



THE ANALYTICAL STUDY AMONG ANXIETY AND SELF CONCEPT OF MEDICAL STUDENTS

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ABSTRACT

Medical students are susceptible to test anxiety (TA), which has a negative influence on their professional life and jeopardises their patients' health treatment. Understanding the topic requires a qualitative investigation of TA among medical students. As a result, this research looked at medical students' perspectives on TA and their recommendations on ways to eliminate it. Methods: At a public university, we performed a phenomenological research on medical students. We used focus group discussions (FGDs) to learn more about their TA experiences. The focus groups were verbatim transcribed, and the transcripts were analysed using Atlas.ti software. The prescribed criteria were followed throughout the theme analysis. Results: A total of 45 students participated in seven focus groups. The students, their academic resources, and the examiner emerged as three primary topics. Each subject had subthemes that were mutually incompatible. The "students" theme was divided into negative vs. positive thoughts and self-neglect vs. self-care, "academic resources" into heavy curriculum vs. facilitative curricular aids, and "examiner" into criticism vs. feedback and strict vs. kind approaches, and "academic resources" into heavy curriculum vs. facilitative curricular aids.

Keywords: *Among Anxiety, Medical Students*

INTRODUCTION

Pupils and students experience exam anxiety, which is an emotional-cognitive phenomena that has a significant impact on their ability to perform and progress in school (1). According to the results of an Iranian research, light test anxiety was experienced by 37 percent of students, moderate anxiety was experienced by 38.5 percent of students, and severe anxiety was experienced by 24/5 percent of students (2). Test anxiety causes individuals to be doubtful of their own talents, and as a result, people are less likely to encounter circumstances that need them to cope with examination. As a result, persons who suffer from exam anxiety, despite the fact that they know the answers to the questions, are unable to employ their knowledge for the purpose of answering the questions because of their worry (3). Test anxiety endangers the psychological well-being of students and pupils, and it has a negative influence on their ability to learn, their skills, and the development of their personalities and social identities.

Test anxiety is a characteristic that develops through time and is often related with emotions of inadequacy and inferiority (4). Self-efficacy beliefs are a critical role in the control of human behaviour and motivation, as well as in the ability to cope with stress (5). A feeling of mastery for doing certain tasks is defined by the Bandura theory, and the trust, confidence, and self-esteem of each individual

for performing such activities are all key factors in determining one's self-efficacy (6). According to Capa and Loadman's research, 40 percent of test anxiety may be predicted by one's belief in one's own abilities (7). Students that have a strong sense of self-efficacy see their assignments as challenges that must be overcome, and in the event of failure, they must put in additional effort. People who have poor self-efficacy in coping with their duties, on the other hand, regard things to be more difficult than they are. As a result, they experience tension and worry, and their performance suffers as a result (8). The presence of a link between test anxiety, self-efficacy, and academic achievement of students has been proven by Janice (9). A study of test anxiety and its link with self-efficacy conducted by Mehrabizadeh revealed that there is a statistically significant correlation between both factors (10). A study of the link between self-efficacy and depression, anxiety, and stress conducted by Khoshnevisan revealed that the variable of self-efficacy accounts for 15% of the variation in anxiety levels (11). Furthermore, it has been shown in several research that persons who have poor self-efficacy have increased social anxiety (12, 13). The conviction in one's own capacity, which is represented as self-efficacy, is a significant component in both performance and dealing with stressful conditions, as previously stated in the literature. Given the fact that students must cope with stressful events such as tests throughout their educational careers, this research was conducted to determine the association between test anxiety and self-efficacy in students at Qom University of Medical Sciences.

Methods

The elements affecting TA were examined from the viewpoints of medical students in this research, which used a phenomenological method to do so. Seven focus group discussions (FGDs) were conducted with a total of 45 medical students from the School of Medical Sciences, Banaras Hindu University, to gather information (BHU). The research was authorised by the BHU Institutional Human Research Ethics Committee, and all students who agreed to participate in the study were required to sign a permission form as part of the process. The researchers highlighted the importance of confidentiality, anonymity, and the opportunity to withdraw from each session at the outset. We provided each participant a pseudonym in order to safeguard their confidence.

