Original Article

Lived experiences of medical science students regarding their exams: A qualitative study

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Abstract

Background & Objective: Evaluating the academic performance and competencies of medical students is essential in the medical field. Written tests play a big part in this situation. This study's primary goal was to comprehend medical students' experiences with their exams.

Materials & Methods: The study was carried out from 2020 to 2022 at the Fasa University of Medical Sciences in the Iranian province of Fars, using a qualitative research methodology using a phenomenological approach. In-depth one-on-one interviews with the investigators were conducted with twenty-three medical students from a variety of professions, including health, medicine, nursing, operating room technology, anesthesiology technology, and medical emergencies. The interpretive phenomenological approach was used to analyze the data, including observations made during written exams and in-depth interviews.

Results: The results of the study revealed four general themes that reflected the views of the medical students about their exam experiences. The themes that emerged were emotional fluctuations, stressful difficulty, coping strategies, and blessings in disguise.

Conclusion: Despite the participants' initial uncertainty, the study participants saw the exams as a blessing in disguise. They saw exams as essential learning resources and a means of gaining access to stable job chances. However, because of the psychological strain and scoring direction, the exam also presented a hard challenge. Furthermore, students experienced a range of positive and negative emotional changes as a result of the test. In order to manage their test anxiety, the students used both positive and negative strategies for coping. These results have substantial implications for policies that might be implemented in the field of education.

Keywords: lived experiences, evaluation, test anxiety, qualitative research

Introduction

In order to guarantee that the curriculum is adequate and to raise the quality of the students' learning, students' skills must be evaluated and assessed (1–3). The best approach to show that a training program is successful is also through evaluation (4). Written examinations, which encompass a range of cognitive domains like synthesis, creative thinking, and problem-solving, are a common way for universities to evaluate their students' skills (5). Nonetheless, studies show that test anxiety is a common occurrence for students taking written tests, and this might negatively impact their health and sleep cycles (6). Examination anxiety is a well-known problem in academic settings. The majority of students report feeling more stressed during exams, according to Mittal et al. (7).

The stress that occurs during examination manifests as a series of behavioral, emotional, and physiological responses. Students often experience negative consequences such as anxiety, suspicion, lack of

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decision-making power, feelings of helplessness, high sensitivity, and anger during and after exams (8–9). The adverse effects of anxiety on performance and academic achievement have been confirmed in numerous studies, and it is the primary reason for poor academic performance (10). Test anxiety's most prominent feature is that it leads to individuals' inability to think despite their ability and willingness. Fear of test results is also one of the most crucial characteristics of people with test anxiety. Overall, test anxiety can result from factors such as lack of preparation (deficiencies in time management, studying, and organizing content), educational factors (professors, test environment), negative experiences, and personality factors (11, 12). A ccording to research by Badrian et al. (2022), students frequently employ positive or negative strategies for coping to get over test anxiety-related challenges. These included "prayer and dialogue with God," "interaction and communication with friends and relatives," "study strategies," and "finding ways to relax and self-care." On the other hand, bad approaches like "drug abuse" and "resorting to cheating" resulted in intricate issues. The researchers proposed that by equipping students with the most effective coping mechanisms, the educational system should enable them to handle challenging circumstances. According to recent reports, experts have concentrated on raising the standard of written exams. Less focus, meanwhile, has been placed on students' experiences, which calls for more research. Because medical students experience so many challenges, they are the target demographic for this study. Medical students might use a variety of strategies for coping to handle simple or complex conditions. A study was conducted in West Asia to examine the lived experiences of medical science students regarding their exams. The findings of this study can contribute to improving knowledge in this area, particularly since beliefs in Middle Eastern countries differ from those in other countries where similar studies have been conducted (13). This study uses the phenomenological approach grounded in the students' actual experiences to understand the phenomenon of written examinations. Exam experiences are important, and enhancing exam quality begins with acknowledging this fact. This understanding depends critically on the experiences of students as users of the educational system.

