Lived Experiences of Medical Sciences Students about their Exams:A Qualitative Study

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Research Article

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A Qualitative Study

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Abstract

Background: Evaluation of medical students is of particular importance. Written examinations have a major role in assessing medical students' academic abilities and achievements.

Objective: This research aimed to determine medical students' experiences about their examinations.

Methods: This study was conducted using qualitative research method with phenomenological approach. In doing so, individual in-depth interviews were conducted with 23 students. The observation method was also used during written examinations. The data were analyzed using the interpretive phenomenological method.

Results: Based on the findings, three main themes were extracted, which could indicate the students' views of their exam experiences. These themes included blessing in disguise, stressful difficulties, and emotional fluctuations.

Conclusions: The students considered the exams to be blessing in disguise. Although they tended to escape from the exams, they considered it to be necessary as a "learning tool" and "a tool for achieving job position". On the other hand, because of the psychological stress and score orientation, they regarded it as a stressful difficulty. The test also gave them a range of positive to negative emotional fluctuations. These results revealed important implications that could be applied at educational policymaking levels.

Keywords: Medical Students, Evaluation, Exam, Anxiety, Qualitative research

Introduction

Assessing and evaluating the students' abilities not only reflects the adequacy of the curriculum, but also plays a major role in the learners' studying and learning methods and can improve their learning quality (1-3). Evaluation is the most important way to demonstrate the success of any training program (4). In higher education institutions, among different evaluation methods, written tests play a major role in measuring the ability of students at different cognitive levels, including synthesis, creative thinking, and problem solving (5). Nonetheless, various investigations have shown that students have problems, such as test anxiety, in written exams that can endanger their health and lead to sleep disturbance (6-8).

Anxiety related to evaluation is one of the known issues in academic activities. Mittal (2018) reported increased stress levels in most students at the time of examination (9). The stress occurring at the time of examination is manifested as a series of behavioral, emotional, and physiological responses. During and after examinations, students tend to experience negative consequences, such as fear, suspicion and lack of decision-making power, feeling of helplessness, high sensitivity, and anger (10-11). The negative effects of anxiety on the performance and academic achievement have been confirmed in many studies and are the main reason for poor academic achievement (12). The

most outstanding feature of test anxiety is that it leads to the individuals' inability to think despite their capabilities and readiness. Fear from test outcomes is also one of the most important characteristics of people experiencing test anxiety. Overall, test anxiety can result from such factors as lack of readiness (defect in managing the time, studying, and organizing the content), educational factors (professors, test environment), negative experiences, and personality factors (13-14).

Recent reports have suggested that various researchers have tried to improve the quality of written examinations, but less attention has been paid to the students' experiences, which needs to be further studied. Given the importance of the students' experiences in exams and given the fact that the first step in improving the quality of exams is the discovery and recognition of the experiences of students as the customers of the educational process, this research aims to explain the phenomenon of written examination via a phenomenological approach based on the students' lived experiences.

Methods

This qualitative study was conducted using the phenomenological approach and aimed at determining the students' experiences of written tests to discover the meaning of the test phenomenon from their viewpoints by entering into the world of their experiences. The reason for choosing a phenomenological approach was the nature of the research question and the underlying hypothesis of phenomenological studies according to which the meaning of any phenomenon can be described merely by the person experiencing it (15). In this study, interpretive phenomenology was used because this method does not only describe the lived experience of the phenomena, but also examines experiences within the context of the individuals' everyday lives (16).

The participants were the students of Fasa University of Medical Sciences who had the experience of participation in at least five tests. Purposeful sampling method was used to select the participants, and we made an attempt to select the participants who had the power of good expression and tended to express their feelings about the phenomenon under investigation and to provide the researcher with more complete information. The study data were mainly collected using individual in-depth interviews. In this way, the researcher conducted an interview after introducing himself, stating the research goals, ensuring the participants regarding the confidentiality of their information, obtaining their permission, and taking informed consents. The

time allocated to each interview varied from 45 to 90 minutes according to the participants' conditions. The time and place of the interviews were also variable, and were decided based on the participants' comfort. The interview process started with an open question, i.e. "Would you please tell us your experiences about participating in a written examination", and other questions were asked based on the participants' responses. Afterwards, exploratory questions were asked as follows: "Can you explain more" or "When you say ...., what you mean? At the end of the interviews, the participants were asked to make a statement if they liked to. They were also appreciated for the possibility of further interviews. All interviews were recorded with the permission of the participants. Then, they were transcribed and analyzed.