Participants, sampling, and recruitment

We divided the participants into groups of five to seven medical students from different academic years because we anticipated that their experiences with stress and anxiety would be different. In order to get a diverse range of experiences, we used purposive sampling while taking student diversity into mind. Furthermore, we hoped to include issues such as gender and ethnicity in our representation (e.g., Malay, Chinese, Indian, or other). Each academic year, we sent invitation letters to the group leaders who had been nominated. The study's permission forms and information about it were also disseminated via the usage of Whats App. In addition, we provided each participant with a token at the conclusion of each session.

Data collection

Students who participated in a pilot of the FGD procedure said it was open-ended and inspired conversation. Following that, the focus group discussions (FGD) were held in a calm and pleasant setting. We opened each session by introducing the group members and providing them with an overview of the study's objectives. The audiotaped conversation began with an open-ended cue based on the preset probe questions: "Test anxiety to me is..." We then moved on to the next probe question. We took notes in order to better understand nonverbal clues. Each FGD lasted between 60 and 90

minutes. The data collecting process proceeded until theoretical saturation was achieved, which happened when no fresh information was found to be relevant. We completed all of the focus group discussions (FGDs) in March 2019.

Data analysis

We began data analysis at the same time as we began data gathering. This intermediate analysis assisted us in adjusting and verifying the developing themes in light of the subsequent data. In the first phase (familiarisation with the data), we followed Braun and Clark's six-phase thematic analysis procedure. The researcher (MW) transcribed the audio recording verbatim (including verbal and non-verbal cues), assigned pseudonyms to all identifiably identifiable individuals, and cross-checked the transcript against the audio recordings. The transcription was then read multiple times by each of the writers (MW, MSBY, AFAR, and NAZNL) in order to get comfortable with the data set and to become immersed in its meaning. Tenth, MW imported all of the transcription files into Atlas.Ti (version 7.9) to begin the second phase (generating initial coding), during which MW and MSBY independently identified open codes throughout the data set; these were either the participants' own words (in vivo) or a descriptive word for their experience, depending on the participant's experience. We made periodic comparisons of the ideas that had been developed in order to settle conflicts and obtain consensus on the first themes that had been generated. In step three (the search for themes), MW and MSBY performed a high-level analysis by merging numerous linked codes to generate overarching themes, which they then presented to the participants. The MW, MSBY, AFAR, and NAZNL conducted collaborative sessions to consider possible subjects for the next conference. Ms. Whitehead analysed the quotes linked with each subject and decided whether or not they were coherent during the fourth step (reviewing the themes) (internal homogeneity). If a quote did not fit the topic, MW either redirected it to a theme that was more closely linked to the original subject or altered the original theme. In the next step, MW analysed all of the themes to establish their relevancy as well as whether or not each topic was significantly different from the others (external heterogeneity). MSBY and AFAR evaluated prospective themes to the codes and to the complete data set in order to guarantee that they were representative of the entire data set. MW, MSBY, AFAR, and NAZNL reviewed discrepancies and ruled out prospective topics for further consideration. For each topic, we assigned a name, defined it, and wrote an explanatory narrative in the fifth step (defining and naming themes). Additionally, MW, MSBY, AFAR, and NAZNL determined if any complicated themes necessitated the creation of subthemes in order to be more effectively organised. Finally, during the sixth step (writing the report), MW and AFAR put together a collection of chosen quotations to serve as illustrations for crucial topics. The report was updated by MSBY and NAZNL. We went through this process again and again until we got universal agreement. Table 1 shows how we handled Guba's four criteria for determining the reliability of qualitative research in our investigation.