Materials & Methods

Design and setting(s)

This study employed the phenomenological approach to go into the domain of students' experiences in order to investigate students' feelings around written examinations and gain an understanding of the phenomenon of testing from their perspective. The phenomenological approach was chosen due to the nature of the study's topic and the fundamental idea of phenomenological studies, which maintains that an individual experiencing an event may only define its meaning. This study used interpretive phenomenology, which looks at experiences within the context of an individual's daily life in addition to describing the lived experience of phenomena. The Colaizzi approach (13–15) was applied in seven steps for data analysis. The Fasa University of Medical Sciences was the setting of the research.

Participants and sampling

The study participants were students from Fasa University of Medical Sciences who had participated in at least five tests. The purposeful sampling method was used to select participants who had good expression skills and were willing to share their feelings about the phenomenon being investigated. This was done to provide the researcher with more complete information.

Tools/Instruments

The study data were mainly collected through individual in-depth interviews. Another method of data collection was observation at the time of written examinations (16). The observations were fully recorded as field notes. The purpose of observation was to collect first-hand data from the natural environment. In this study, the researcher acted as an observer participant and immersed himself in the existing conditions so that he could see and hear some of the facts as they happened to the participants in the field.

Data collection methods

The researcher, as an interviewer, introduces himself and states the research objectives. The time allotted for each interview varied from 45 to 90 minutes, depending on the conditions of the participants. The time and place of the interviews were also variable and were decided based on the convenience of the participants. "Would you please tell us about your experience taking a written exam?" was the first open-ended question given during the interview. Based on the participants' answers, more questions were posed. These were followed by probes such as "Can you clarify further? "and "When you utter this sentence, what do you mean?" For example, we asked students, "When you say teachers must have lesson planning, what do you mean?" Please explain more. At the end of the interviews, participants were asked to

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make a statement if they wished. They were also offered the possibility of further interviews. All interviews were recorded with the participants' permission. They were then transcribed. After 20 interviews, the researcher realized that new data had yet to be obtained. To be on the safe side, three more interviews were conducted. A total of 23 participants were interviewed.

To make sure the data was accurate, the researchers used the criteria established by Goba and Lincoln. Credibility, dependability, confirmability, and transferability were the standards for rigor and reliability. The researchers employed peer debriefing, member checking, and extended interaction with the participants to build credibility. They also made sure the information was credible by evaluating multiple sources and triangulating it according to source, method, and time. The researcher completed the interviews as rapidly as possible and got the entire data checked by an external reviewer or peer debriefing to assure reliability. For fidelity, the researcher agreed on codes and topics, reviewed interviews and codes, and continuously submitted work reports to two expert students, teachers, and multiple observers during the study. By maintaining documentation at all stages of the research, the researchers guaranteed the conformability of the data. Finally, for transferability, interviews were conducted with different participants, using different terms and topics to achieve maximum sampling variance. Table 1 presents a sample of the main category, subcategory, initial code, and participant statement.

Table1. A sample of the main category, subcategory, initial code, and participant statement

Main Category	Subcategory	Initial code	participant statement
A blessing in disguise	Learning tool	-Taking an exam is so hard -Taking an exam is a learning tool - Taking an exam is necessary for dispensing justice between students - Taking an exam is as a tool for differentiating students	Participant No. 4 commented on the need for exams to make learning possible and to distinguish a strong student from a weak one: "The exam is so hard, but it is necessary; there should be an exam because it distinguishes a student who has tried and worked hard from someone who has not tried. The exam proves whether the student has understood the lesson. It is a criterion used to evaluate individuals and determine their level of understanding and learning."
	Tool for achieving job position	-Exam is as a tool to achieve graduation -Exam is a tool to get a job position -Exam is a tool to help to get the best job position	The 12th participant expressed his belief that passing exams is crucial to landing a job. He stated, "I think every test is crucial and has a direct bearing on our future. I always ask myself if what I am doing today is bringing me closer to where I want to be tomorrow, so I think if I do all the responsibilities and duties on time, I will move forward sooner, and I will get a better job position."