Another method used for data collection was observation at the time of written examinations. The observations were fully recorded as field notes. The purpose of the observation was to collect the 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 were happening to the participants in the field. In order to prevent the buildup of observations, we returned the observed cases to the subjects and their accuracy was investigated.

In this research, data analysis was performed simultaneously with data collection. Thus, data analysis began with the first interview. Data analysis was carried out as an interpretative method in four main stages. First, all interviews were written in the form of a text that represented each participant's experiences. In the next step, the participants' statements were encoded. In the third stage, the texts were grouped according to the observed similarities and differences, and a proper title was assigned to each group. In the final stage, the groups were classified based on their similarities, so that the relationship between the themes provided the basis for the interpretation of the data.

After 20 interviews, the researcher realized that no new data were obtained. For more certainty, three other interviews were conducted. Thus, a total of 23 participants were interviewed. In order to confirm the validity and accuracy of the research, we examined the validity, reliability, and trustworthiness of the data. As to validity, the findings were presented to the participants and they were asked to express their views on the correspondence of the findings with their experiences. In addition, a collaborative reflection on the themes revealed by the research team was carried out at various stages. By maintaining documentation at all stages of the research, the researchers guaranteed the confirmability of the data. Moreover, the researchers' interest in the phenomenon

under the study, long-term engagement with the data, and attempts to gain opinions from others in the field were the other factors that ensured the trustworthiness of the data. As to ethical issues, approval was obtained from the Research Vice-chancellor of Fasa University of Medical Sciences.

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

Results

This study was conducted on 23 students of both genders aged 21- 27 years who studied in different fields of health, medicine, nursing, operating room technology, anesthesiology, and medical emergencies. The students' lived experiences of the tests led to extraction of three main themes and six subthemes, as presented in Table 1. In this section, some participants' comments are mentioned.

Theme 1: A blessing in disguise

The students interpreted the exams as a blessing in disguise. Although they constantly tended to escape from the exams, they considered it to be necessary as a "learning tool" and "a tool for achieving job position".

Learning tool

The students considered the test to be a means of reading a lesson or a book, learning, and moving forward. Participant No. 4 commented on the necessity of testing to make learning and differentiating a strong student from a weak one:

"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 this lesson. It is a criterion used to assess the individuals and determine their levels of understanding and learning".

The students considered exams to be a means of achieving educational goals and measuring the outcomes. In this regard, participant No. 3 said:

"The exam means that I have taken part in this class for the duration of the course and what I have got, whether the time I've spent has led to a result or not, or whether it was just a waste of time. I mean the product is how much I've learned and how much has been added to my knowledge, and I can use this knowledge somewhere; I can use it in my job in future".

Another participant (No. 1) referred to learning fixation through the test:

"The exam will make the students go after what they have already learned to be re-established in their minds".

The students also pointed to the importance of the test in learning feedback and considered it to be a factor in adhering to educational justice. In this respect, participant No. 2 maintained:

"The exam is a way to give feedback on the information that we have been taught, while it is essential to respect the justice among the students".

Tool for achieving job position

The students understood the importance of testing as a means of achieving graduation and acquiring faster career opportunities. One of the participants (No. 9) said:

"If we pass our exams, we will go to a higher level and will graduate sooner. Every exam will affect our future; we find a job sooner, and we gain our independence".

Theme 2: Stressful difficulty

Exam had different meanings for the students. The students considered testing as a stressful difficulty that threatened their health. This main theme had two subthemes, namely "endurance of psychological pressures" and "the score-orientation pressure".

Endurance of psychological pressures (mental stresses)

The students suffered from psychological stress due to different factors. One of these stressors was readiness. Regarding the stress of readiness, one of the participants (No. 7) stated:

"When the name of test comes out, there is insomnia and stress in the dormitory. The test and dormitory call insomnia to my mind, the insomnia that we endure for getting prepared".

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 semester 1; 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 ... I was totally confused. At the test night, we did not know what to do".

The participants also mentioned that their stress resulted from the opposite gender pressure. One of the male participants stated:

"... There was jealousy and harassment among the girls. The stress that the girls gave us increased our tension before and during the exam ..."