Results

Detailed information about the participants is shown in Table 2. The participants were almost evenly divided between males and females, with the majority of them being fourth-year students. Figure 1 shows the primary topics that emerged from the thematic analysis. These include students, academic resources, and examiners (in that order). Each theme was then broken into subthemes that corresponded to increasing and reduced TA levels, respectively. The themes, which were shown in grey, were positioned in the middle of the figure. To differentiate between the two groups, all subthemes that raised TA were combined and coloured red, while those that lowered TA were

collected together and colored green. The two major probe questions that were asked during the FGD are shown by the arrows on each side of the figure. Most notably, we ordered the themes and their related subthemes in a logical sequence from exterior to interior to reflect the links and interactions that exist between them.

Theme 1: students

Negative vs. positive thoughts Most students expressed how their negative and positive thoughts influenced TA:

It is possible for both positively and negatively oriented students to make mistakes, but the positive student will continue with just mild concern because they understand that what has been done is done and that they cannot alter it.

Table 2 Characteristics of the participants

Variable		
Gender	Male	23 (51%)
	Female	22 (49%)
Year of study	2nd year	8 (18%)
	3rd year	16 (36%)
	4th year	21 (47%)
Race	Malay	22 (49%)
	Chines	11 (24%)
	Indian	9 (20%)
	Others	3 (7%)

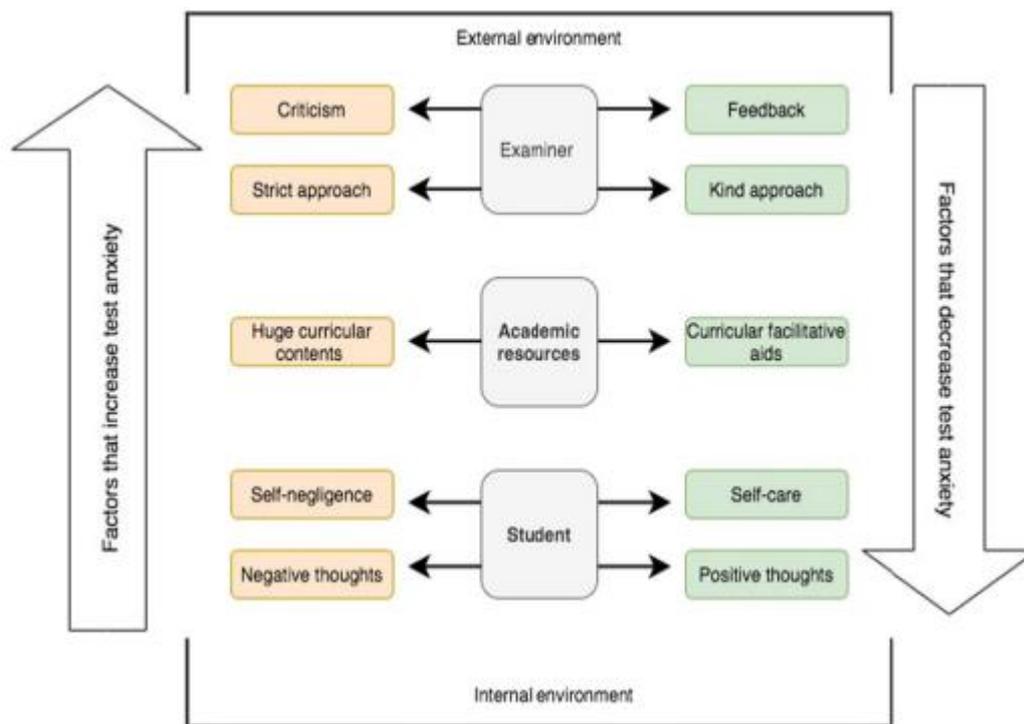
It is true that the positive student will not concentrate on the past or faults, but the negative student will, and as a result, [this student's] anxiety level will grow. (6th grader, Student E, in Group 6)