Data analysis

Throughout the course of this study, data analysis was conducted in conjunction with data collection. We were able to start analyzing data from the first interview thanks to this methodology, which involved an interpretative procedure that involved seven primary stages based on the Colaizzi method's seven steps. First, we wrote up transcripts of every interview to capture the main points of each participant's experience. This involved listening closely to each participant's description and extracting statements that related to their lived experiences as medical students in relation to their exams. We then used MAXQDA 20 software to manage data ordering. Next, we extracted sentences and vocabulary related to the phenomenon under study, giving each one a special meaning. In the third phase, we coded and extracted important statements from the participants' narratives to construct formed meanings. Ultimately, we combined these developed interpretations into thematic clusters. At this point, the texts were categorized into groups based on the similarities and differences that were noted, and each group was given a suitable title (5). After that, the researchers extracted an exhaustive description. An exhaustive description was developed by synthesizing all the thematic clusters and explaining the meanings formulated with them. The research team also integrated the findings from the interviews and observations by analyzing, reflecting, comparing, and synthesizing (6). The researchers conducted an interpretative analysis of symbolic representations for the lived experiences of medical students about their exams (7). Also, they tried to identify the structure and the context of the lived experiences of medical sciences students about their exams. by explication' through an exhaustive description

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and analysis of the phenomenon under study (13, 14). In the final stage, the groups were classified so that the relationship between the themes provided the basis for the interpretation of the data.

Results

Twenty-three students, ages 21–27, of both sexes studying in the fields of health, medicine, nursing, operating room technology, anesthesia technology, and medical emergencies participated in this study (Table 2). Based on the students' actual experiences with the examinations, four primary themes and eight sub-themes were identified, as indicated in Table 3. This section highlights some of the participants' comments.

Theme 1: A blessing in disguise

Students interpreted exams as a blessing in disguise. Although they tended to avoid the exams all the time, they considered them necessary as a 'learning tool' and a 'tool for achieving a job position.'

Learning tool: The students considered the test as a means to read a lesson or a book, to learn, and to move forward. Students also consider exams to be a means of achieving educational goals and measuring results. In this regard, participant No. 3 said: *"Taking the exam signifies that I have attended this class the entire time and that I have evaluated whether or not my time was wasted or if it produced a desired outcome. I mean, the product is how much I have learned and how much has been added to my knowledge, and I can use that knowledge somewhere; I can use it in my job in the future."* Another participant (No. 1) referred to the fixation of learning by the test: *"The exam will make the students go after what they have already learned to be re-established in their minds."*

During the study, students emphasized the significance of exams in providing them with learning feedback and maintaining educational equity. One student stated, *"The exam is a way to receive feedback on the information we have learned, and it's crucial to ensure fairness among students."*

Tool for achieving professional position: The students understood the importance of the test as a means of achieving a degree and gaining faster career opportunities. One of the participants (No. 9) said: *"If we pass our exams, we will go to a higher level and graduate sooner. Each exam will affect our future; we will find a job sooner and gain our independence."*

Theme 2: Stressful difficulty

The examination had different meanings for the students. Students considered exams as a stressful difficulty that threatened their health. This main theme had two sub-themes, namely 'endurance of psychological pressure' and 'score-oriented stress'.

Endurance of psychological pressure (mental stress): The students suffered from psychological stress due to various factors. One of these stressors was preparation stress. Regarding the stress of preparation, one of the participants (No. 7) stated: *"When the name of the test comes out, there is insomnia and stress in the dormitory. The test and the dormitory call insomnia to my mind, the insomnia we endure to prepare."*

Table2. Demographic characteristics of participants in the individual interviews

Participants	Gender	Age	Degree	Major
Participant 1	Male	22	Doctorate	Medicine
Participant 2	Male	21	Bachelor	Operating room Technology
Participant 3	Male	22	Doctorate	Laboratory Science
Participant 4	Female	21	Bachelor	Nursing
Participant 5	Male	24	Bachelor	Medicine
Participant 6	Female	22	Bachelor	Laboratory Science
Participant 7	Female	21	Bachelor	Health
Participant 8	Male	21	Bachelor	Medical Emergencies
Participant 9	Male	22	Bachelor	Anesthesiology Technology
Participant 10	Male	21	Doctorate	Medicine
Participant 11	Male	23	Doctorate	Medicine
Participant 12	Male	27	Doctorate	Medicine
Participant 13	Male	25	Doctorate	Medicine
Participant 14	Female	22	Bachelor	Nursing
Participant 15	Female	24	Bachelor	Nursing
Participant 16	Female	23	Bachelor	Nursing
Participant 17	Male	21	Bachelor	Anesthesiology Technology
Participant 18	Male	21	Doctorate	Medicine
Participant 19	Male	21	Bachelor	Laboratory Science
Participant 20	Female	21	Bachelor	Anesthesiology Technology
Participant 21	Female	23	Bachelor	Nursing
Participant 22	Male	22	Bachelor	Health
Participant 23	Male	25	Bachelor	Medical Emergencies