The degree of difficulty of the test was one of the other causes of stress among the students. Participant No. 21 talked about the difficulty of the questions:

"Questions were hard, the orthopedic questions. I really did not know any of them, I said I would not succeed, and I had stress".

Psychological stress caused by testing created psychological problems in the students. In this respect, participant No. 5 stated:

"The students experienced rising stress before the test until the day of the test; on the exam day, the test itself gives us a lot of stress. When we pass the test, this stress will drop. If we don't succeed, it will remain. It will disturb the students, and they cannot think, eat, and concentrate. All

students in the university are losing weight because of the high stress they have, and the high amount of labor. They hate life; it is unattractive and uninteresting".

The test space was one of the other causes of psychological stress based on the students' experiences. Participant No. 15 pointed to the test space:

"Well, of course, the exam itself has a stressful atmosphere; the space is special and formal as if you are alone; that is, you should answer these questions in this situation. No one else does help you, and the only one who can help you is you".

Stress during and after the exam session resulted from the concern about the outcome of the exam. In this regard, participant No. 6 said:

"During the test, I was worried about the questions from the parts I had not studied or those I would not be able to answer. Having doubts about the answers or not knowing answers to the questions increased the negative feelings in me. In fact, I was worried about the final result and the overall outcome of the exam".

Score-orientation stress

The students considered the test as a score-orientation stress and referred to the consequences of the unreal value of the scores. They stated that the score was a criterion of judgment for professors and classmates about the students' attitudes, knowledge, performance, and even personalities. This led the students toward score orientation rather than focusing on learning, rethinking, critical thinking, and problem solving. One of the participants (No. 12) said:

"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 be of higher intelligence and higher knowledge; one gradually and unconsciously becomes score-oriented; the conditions require you to read for achieving a score. Since I study for gaining a score, I do not have a good feeling".

Participant No. 5 also referred to the score-orientation damage:

"No one evaluates me by my understanding. Score is the criterion for assessment. All professors are the ones who provide a list. They say that you have a better score, so you are a better student, you are more literate, so you get more points. Our education system is like this. When I don't get a good score in a test, the instructor, based on the image that comes into his mind, says "Well, he

does not study well, so he is not approved". If the professor wants one of the students to help him, for example, during an operation, 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 with the end of the test. One of the students' experiences was emotional fluctuations that affected him for a long time. Depending on the students' impressions of the test, they were affected for a long time. The subthemes of this category included "positive emotions" and "negative emotions".

Positive emotions

The students who successfully passed a test were dominated with positive feelings, such as empowerment, self-satisfaction, usefulness, and happiness. In this regard, participant No. 8 maintained:

"When you do study the subject and get a good score, it gives you a sense of satisfaction, which makes you feel eager to learn your lessons in the same positive way. You are going to continue, so you will have the same results and the same feelings again".

Another participant (No. 14) also said:

"I feel I am useful and my time has not been wasted".

Negative emotions

In unsuccessful tests, the students were involved with negative emotions, such as stress, anxiety, hopelessness, fear, discomfort, self-dissatisfaction, and loss of self-confidence.

Participant No. 17 said:

"When I'm not successful in the test, I have a very bad feeling. First, I lose my self-confidence, I no longer accept myself, I have a sense of dissatisfaction with the reason why I was lazy, and a feeling of disappointment from the outcome and from myself. Negative anxiety also comes to my mind. I have a feeling that I cannot do anything with it; that is, this stress has no benefits for me. It is something that has happened, but I'm having its stress".

Self-blaming was one of the behaviors that the students followed after an unsuccessful test. In this respect, participant No. 11 said:

"I blamed myself why I had not studied more. If I had studied, I could have scored better. I had a lot of stress for the reason I could not do it. Then, I was so upset that I got a low score. I felt sad".

Feeling of inferiority was one of the other negative emotions that the students experienced after unsuccessful tests. Participant No. 19 said:

"I had a sense of inferiority. I was bothered that I had studied, but I did not get a good result".