One group of students saw that their preconceptions of negative concepts were triggered when they were forced to share an unpleasant experience with their peers: "I [learned] that the malignant doctor would check me the next day." Eight of the pupils did not pass the exam. It was a tough day [the day I discovered this.] (Student B, Third Group) The knowledge that a "malignant doctor" will serve as my examiner causes [my] test anxiety to rise [even more]. (Student C is in Group No. 6)

Moreover, because the students identified as A-level students and had pursued their education since

Table 1 Provisions made to address the findings' trustworthiness [19]

Aspect of trustworthiness	Implementation process
Credibility (internal validity)	<p>Trained moderator All researchers received training in qualitative research; additionally, the principal researcher (MW), who serves as the moderator of the FGD in this study, conducted a pilot FGD prior to conducting the actual data collection</p> <p>Prolonged engagement During the FGD, MW ensured that participants had ample opportunity to share their experience</p> <p>Data source triangulation We employed methodological triangulation in our study, in which we compared the qualitative findings to the quantitative findings</p> <p>Member checking We used two strategies for member checking: (1) iterative questioning by extracting related data via rephrased questions "on the spot," and (2) summarizing the key points of discussion and asking participants to verify the summary while also allowing for additional remarks</p>
Transferability (external validity)	<p>Thick descriptions The method section includes a detailed description of the data setting, informants, and phenomena, which enables future researchers to transfer the findings</p>
Dependability (reliability)	<p>Code-recode procedure The researchers (MW and MSBY) used a code-recode technique in which they returned to previously coded raw data to re-code it and compare it to the previous coding. They used this method two weeks after the initial coding to ensure that the results were consistent</p>
Confirmability (objectivity)	<p>Audit trail MW kept a detailed account of the FGD files and analysis process for the audit</p>

**Fig. 1 Emerged themes and sub-themes in relation to increasing and decreasing test anxiety**

These expectations, which began in childhood, exacerbated their uneasiness. Importantly, some students said that positive thinking and retaining their motivation helped them to perform better on tests. I always strive to keep myself optimistic and always remind myself to have confidence in myself and trust in God. Students in Group 5 (Student A) [...] By assuring myself that I will perform well in the test[,] I can keep my nervousness under control. Students in Group 2 (Student D).

The difference between self-negligence and self-care The greater the amount of time students had for self-care and keeping a healthy lifestyle, the greater the rise in the number of happy thoughts. In particular, the students said that getting enough sleep, eating a balanced or filling meal, and exercising helped to decrease TA:

[W]hat helps me deal with stress or worry is eating well and getting enough sleep[.] Students in Group 4 (Student C) For me, I must nourishment in order to concentrate. As a result, eating helps to alleviate my stress levels. (Student F, Fifth Group) When I go [to take an] test without having had a cup of coffee and anything to eat, I become a little apprehensive. (Student B, Third Group)

Self-negligence, on the other hand, was shown to be connected with greater TA. Students reported a variety of negative habits that had an influence on their health and ability to study for exams, including:

I also tend to get anxious when I go for an exam without having coffee and something to eat[.] (Student E, Group 4) I went to sleep at 7:00 am and [woke] up at 1:00 pm. I drink two cups of coffee per day. I [know that] some of my friends drink 5–10 cups of coffee [per day]. These kinds of things are not usual to your body. (Student B, Group 1)

Theme 2: academic resources

Curriculum-heavy vs curricular tools that are more facilitative The students said that the rigorous medical curriculum increased their anxiety levels in the weeks leading up to their exams:

However, the difficulty with medical school is that [there are] much too [many topics that must be] prepared [for] the test[.] Students in Group 1 (Student D) The [amount of things] we need to cover [...] for big examinations, in particular, is the one that [stresses me out]. (Student C, Third Group) My schedule is packed with [a plethora of obligations]. You want to do [everything] and [a lot of things], but you don't have enough time[.] Students in Group 5 (Student A)