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Table3. Themes of the students' lived experiences of the exams

Theme	Subtheme
A blessing in disguise	Learning tool
	Tool for achieving job position
Stressful difficulty	Endurance of psychological pressures
	Score-orientation stress
Emotional fluctuations	Positive emotions
	Negative emotions
Coping strategies	Positive coping strategies
	Negative coping strategies

The unknown sources of learning were the other stressors based on the students' experiences. In this regard, participant No. 16 mentioned: *"We did not have a specific reference in the semester; we had three professors. One of them said he would give the exam from the PowerPoint file; the other one said he would use the book, and the last one also said he would ask questions from the book, so I was totally confused. We were at a loss for what to do the night of the exam."*

The participants also said that pressure from the other sex was the cause of their stress. A male participant stated: *"Among the girls, there was harassment and jealousy. The stress the girls put on us increased our tension before and during the exam."*

The difficulty of the exam was another source of stress for the students. Participant No. 21 talked about the difficulty of the questions: *"The questions were hard, the orthopedic questions. I really did not know any of them; I said I would not succeed, and I had stress."*

The psychological stress caused by the tests led to psychological problems among the students. In this regard, participant No. 5 stated: *"Students experienced increasing stress before the test until the day of the test; on the day of the test, the test itself gives us much stress. If we pass the test, this stress will decrease. If we do not pass, it will stay. It will disturb the students, and they will not be able to think, eat, or concentrate. All the students in the university are losing weight because they are under much stress and have much work. They hate life; it is unattractive and uninteresting."*

Based on the students' experiences, the testing room was another cause of psychological stress. Participant No. 15 pointed to the exam room: *"Well, of course, the exam itself has a stressful atmosphere; the room is special and formal as if you are alone; that is, you have to answer these questions in this situation. No one else is helping you, and the only one who can help you is you."*

Stress during and after the exam session resulted from concern about the exam's outcome. In this regard, participant No. 6 said: *"During the test, I was worried about the questions from the parts I had not studied or the ones I would not be able to answer. Doubts about the answers or not knowing the answers to the questions increased my negative feelings. In fact, I was worried about the final score and the overall outcome of the exam.*"

Score-oriented stress: They claimed that the grade served as a yardstick by which instructors and fellow students assessed students' attitudes, performance, knowledge, and even personalities. As a result, students started to prioritize their grades over learning, reflection, critical thinking, and problem-solving. No. 12, one of the participants, stated: *"When you are a student in a class of thirty, you see that everyone is constantly discussing the score. For example, they say that because of his higher score, this student must have higher intelligence and higher knowledge; you gradually and unconsciously become score-oriented; the conditions require you to read to get a score. Since I am studying to get a score, I do not have a good feeling."* Participant No. 5 also referred to value-orientation damage: *"Nobody evaluates me according to my understanding. Score is the criterion of evaluation. All the professors are the ones who give a list. They say you have a better score, so you are a better student, you are more educated, so you get more points. Our education system is like that. If I do not get a good score on a test, the teacher, based on the image that comes to his mind, says, "Well, he doesn't study well, so he will not pass. When the professor wants one of the students to help him during an operation, for example, he trusts the one who has a higher score. One gets frustrated and is exposed to a sense of inferiority."*

Theme 3: Emotional fluctuations

The students' experiences did not end at the end of the test. One of the students' experiences was emotional fluctuations that affected them for a long time. According to the students' impressions of the test, they were affected for a long time. The sub-themes of this category included 'positive emotions' and 'negative emotions'.

