

Research Article

Exploring Emotional Control and Emotional Fortitude among Preclinical Undergraduate Medical Students: A Qualitative Study

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Abstract

Background: Although emotional intelligence is essential for medical students to succeed in their careers, it is overlooked in medical education.

Objective: To explore the emotional control and emotional fortitude among preclinical undergraduate medical students.

Methods: A qualitative exploratory study following constructivist approach was conducted from May-June 2023. The University Sains Malaysia Emotional Quotient Inventory Manual helped in constructing a semi-structured Google questionnaire to explore emotional control and emotional fortitude from second year medical students. Initially an inductive content analysis was utilized followed by thematic analysis approach provided by Braun and Clark to final themes.

Results: Every student has a different way of regulating emotions. One of the participants said that his disruptive emotions are controlled by remembering Allah while the other disclosed that he just explodes in anger. A student said that she detaches herself from the closed ones when she is facing stressful situation whereas the other told that she likes to talk to loved ones. Most of the study participants were found mature enough to accept and learn from their mistakes, improve and progress in life. They were able to resolve tense situations and handle difficult people through grey rocking technique, empathy, and distancing from them.

Conclusion: This study highlights the importance of developing emotional intelligence in undergraduate medical students. Although emotional intelligence is essential for medical students to succeed in their careers, it is overlooked in medical education. We can help students to become more effective and compassionate physicians by incorporating emotional intelligence training into medical school curricula.

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Introduction

The University Sains Malaysia Emotional Quotient Inventory Manual (USMEQ-i) explains the Emo-

tional Intelligence (EI) or Emotional Quotient (EQ) as the ability to sense and respond to one's own and other's emotions.¹ This capability to sense and respond guides one's thoughts and actions.¹ The ability to express and control emotions is very essential besides the capacity to understand, interpret and respond to other's emotions.² Several researchers emphasize that the ability of EI is more important than Intelligence Quotient



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(IQ).^{1,2} There are different models of emotional intelligence in literature on the basis of different theorists³ such as the ability model of emotional intelligence by Mayer and Salovey (1997) consists of perception, appraisal and expression of emotion along with emotional facilitation of thinking, understanding and analyzing emotions, and reflective regulation of emotions. Two mixed models of emotional intelligence were proposed by Bar-On (1997) which is a theoretical model and by Goleman (2001) which is a more practical model.³ Bar-On emphasized that emotional intelligence is a non-cognitive capability, competency, and skill that may influence an individual's ability to cope successfully with environmental pressures. Whereas Goleman stated that emotional intelligence is an underlying personal characteristic and not cognitive intelligence. The third model was trait model by Petrides and Furnham (2001) which explained that emotional intelligence is a self-perceived ability and tendency to behave. Generally, the existing models categorize emotional intelligence into personal intelligence (understanding and managing self-emotions) and social intelligence (understanding and managing others' emotions).³

The USMEQ-i was developed by Dr. Muhamad Saiful Behri Yusoff, Dr. Ahmad Fuad Abdul Rahim and Prof. Dr. Ab Rahman Esa in 2010 by Medical Education Department, School of Medical Sciences, University Sains Malaysia Kubang Kerian, Malaysia.⁴ The USMEQ-i explains three theoretical approaches to EQ.⁴ The first approach is the specific ability approach which focuses on cognitive ability including emotional awareness. The second is an integrative approach which focuses on multiple specific abilities to have an overall sense of emotional intelligence. It includes cognitive ability of emotional knowledge. The third approach is a mixed-model approach having mixed qualities such as non-cognitive capability, skill and/ or emotionally or socially intelligent behavior along with inherent personality domain encompasses a broad definition of emotional intelligence.⁴ The USMEQ-i is an example of mixed model approach which includes seven dimensions of emotional intelligence (Emotional control, emotional maturity, emotional conscientiousness, emotional awareness, emotional commitment, emotional fortitude and emotional expression).^{4,5} Broadly speaking EI helps in controlling temperament, improving adaptability and self-management skills. Moreover, EI helps in learning