Discussion

The present study aimed to explain the students' lived experiences of written tests. Although it is important in qualitative research to produce and describe an experience correctly so as to increase our insight, generalization of the results is not important. A part of the findings of this research, in line with other studies' findings, could lead to a greater understanding of the concept of exam. In this study, the students considered the test to be a blessing in disguise. They also considered it to be necessary as a "learning tool" and "a tool for achieving job position". The students' experiences illustrated the need for assessment and testing. Similarly, Al Kadri et al.'s study (2011) showed that the learners' experiences of valid assessments created a strong motivation for learning. In addition, the learners' perception of evaluation was relevant to their approach to studying and acceptance and use of outcomes (17). Heeneman et al. (2018) also believed that if the evaluation was properly planned and implemented, it could fill the gaps in education and curriculum and be a powerful motivator for learning. Although faculty members can help improve the students' performance by implementing appropriate test questions and common test methods, the students' tendency towards multiple-choice exams, as the most common type of medical examinations, cannot stimulate deep learning approaches. Obviously, if a test does not have the proper taxonomy of the questions, the main role of the test, as a complement to the learning cycle, will be eliminated in the evaluation cycle. This increases the responsibility of academics to implement and monitor the evaluation process as a learning tool in the learning system (18).

Based on the students' experiences, evaluation played an important role in enhancing their achievements in job positions. The students believed that they would be far more successful in the future in case they would be able to pass more tests successfully. One of the key issues in higher education is the discussion on the requirements for education and vocational training used for entrepreneur graduates (19). The students' views on participating in a test as a means of acquiring

the competency required to accept a professional position in the future would enhance the comprehensive motivation to improve the achievement of science and skills. Studies in Europe also indicated that the students' attitudes towards academic education, i.e. having a university certificate will automatically lead to employment, was changing rapidly, and the students constantly asked for a clear description of what they really had to do for gaining scholarships (20). Therefore, the educational system should meet the needs of the learners in designing the tests. In other words, the tests should be designed so that they are effective in the learners' future career prospects.

Due to psychological stresses and score orientation, the students considered the test to be a stressful challenge from which they tended to escape. The students regarded the stress of readiness for the exam as a psychological stress caused by several factors, such as volume of the lessons, lack of control over the content of the test, lack of using different strategies for studying and learning, and lack of study management during the semester. In the same line, Khoshhal et al. (2017) reported that 65% of medical students suffered from psychological stress for such reasons as studying at the night before the test and volume of the courses. Moreover, female students endured higher stress levels due to the large volume of lessons in comparison to males (21). Stevenovic et al. (2017) also showed anxiety and stress in nursing students before testing (22). James et al. (2017) demonstrated that the factors causing stress included the large volume of lessons, training shortages, and time of the test (23). Therefore, optimal policymaking is necessary for decreasing the stress of testing and promoting learning (24).

The current study participants indicated that the test, depending on its outcome, resulted in different pleasant and unpleasant feelings. Unpleasant, negative, and hard personal experiences after the tests led to the 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 conditions in the students, which lasted for several days. Consistently, Ahmad (2018) argued that evaluations could create different emotions, which could interact positively with evaluations and advancement goals. At the same time, success and failure could mutually form the students' emotions (25). Overall, students experience a lot of emotions under the test conditions, which would have a great impact on their motivation, learning, performance, and health (26).

Conclusions

Medical students perceived the importance of exam as a tool for learning and gaining a professional position, but they experienced the test as a stressful challenge due to the psychological stress and score orientation. Hence, educational policymakers are required to plan for facilitating the learning process and paying attention to the important role of the test. They should also take measures to strengthen the students' capabilities including the students' views towards the exams as an appropriate tool for advancement and to eliminate weaknesses such as psychological stress, which could threaten their health. Furthermore, it is recommended that the educational planners should modify the trend of score orientation in universities and design more appropriate evaluation programs.

Conflict of interest: None Declared

Table 1. 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

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Authors' contributions

 All authors (SK, ZF, SAK and ZHS) have participated in the conception and design of the study. SK and ZH, Contributed the data collection and prepared the first draft of the manuscript. SAK and ZHS, Critically revised and checked closely the proposal, the analysis and interpretation of the data and design the article. All authors see the final manuscript and approved it.

Availability of data and materials
The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations
Ethics approval and consent to participate

All the participants gave written informed consent to participate in the study. The present study was conducted in terms of the principles of the revised Declaration of Helsinki.The participants were assured about their anonymity and confidentiality of their information. Moreover, the study was approved by the Institutional Research Ethics Committee of Fasa University of Medical Sciences, Fasa, Iran (ethical code: IR.FUMS.REC.1395.112).

Consent to publication
Not applicable.

Competing interests
The authors declare that they have no competing interests.

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