Positive emotions: Students who successfully passed a test were dominated by positive emotions such as empowerment, self-satisfaction, usefulness, and happiness. In this regard, participant No. 8 asserted: *"When you study the subject and get a good score, it gives you a feeling of satisfaction, which makes you want*

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to learn your lessons in the same positive way. You will continue, so you will have the same results and the same feelings again." One participant (No. 14) expressed feeling a sense of usefulness and productivity, stating, *"I feel like my time is not wasted."*

However, for some, failure to pass exams was associated with negative emotions such as stress, anxiety, hopelessness, fear, discomfort, self-dissatisfaction, and loss of self-confidence. Participant No. 17 shared, "When I don't pass the test, I experience intense negative emotions and feel really down. *First, I lose my self-confidence, I no longer accept myself, I have a feeling of dissatisfaction with the reason why I was lazy, and a feeling of disappointment with the result and with myself. Negative fear also comes to mind. I have the feeling that I cannot do anything with it; that is, this stress has no benefit for me. It's something that happened, but I have its stress."*

Self-blame was one of the behaviors students engaged in after a failed test. In this regard, participant No. 11 said: *"I blamed myself for not studying more. If I had studied, I could have done better. I had a lot of stress because I could not do it. Then I was so upset that I got a low score. I felt sad."*

Feeling inferior was one of the other negative emotions that students experienced after unsuccessful tests. Participant No. 19 said: *"I had a feeling of inferiority. It bothered me that I studied but I did not get a good result."*

Theme 4: Coping strategies

Students' experiences showed that they used different coping strategies to reduce test anxiety. They tried to take care of themselves, cope with exam anxiety, and maintain a healthy lifestyle before, during, and after exams. The sub-themes of this category included 'positive coping strategies' and 'negative coping strategies'.

Positive coping strategies: Students mentioned that 'self-care' and 'spirituality' help them to control test anxiety. In the area of self-care, the students' experiences showed that they use adaptive strategies such as; 'improving learning style', 'creating a social support system', 'relaxing activities', 'self-controlling behaviors', and 'indifference related to judgments of score-oriented thinking'.

Regarding improving their learning style, students use different learning styles, such as repetition, reading quickly at first and carefully later, memorization, question-and-answer, microlearning, and blended learning. Regarding improving their learning style, participant No. 2 stated: *"I and my friends, reading online and offline, reading references, asking each other."* Participant No. 8 stated: *"When I want to learn better, I break the course and the course materials."*

Regarding the creation of a social support system, participant No. 19 stated: *"When I have anxiety, before the exam, I try to study, crack and laugh with my friends."* Regarding relaxation activities, Participant No. 15 said: *"When I feel anxious about the test, I try to drink cold water, take deep breaths, chew gum, do yoga, and relax my leg muscles.*"

Regarding self-control behaviors, participant No. 12 said: *"Making positive mental images helps me to relax and calm down. I control my harmful behaviors. I don't grumble."* Regarding indifference in relation to judgments based on value-oriented thinking, Participant No. 22 said: *"I have worked on myself over time and learned to be indifferent to these judgments (score-oriented thinking related to myself)."*

In the area of spirituality, the students' experiences showed that they used adaptive strategies such as appealing to and dialogue with God and Imams and reading the Quran. Participant No. 7 said, *"I read a Quran before the test, and it calmed me down."* Participant No. 4 said, *"I dialog with God and Imams. I am sure they will help me."*

Negative strategies: Few students use negative strategies to cope with test anxiety. The students use negative strategies such as 'cheating' and 'projection'. Participant No. 20 about cheating said: *"Sometimes I cheat. However, I think I should not rely on cheating because after that I see that I have some problems in clinical situations."* Participant No. 13 about cheating said, *"I do cheat. But in these situations, I feel unfair."* Participant No. 17, about projection, said: *"When I fail my exam. I put all the blame on my teacher."*

Discussion

The study aimed to provide insight into students' experiences with written examinations. While qualitative research requires an accurate representation of the experience for improved understanding, the generalization of results holds no significance (17). Some of the findings of this research were consistent with previous studies and could lead to a better understanding of the testing process. According to the findings, students believed that exams were an essential part of education and job development. Their encounters made the value of testing and assessment clear.