new skills at a faster rate.⁶

In medical education, emotional intelligence plays a crucial role in creating sensitive and empathetic physicians.² It is one of the key competencies of modern medical practice.⁷ Undergraduate medical training is a stressful period for students because of longer duration and heavy academic workload as compared to other programs.⁸ Students face stress due to complex medical curricula and they find difficulty in adapting to new surroundings due to lack of emotional maturity.⁹ It has been observed that a proportion of undergraduate medical students start using antidepressants to deal with stress. These students need to be trained to manage their stressful training period. Abundant literature is available to assess cognitive ability or the level of emotional intelligence among medical students,^{2,4,10,11} but literature is scarce in capturing in depth data on non-cognitive capability along with inherent personality of medical students to regulate their emotions and solve their daily life problems. This study has utilized mixed-model (Bar-On and Goleman) theoretical approach of EQ4 by using two domains (emotional control and emotional fortitude) of USMEQ-i out of seven. This approach is utilized because it deals with the non-cognitive ability of individuals to regulate their emotions, solve their daily life problems and handle difficult people. The two domains of USMEQ-i were selected because they were more suitable to get appropriate in-depth responses from preclinical medical students. Hence the readers will have an insight into how preclinical medical students regulate emotions during stressful situations and handle difficult people.

Methods

A qualitative exploratory study following constructivist approach was carried out from May-June 2023. Ethical approval was granted by the ethics committee of a private medical college of Islamabad (Appl # EC, 25th May 23).

The USMEQ-i Manual¹ has helped in constructing a semi-structured self-administered questionnaire to explore the two domains (emotional control and emotional fortitude) out of total seven. A questionnaire was developed by utilizing the seven-step process provided by Association for Medical Education in Europe (AMEE) Guide no 87.¹²

Google form was used as a medium for disseminating finalized questions among students through the institutional WhatsApp group. Interviews or focus groups were not conducted because the students usually do not open in front of everyone. Only second year among the preclinical students were selected (purposive sampling) for data collection. The first-year students were excluded because they are particularly struggling to adapt with academic, personal, social, financial and health factors.^{13,14} There is a variety of academic disciplines and course specific challenges at a medical school.¹⁴ Studying at a university level is a transformative experience in which students learn to form relationships and embrace new experiences.¹⁴

The approach of data collection through Google forms allowed students to openly express themselves. The anonymity of the students was assured by not obtaining their names or roll numbers. Qualitative study requires in-depth exploration therefore getting the relevant response was important.¹⁵

Initially an inductive content analysis was utilized which is an iterative process for labelling qualitative raw data in the form of text to create categories.¹⁶ Later the textual data was manually analyzed by four authors utilizing systematic approach for qualitative text analysis.¹⁷ Approach to thematic analysis provided by Braun and Clark was utilized in this study.¹⁸ In-vivo analytic codes (1st coding cycle) were developed by careful reading the text in response to open-ended questions till the data saturated at participant number 60. The codes were arranged to form subthemes. 2nd cycle of coding was

done, and subthemes were discussed among all authors. Differences in the coding were resolved after group discussion and consensus. Analysis was verified with all authors and the themes were finalized after reaching consensus to ensure data analysis triangulation. Member checking was not utilized because the data was collected in the form of text (participant's original quotes) and the chances of bias during data transcription were already reduced. Moreover, due to the sensitive nature of data, it was not possible to go back to participants for verification of analysis.

Results

The data saturated at participant number 60 out of total of 100 students with female predominance (71.66 %). A total of six themes and twenty-nine subthemes emerged from the data based on two domains of emotional intelligence. The representative participant's quotes are given below (Table-2).

Discussion

This study explored two domains out of total seven from the USMEQ-i among preclinical undergraduate medical students. One is emotional control (regulating emotions during stressful situations) and the other is emotional fortitude (handling difficult people and tense situations by negotiation and resolving disagreements).

Table 1: Participant's Demographics (n=60)

Gender	Total number	Frequency (%)
Male	17	28.33
Female	43	71.66

Table 2: Emotional Intelligence among Preclinical Undergraduate Medical Students

Domain-I: EMOTIONAL CONTROL	
Description: The study participants have expressed how they control their disruptive emotions and impulsive behavior. Moreover, they have expressed how they react and manage stressful situations or when they face failure in their daily life or medical school life.	
Theme-1: Control of Disruptive Emotions (anger, sadness, anxiety, fear) and Impulsive Behavior	
Subthemes	Participant's Quotations
a Remember Allah	... When I begin to feel any negative yet natural emotion, I remember Allah. (M, # 45) ... Yes Alhamdulillah ❤️ it is all cause of Allah ❤️. I Wake up daily and make dua that Allah give me power to control anger. (M, #12)
b Giving yourself sometime to understand	... Giving yourself some good amount of time to understand what you're going through is a great way to make sense of your feelings and have a peaceful life experience. (F, #58)
c No immediate reaction	... I don't react to situations immediately ... I take my time to process an appropriate reaction. (F, #56)

