curricular pace. One student, who came from a background where she was the first doctor-to-be in the family, said *"I found it as a very big surprise. I was well aware that I would have to study ... I believed that medicine is about discipline that you just have to study around 3-4 hours daily. But if there are circumstances in which if you cannot study for one day there is a pile of information that does throw you off so much … that the student goes into a downward spiral of stress, anxiety and at one point gives up".* Another female student added *"I always wanted to be a doctor but when I just joined medical field… it was different from what I expected and the … days were harder… I just couldn't cope up with all of this."* One female student said, *"I felt really rushed during the entire course of the year. I felt like I really needed more time to study the concepts compared to my peers. I felt like I missed a lot of syllabus that is covered in one day, I felt like I have so much to cover and to study for the future that I felt overwhelmed and I was unable to understand where to begin from".* It seemed these students tried to catch up with their studies, but their study methods were usually ineffective. Gradually they felt lost and alienated. A female student said, *"my friends always did better than me and because they did better, I would try to catch up… or I would try to study with them, but their pace of study was entirely different".*

The students expressed their need of institutional support, which, according to most of them, was lacking. When they were asked in FGDs, *"how many of you availed counselling services within the institute?"* they feigned complete ignorance. One male student said that *"he was pushed into availing counselling services and didn't find the session very effective".* One female student said, *"The counsellor told me very vaguely to study everything. So, I didn't find that helpful. I was ... I was more confused after that ... I was told to study everything from several books, including videos and flash cards and many different methods. I believe that the teacher was trying to help me by showing me different options for studying, but my confusion was still the same and that made me study the wrong thing for the exam."* Another female student added, *"I was really put down by the counselling".*

Living away from home also affected these students' performance. A strange environment, animosity of seniors

and peers were ever-present pressures adding to their burden. When asked how living away from home affected performance, one female student said, *"it does affect your mentality! "* Another said, *"Others will be out partying in the hostel, and I would be stuck with the books. That is a distraction; you cannot deny that.* Another one endorsed, *"... yeah ... living in a hostel also keeps you away from your family and it just puts you ... mmm ... it's not time I guess... nor you spent time missing your parents it's a distraction".* Adjustment for hostel residents was more time-consuming compared to day scholars. Students had to deal with the peer pressure, social interactions, and poor guidance by seniors, financial threat and homesickness. One female student said she got late accommodation which wasted her time and later on other factors came into play *"The atmosphere affects you obviously … you do all stuff on your own … the time you should be sitting and studying is used for other stuff ... if you are not getting food, you are cooking, washing clothes ... a lot of time gets wasted".* The scepticism about how and from where to study was more pronounced amongst hostel residents. It was difficult for students to form an immediate trusting relationship with any peer. Hostel residents had more interaction with their senior students and suffered more from varied and deviant suggestions about the learning process and resources. A female student said, *"Hostel is a very … ahm ... pros-and-cons situation. There are distractions and you might come across people who will try to purposefully fail you. They will tell you what to study and it will be wrong, but if do you come across someone who is willing to help you or someone you believe you can trust to give you correct explanation, they can guide you very helpfully and help you fill up those gaps in your knowledge.*"

Second year students in the FGD were asked how many of them had come into the medical field by their own choice. They got unusually quiet. The question was rephrased: "How many of you *DID NOT* come into this field by your own interest?" Six out of 9 males and 1 out of 6 female students raised their hands. A male student reluctantly said, *"I thought my parents wanted me to be a doctor, so I should go in this field because they can think better for me, they can understand better than me that what I can do better. But if you have absolutely no interest, you are in trouble!!!"*

A female student exclaimed, *"I think medical profession and medical school is not easy thing. You need to have full interest and everything orderly to grow up because the only thing you do is study and just study."* Another female student said, *"I knew my parents always wanted me to do this. I could not really decide anything else other than this. I … of course, I wanted to make my parents happy. The thing is that does take a toll on you!!!".* A male student added, *"The injustice bestowed upon me was that I liked maths and physics. But everyone in my family is a doctor so I came here because my parents wanted me to be one".*

When the same question was asked from first year students, all laughed embarrassingly. One male student said, *"I got admitted in engineering college as well, but this was what my parents wanted ... but they never forced me. They said you are open to do what you want so I guess I wanted to make my parents happy; like I was not very motivated. There was no one in family who was a doctor".* Another male student admitted, *"I was forced into medicine but with time I find it interesting".* A female student said, *"I came here on my own will but after I joined, I lost motivation."*

Discussion

Significant factors contributing towards poor performance were identified. All are interlinked, leading to a vicious cycle of loss of motivation, self-worthlessness, poor internal grades, poor attendance, stress which further pushes the student towards losing hope and failure. Most of these factors, if identified and dealt with, can change the course of events.

Certain interventions are needed at pre-admission level. Aptitude tests can readily determine the future performance of students particularly if they are indoctrinated by parents/family members to enter medicine. Meanwhile, society must change its thought process; parents should give free choice to their off springs to select their career. Pakistan is a patriarchal society, so it is an act of disobedience to choose one's future profession by the student himself. The peremptory demand of 'doctor brides 'concept[14] has forced the parents of girls to push them in to medicine. In these cases, effective counseling of parents is required.

Teachers can identify at-risk students' dropping out by observing behaviours which comes under 'learning related skills' (LRS) of students. LRS include behaviours such as persistence in completing the task, attentiveness, learning independence, eagerness to learn, organization of thoughts depicted in written assignments, following directions, receptiveness to challenges, cooperation, pro-social behaviours, responsibility, directed attention,

flexibility, ability to plan and solve problems.[15]

The stress of medical studies is more tangible in integrated curriculum. It is difficult for the students to catch up with curricular pace. The strain of medical studies is ominous for reasons discussed in result section. Our results reinforce the disquisition made by Moffat KJ,[16] Biswas SS[17] and Chew[18] in their articles where they emphasize the problems faced by first year medical students leading to poor academic performance, an effect highlighted when the medical college curriculum is integrated, and problem based.

The results of our study closely relate with study of Muzafar et al, where common stressors identified in a Pakistani medical college were: too much study with little balance, lack of sleep, lack of time-off, fear of failure, sense of never-ending competition, scoring lower than expected and high parental expectations. Our study contradicts their findings in that they found that females and day scholars have higher incidence of burnout. In our study, we do not find any gender difference and it was evident that hostel residents face more problems in terms of adjustment, environment and distractions. They must work on their own and settle in a culture developed within hostel. These problems are enhanced particularly if the student is a foreign national as he/she is unaccustomed to institutional and environmental culture and cannot visit family frequently.[19]

The verbatim responses of failed students in our study invariably show symptoms of burnout. Out of the three aspects of burnout, medical students of preclinical years, experience personal and work related burnout.[19]

Conclusion

Several personal factors that contributed towards poor performance of students included poor academic self-concept, lack of motivation, ineffective coping mechanisms, study skills, and personal life events. Environmental factors included curriculum, assessment, learning environment, conflicts with peers and teachers, hostel living, lack of social support, indoctrination by parents and non-medical background.

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