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Similar to this, a study by Al Kadri et al. demonstrated that learners were encouraged to perform better by credible assessments. Learners' perception of assessment was relevant to their learning approach and acceptance and use of the results (18). Heeneman et al. also believed that assessment could fill gaps in teaching and curriculum and serve as a powerful motivator for learning. Instructors can improve student performance by implementing common testing procedures and appropriate exam questions. However, exams that rely solely on multiple choice questions, such as those found in medical exams, may not encourage deep learning strategies. To ensure that tests are beneficial to the learning cycle and not just the evaluation cycle, exams must include an appropriate taxonomy of questions. This underscores the academics' responsibility to implement and monitor the evaluation process as a learning tool in the learning system (19).

The students' experiences indicated that assessment played a crucial role in helping them perform better in their jobs. They believed that passing exams would lead to greater success in the future. The topic of education and training for entrepreneurship graduates is one of the most significant topics in higher education (20). Students' perceptions of exams as a means to gain proficiency for future job acceptance could motivate them to improve their science and skill performance. European research has shown that students' perceptions of academic education, that is, the belief that a university degree guarantees a job, are evolving, and they often seek clarity on the actual requirements for obtaining scholarships (21). Therefore, the educational system should consider learners' needs when creating exams. In other words, exams should be designed with students' future employment opportunities in mind.

Due to psychological stress and score orientation, students avoided taking tests since they felt they were stressed. Their impression of psychological stress during test preparation was influenced by a number of factors, including the number of classes they had, their lack of control over the test's content, their failure to apply different study and learning strategies, and their poor study management throughout the semester. According to Khoshhal et al. 65% of medical students reported feeling psychologically stressed out for various reasons, including the amount of coursework and studying the night before an exam. In addition, compared to male students, female students were more stressed out by the sheer number of courses they had to take (22). Stefanovic et al. also demonstrated anxiety and stress in nursing students before testing (23). James et al. identified the factors causing stress as the large volume of classes, lack of training, and test timing (24). Therefore, there is a need for optimal policies to reduce testing stress and promote learning (25).

Moore et al. cited by Merrill and Thomas (2013), believe that ‘coping skills refer to the behavioral and cognitive efforts that individuals make in response to stressors in order to minimize the negative effects associated with a stressor’ (26). Based on their experiences, students utilized different positive and negative coping strategies to deal with test anxiety. Among the positive coping strategies mentioned were self-care and spirituality. Wadi et al.'s research supports this finding, revealing that medical students employ various coping mechanisms to alleviate exam anxiety. The study also demonstrated how self-care can improve personality traits and cognitive capacity, leading to better management of exam anxiety. To address this, academic counseling programs should encourage students to lead healthy lives and prioritize self-care (27). Additionally, students use effective learning strategies such as goal-setting, metacognitive awareness, positive self-talk, successful study habits, and self-assessment of the content they are learning alongside accountability partners, according to Worst et al.'s study. To lessen emotional suffering and exhaustion, they also spend time with their friends, family, and other support networks, and take control of their lives by getting enough rest, exercising regularly, eating well, and participating in recreational activities (28).

A study by Memon et al. showed that medical students were more concerned about their grades and, therefore, more likely to develop anxiety. Students with high GPAs were more satisfied with their academic performance and vice versa (29).

In terms of spirituality, study participants reported that invoking and dialoguing with God and reading the Qur'an helped them to reduce their test anxiety. In the study by Badrian et al. one of the main themes used by students to cope with test anxiety was "prayer and dialogue with God". They demonstrated that praying, reading and listening to the Quran and spiritual health determine the integrity of the person and is the force that harmonizes the physical, psychological and social dimensions. Religious and spiritual beliefs make a person calm and play an important role in adapting to tensions (13).

Students' experiences have shown that in order to reduce their test anxiety, they use "negative coping strategies" such as projection and cheating. According to Hirsch et

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al.'s study, Doctor of Pharmacy students tend to use more maladaptive coping strategies as their stress levels increase, which is linked to poorer mental health and lower quality of life (30). Furthermore, Badrian et al. found that students may experience complex issues as a result of negative coping techniques they use, such as abusing prescribed drugs and composing essays with false information (13). Additionally, Moore et al. discovered that students exhibiting symptoms of anxiety are more prone to utilize negative or avoidant coping mechanisms as a means of mitigating the effects of their emotional states. These include practices like self-harm, binge eating, eating too little or too much, smoking cigarettes, taking recreational substances, and drinking alcohol (26).