Notably, supporting actions taken before to the test may be able to alleviate some of the stress. Measures such as boosting formative assessments, providing briefings on the test forms, and making class more enjoyable are all recommended: The relevance of formative evaluations was stressed by the students in particular:

End each class with a quiz[s] or assignment based on[the] learning plan so that students understand precisely what they need to study for each topic[.] (Student A is in Group No. 6) Because there was no briefing for our last test, we had no idea how many questions [would] be on the exam [...] [or] what [would] be evaluated[.] (2nd grader, Group 2) (Student C) Make an effort to make the lesson more enjoyable since enjoyable and relaxing courses have been shown to improve one's memory and concentration while in that session. To be completely honest, [the] lecturer[s] who make lectures more enjoyable and [invoke] more conversation tend to help me retain more information. (Student A, Third Group)

Discussion

This qualitative study explored TA from the perspective of medical students and identified its precipitating and diminishing factors: the students, their academic resources, and the examiner.

Theme 1: students

Ideas that are negative versus thoughts that are good Te students had a significant part in the development and depletion of TA. It is possible that this is related to the nature of TA, which arises from a negative self process that encodes the external environment into individual reactions. It was

amplified by an individual's negative self-thoughts, academic competency, and/or capacity to deal with hard evaluative settings in this context since the process focused on the nature of the test and how the examiners would interact with the examinees. In one study, several participants said that they had acquired self-expectations from infancy. These expectations were bolstered by the individuals in their immediate vicinity, and they continued to be raised throughout their medical school careers. Other studies have shown that the academic expectations of parents have an impact on their children's TA [20–22]. Notably, the participants in this research expressed concern about the possibility of passing on their negative experiences to their colleagues.

Our findings imply that enhancing positive attitudes and trusting in one's own abilities might help medical students lower their TA. Wong [23] hypothesised that reasonable ideas would result in either neutral or positive emotional outcomes as a result of his work into the cognitive triad. Numerous studies have relied on this assumption in order to design cognitive reconstructions that lower TA [13, 24–27]. Based on these findings, it seems that our ideas have an impact on our actions [28]. As a result, we contend that the most essential components in this research are negative and optimistic thoughts. They may be used to create interventions to help people with TA.

The difference between self-negligence and self-care A range of self-negligence habits were seen in the students, including sleep deprivation, excessive use of coffee and other stimulants, and avoidance of sports. These activities may aggravate TA and trap individuals in a vicious cycle. Self-negligence has a negative impact on psychological perception and reduces mental fortitude, leading in the development of TA. Self-care, on the other hand, has been shown to increase personality features as well as mental capacity to battle TA [29, 30]. In order to address the critical condition of self-care among medical students, our findings suggest that academic advising programmes, among other things, should encourage healthy lifestyle choices to help them achieve their goals.

Theme 2: academic resources

Students who are confronted with the difficulty of their medical curriculum from the outset of their education may have an exaggerated feeling of pressure and heightened TA [9–12]. It is possible to mitigate the negative effects of the curriculum by introducing instructional tools that facilitate learning. Examples include making class more entertaining while using more formative evaluations in the classroom. Other strategies include promoting small-group learning, which is advantageous because it creates a safe environment for debating and visualising confusing topics. Studying in groups has been demonstrated to be an effective approach for improving student learning while also creating a comfortable setting for conversation.

Conclusion

The findings of this qualitative research offer insight on the aspects that influence TA from the viewpoint of medical students. The students, their academic resources, and the examiner were identified as the three most important aspects affecting TA. Each of these variables has sub-factors that were identified as well. This research provided a strong platform for policymakers and decision-makers in medical education to build on in order to enhance present evaluation processes while also improving the well-being of students in medical school. The findings show that the polar factors of the examiner and the student operate in concert to influence TA in a positive way. TA will be significantly reduced if extra psychological support is provided to students and examiners are trained on how to cope with examinees, among other things.

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