d	Trouble managing anger	... It varies, sometimes I can't control and just explosion of anger happens, but sometimes I am just amazed myself for not reacting on stuff which I was supposed to react in past. (F, #4)
e	Train one's mind	Training your mind to keep away from what triggers your impulsiveness is the most effective way. (F, #38)
f	Isn't being impulsive normal	... Sometimes I'm not able to control my impulses and I think it is quite normal Isn't it? (F, #47)
Theme-2: Reaction to stressful time and its management		
a	Reading novels, playing games and making a to do list	... If it is a general anxiety, I read novels or play games to distract myself. (F, #21)
b	Analysis of the situation	... During the rare times when the stress becomes too much, I need to take a moment to gather myself and ask what's going wrong, what's going right and what I can change. (M, #45)
c	Detachment from closed ones	... Under great pressure in my daily life, I automatically detach myself from everyone especially closed ones. (F, #38)
d	Talk to loved ones	... I talk to a loved ones and discuss my issues with Allah during and after namaz. (F, #58)
e	Do not disturb mode	... I prefer to stay alone in my "do not disturb" mode. (F, #55)
f	Walk, workout, spending time with family	... I go on walks, I work out, I spend time with family and focus on how I can tackle the pressure. (F, #56)
g	Hard to tackle pressure	... I find it really hard to tackle pressure and stresses therefore, it affects my physical and mental health at a great deal. (F, #33)
h	Increased sleep, overeating and plan things	...I sleep a lot, I overeat. I manage it by making schedules and planning things. (F, #3)
i	Crying alone, calling mother, and watching motivational videos	... When I am too stressed, I cry alone ... or call my mother and then watch a YouTube motivational video... I feel better then. (F, #40)
Theme 3: Controlling emotions after facing failure or overall control in any situation		
a	Pray to Allah and cry out a little	... When I'm in trouble or face failure I pray to Allah SWT to ease my hardship . When I'm really angry, I cry out a little. I don't think any human can have full control over themselves in any situation. (F, #56)
b	Facing failure isn't easy	... It isn't easy facing failure, and I still haven't found a way to deal with it with it properly. It is demotivating. (F, #21)
c	Full control of myself	... I've matured enough to accept things for what they are, and if they are beyond my control, I simply let go. Failure is motivating because it means I still have room to grow. (M, #5)
d	"The moment you get demotivated by failure is the moment you lose in life"	... Failure is always motivating. The moment you get demotivated by failure is the moment you lose in life. (M, #46)
Domain-II: EMOTIONAL FORTITUDE (SOCIAL COMPETENCE)		
Description: Majority of the study participants were found mature enough to accept and learn from their mistakes, resolve tense situations and handle difficult people.		
Theme-1: Admitting mistakes		
a	The only way to learn and progress	... Yes, I do! It is the only way to learn and progress. We all make mistakes. (F, #21) ... Yes, all the time. Probably because I am a perfectionist, and I am constantly thinking of improving myself. (F, #58)
b	Fear of Allah	... Yes, because I have a fear of Allah. (F, #7)
Theme-2: Resolving tense situations		
a	Self-reflection and communication are the key to success	... Being willing to self-reflect, open to communication and compromise to a reasonable extent is the best way to resolve conflict.(F, #21)
b	Gather strength from family and friends	... For tense situation, I always gather some strength from my family and friends to resolve it. (F, #51)
c	Unable to handle	... I cannot handle the situation ... there would always be someone who would handle the situation for me. (F, #59)

Theme-3: Handling difficult people	
a	Grey rocking technique ... Grey rocking is the best technique to deal with difficult people. I tend to remain neutral in most conflicts. (F, #21)
b	Active listening ... To be honest I feel difficult people have a rigid mindset. I try to actively listen to them and it does work for me most of the times. (F, #56)
c	Empathy ... Empathy is one of my key tools that I use to deal with people around me. (F, #58)
d	Feel anxious ... When handling difficult people, I feel anxious ... sense my rising heartbeat while talking to them. (M, #59)
e	Distancing myself ... I have faced difficult situations and people by distancing myself from them and just focus on myself and academics. (F, #32)

* # -Participant no, F-Female, M-Male

The findings of this study suggest that medical students have a good understanding of the importance of emotional control and use a variety of strategies to deal with their emotions during stressful situations. It is the resilience which is defined as the ability to adapt in response to any challenge or to handle pressure and find ways how to thrive.^{19,20} West et al. concluded that resilience was inversely associated to burnout symptoms in more than 5000 physicians.²¹ In this study, few strategies to deal with disruptive emotions such as anger, sadness, anxiety, and fear were remembering Allah, taking some time to understand the situation and by not reacting immediately to any situation. One of the students said she just cannot handle anger and explodes and the other said that she is oversensitive, and it is hard for her to control anger. The other perception was that a mind can be trained to avoid impulsive behavior. On the contrary, one student said that sometimes it is quite normal to be impulsive. A previous study²² determined the factors associated with impulsive behavior among medical college students such as fear of exams, lack of sleep and use of mobile phones. In this study, the boys seem better in controlling their disruptive emotions and impulsive behavior than girls.