Participants in the current study reported that the test resulted in different pleasant and unpleasant feelings depending on the outcome. Unpleasant, negative, and difficult personal experiences after the tests led to feelings of boredom, uselessness, frustration, and anxiety. In other words, the occurrence of unpleasant emotions due to negative consequences and poor test scores led to distressing emotional states in the students that lasted for several days. Consistently, Ahmad argued that assessments can generate different emotions that can positively interact with assessments and promotion goals. At the same time, success and failure could mutually shape students' emotions (31). Overall, students experience many emotions under testing conditions, which would have a great impact on their motivation, learning, performance, and health (32).

Emotions are the psycho-neural processes that are influential in controlling the vigor and patterning of actions in the dynamic flow of intense behavioral exchanges among animals as well as with certain objects that are important for survival. Emotions have a significant impact on human cognitive processes, including perception, attention, learning, memory, reasoning, and problem-solving. There is substantial evidence that emotional events are remembered more clearly, accurately, and for longer than neutral events. Participants reported that the test resulted in different pleasant and unpleasant feelings depending on the outcome. In human learning and memory, it remains unclear whether positive emotions facilitate learning or negative emotions impair learning and vice versa (33). Therefore, optimal interventions are needed to reduce test stress and promote learning. There are many theories of learning in medical education. Dong et al. referred to different theoretical approaches: behaviorism, cognitivism, constructivism, humanism, social learning, situated learning, community of practice, workplace learning, experiential learning, reflective practice, adult learning, transformative learning, self-directed learning, cognitive apprenticeship theory, cognitive load theory, and multimedia learning theory. Although each theory has its emphasis, different theories are not necessarily in conflict with each other. They give us multiple perspectives and broaden our thinking. They can complement each other, and together, they provide a more holistic picture of learning and learner problem-solving (34).

This deep qualitative study on the lived experiences of medical sciences students regarding their exams added these things to the body of knowledge. This study creates a meticulous understanding and explanation of the views and experiences of individuals. Also, this study examines the lived experiences of medical sciences students in the cultural context of Iran in order to shed light on the physical, psychological, social, and spiritual dimensions of students' experiences with the challenges before, during, and after the exam event and to recognize the students' way of confronting these phenomena comprehensively.

One limitation of this study that can be mentioned is that medical students were the only sample for this study, and the results may not be applicable to students of other majors.

Conclusion

Medical students perceive exams as crucial for their learning and professional growth, but they often find them overwhelming due to the psychological pressure and emphasis on scores. Even after the exam is over, students may experience emotional ups and downs. To manage exam anxiety, medical students use various coping mechanisms. Therefore, educational policymakers must plan to facilitate the learning process and recognize the critical role of exams. They should also take action to enhance students' abilities, including their perception of exams as a tool for advancement, and to address weaknesses such as psychological stress that could harm their well-being. Furthermore, educational planners are advised to revise the trend of score orientation in universities and develop more appropriate evaluation programs.

Ethical considerations

Regarding ethical issues, we obtained approval from the Research Vice-chancellor of Fasa University of Medical

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Sciences. The local Ethics Committee of Fasa University of Medical Sciences approved the study (Ethical code: IR.FUMS.REC.1395.112). Additionally, all participants provided informed consent to participate in the study. The present study was conducted in accordance with the principles of the revised Declaration of Helsinki, and participants were assured of the anonymity and confidentiality of their data.

Artificial intelligence utilization for article writing

Artificial intelligence was employed to oversee grammar and paraphrasing while adhering to ethical rules.

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Conflict of interest statement

It is declared that the authors and the researcher have no conflict of interest during the research.

Author contributions

The authors' contributions to this study are as follows:
Z. F: Generated ideas and designed the study, drafted the article, and provided critical revision before submission. S.K: Analyzed and interpreted data, provided critical revision before submission. A.K.J: Drafted the article. S.A.K: Produced ideas and designed the study. Z.H.S: Designed the study, implemented it, and collected data. R.S.S: Designed the study, implemented it, and collected data.

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Data availability statement

Data are available upon request.

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