It is evident from the study findings that the students react in a variety of ways to stressful times. Few participants said that they engage themselves in de-stressing activities, such as exercise, spending time with loved ones, or reading. The students make conscious effort to regulate their emotions in response to stress.²³ One of the study participants said that he takes some time to analyze the situation that is causing stress so that he can do anything to manage or leave it to Allah. Few students detach themselves from the closed ones, cry alone and communicate with mother, overeat, and sleep more during stressful times. One of the participants said

that it is really hard for her to tackle pressure and stress which affects her physical and mental health. A previous study,²⁴ from 12 countries quoted the high rates of mental health problems, burnout, substance abuse, and mental stress in medical students. In this study girls reacted differently to stressful situations and worked hard in dealing with stress while boys managed stressful situations well.

The participants have also expressed a variety of ways in which they control their emotions after facing failure in daily or medical school life. One of the students said that it isn't easy to face failure, and she still hasn't found a way to deal with it properly and it is demotivating for her. Medical schools should provide student support programs for social and personal needs such as academic support, career guidance, health issues etc.²⁵ Moreover, there is an increasing trend to improve EI levels in various professions because the program outcomes can be effected by it.²⁶ Another participant was mature enough to accept things for what they are, and he further told that if things are beyond his control, he simply let go. Failure is motivating for him because it means he still has room to grow, and that he thinks he has full control of himself in most situations. It is good to know that EI can be polished at any age, rather it is improved naturally with age.²⁷ One of the students beautifully explained that the moment you get demotivated by failure is the moment you lose in life. He further said that momentarily suppressing one's emotions is good as long as you make sure they don't build up indefinitely. The study shows that it was difficult for girls to face failure while boys managed well, and the failure was motivating for them.

The second domain explored was emotional fortitude. The majority of the students were found mature enough to accept and learn from their mistakes, to handle tense

situations and difficult people. Although failure is negatively perceived, it may be the opportunity to learn from mistakes and errors of self and others within an educational setting.²⁸ The study participants expressed that admitting mistakes is the only way to learn and progress and self-reflection and communication are the key to resolve tense situations. Communication is the meaningful interaction among people which is a two-way process to send and receive messages.²⁹ Communication skills are important to teaching and learning at university level.²⁹ EI is important in developing one's personality and to achieve success in life and profession.³⁰ One of the students said that she gathers strength from family and friends to resolve tense situations. The other student said someone would handle the situation for her as she is unable to handle herself. Students told different strategies to handle difficult people such as grey rocking, active listening, empathy, and distancing from them and focusing on self and academics. One of the students said that it is difficult for him to handle such people and he feels anxious, and his heartbeat rises. Majority of the female participants were good in resolving tense situations and handling difficult people.

Although the students were in depth explored regarding emotional control and emotional fortitude, this study has few limitations. The data for this study was collected from a single medical institute and the cultural and institutional factors might have influenced the findings therefore affected the generalizability of the study. The other limitation is that only two dimensions among the total seven dimensions of USMEQ-i were explored. In future multi-institutional studies can be done and the gender differences in regulating emotions and handling difficult people can be elaborated in detail.

Conclusion

The study emphasizes the importance of EI for medical students. It suggests that EI is often overlooked in medical education, which primarily focuses on cognitive skills. The study proposes curriculum revisions for both undergraduate and postgraduate medical programs by incorporation of EI. Moreover, a supportive environment for students to discuss their emotions and to seek help whenever required is crucial during their training period. Reflecting on emotional experiences can contribute to the student's personal growth.

Ethical Approval: The Research Board & Ethics Committee, HBS Medical & Dental College, Islamabad approved this study vide letter No. Appl#EC,25th May, 23.

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Authors' Contribution

AA: Conception & design, Acquisition of data, analysis & interpretation of data, drafting of article, critical revision for important intellectual content, final approval

FM: Acquisition of data, drafting of article,

AQ: Acquisition of data, analysis & interpretation of data, drafting of article

LS: Acquisition of data, drafting of article

SM: Acquisition of data, analysis & interpretation of data, drafting of article

KF: Conception & design, Acquisition of data, drafting of article

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