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Evaluation of the Relationship Between Stress and Time Perspective with Academic Burnout in Paramedical Students

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Abstract

Background: Academic burnout is a severe problem associated with poor academic performance. Few studies have dealt with the role of stress and time perspective in academic burnout despite significant attention paid to this issue.

Objectives: The present study aimed to evaluate the relationship between stress and time perspective with academic burnout in paramedical students.

Methods: This descriptive-correlational study was conducted on all paramedical students of Ahvaz, Iran, in 2022. A total of 292 students were selected as the sample through multistage random cluster sampling. The research instruments included the Academic Burnout Questionnaire, the Zimbardo Time Perspective Inventory, and the Medical Student Stressor Questionnaire. Data were analyzed using the Pearson correlation coefficient and stepwise regression.

Results: There was a significant positive relationship between stress and academic burnout but a significant negative relationship between time perspective and academic burnout (P = 0.001). Stress and time perspective predicted 42% of the variance of academic burnout.

Conclusions: Stress had a positive relationship, and time perspective had a negative relationship with academic burnout. Based on the results, paying attention to the role of stress and time perspective in students' academic burnout is more critical than ever.

Keywords: Academic Burnout, Time Perspective, Stress, Paramedical Students

1. Background

Medicine is regarded as one of the most stressful professions (1), and those operating in this field are at the most significant risk of burnout because of their responsibility for the ongoing care of patients (2, 3). The job characteristics and continuous communication with patients may cause burnout and many health problems, possibly jeopardizing academic performance and causing academic burnout for those working in this field (4, 5). Student burnout has been identified as an essential indicator for assessing educational system failure (6). Academic burnout among university students refers to feeling tired due to homework (fatigue), having a pessimistic attitude towards university affairs (cynicism), and feeling incompetent as a student (low efficacy). Consequently, academic burnout is among the most serious issues confronting the educational system at all levels, undermining academic performance while wasting cost and human resources (7). Burnout occurs due to prolonged exposure to environmental stress, and its symptoms manifest in physical, psychological, emotional, and mental dimensions (8, 9). Various factors cause academic burnout in medical students, one of which appears to be stress.

According to the literature, the essential sources of stress for medical students are academic studies (volume and study problems) and the clinical environment (fear of unknown situations and mistakes in patient care and equipment use) (10, 11). On the other hand, student life causes students to become more academically exhausted due to parents' expectations, independence, and financial problems. A person's life undergoes significant changes during the student years. Students face various stressful factors upon arrival, including distance from family, financial difficulties, and many other issues (12). Many studies have found that medical students are more susceptible to stress than other students (13, 14). Although

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stress positively affects students' level of learning, competition, and motivation, it can also impede correct performance (3). The lack of rest time, the large amount of material to learn, and comprehensive exams contribute to stress among medical students (15, 16). Bergmann et al. (3) reported that uncontrolled stress can lead to psychological and physical problems, including rage, aggression, depression, and drug abuse.

Time perspective is another factor affecting academic burnout. Time is essential for people who want to learn and study (17). Time perspective is one of the new concepts introduced in cognitive and personality psychology literature, which organizes one's life experiences in distinct time frames (past, present, and future). Each person has a different attitude towards time and perceives time in a different way, which is known as time perspective. Many aspects of human life are strongly influenced by how people perceive time and share their attitudes. However, most educated and ordinary people underestimate the value of time (18). Thus, time perspective is an essential psychological variable related to many fields of human performance, and it seems that it can predict academic success and engagement (19).

Although many students enjoy attending university, academic matters such as tests, essays, and presentations can lead to academic burnout. Academic burnout is a negative reaction to acute and intense stress, often caused by high demands beyond students' ability, and leads to emotional and physical fatigue. Academic burnout harms students' mental, psychological, and physical well-being (20). Poor academic performance can lead to academic burnout, including a lack of enthusiasm for course materials and a lack of continuous attendance in classrooms. In addition to frequent absences, inability to learn course materials and dropout, students may suffer physical and mental consequences such as headaches, sleep disorders, malnutrition, low physical activity, fear, depression, or alcohol and drug abuse (21-23). Time perspective creates frameworks that allow students to make sense of events across time dimensions. In addition, the time perspective provides a general view through which students can choose and pursue long-term and short-term goals. Therefore, the time perspective can lead students to significant progress in life. On the other hand, academic burnout can negatively affect paramedical students because of experiencing a stressful academic life. Since a few studies have dealt with the effects of stress and time perspective on academic burnout of paramedical students, the findings of this study can be used for dealing with challenges and opportunities, public health, psychological resistance, and toughness against psychological pressures.

2. Objectives

According to the mentioned materials, the present study aimed to investigate the relationship between stress and time perspective with academic burnout in paramedical students.

3. Methods

This descriptive-correlational study was conducted by all paramedical students of Ahvaz, Iran 2022, of whom 292 students were selected as samples through multistage random cluster sampling. The sample size was determined based on the number of variables. According to Loehlin and Beaujean (24), 250 to 300 participants were sufficient to test the study hypotheses, considering the number of paths and variables. The inclusion criteria were being at least in the second semester of medical school, having mental and physical health based on students' self-reports, and being willing to participate in the study. The exclusion criteria were a major stressful event (e.g., the death of a loved one over the past six months, an incurable illness for participants or their family members, and any other event negatively affecting a person's normal life, behavior, and performance) and a history of taking sedatives or nervines. The participants were briefed on the research objectives and procedure and then asked to complete the questionnaires. The participants were also assured that the research information would be used confidentially and anonymously to observe the principles of ethics in research.

3.1. Measurement Tools

3.1.1. Academic Burnout Questionnaire (ABQ)

This questionnaire was developed by Bresó et al. (25) consisting of 15 items scored based on a 5-point Likert scale (from "strongly disagree" to "strongly agree"). The subscales include academic fatigue (five items), academic apathy (four items), and academic inefficiency (six items). Kordzanganeh et al. (26) measured academic burnout in university students and reported Cronbach's alpha coefficient of 0.87 for the questionnaire. In addition, in the present study, Cronbach's alpha coefficient was 0.82.

3.1.2. Medical Student Stressor Questionnaire (MSSQ)

This questionnaire was developed by Yusoff et al. (27) with 40 items. The subscales of this questionnaire are Academic Related Stressors (ARS), Intrapersonal and Interpersonal Related Stressors (IRS), Teaching and Learning Related Stressors (TLRS), Social Related Stressors (SRS), Drive and Desire Related Stressors (DRS), and Group Activities Related Stressors (GARS). The items are scored based on a 5-point Likert scale (from "strongly disagree" to "strongly agree"). Higher scores on each subscale and the whole questionnaire indicate higher stress levels. Jayarajah et al. (28) reported a Cronbach's alpha coefficient of 0.95 for the questionnaire. Moridi et al. (29) calculated Cronbach's alpha coefficient of 0.92 for the Persian version of the questionnaire, which was 0.89 in the present study.

3.1.3. Zimbardo Time Perspective Inventory (ZTPI)

This questionnaire was developed by Zimbardo and Boyd (30) to revise and create a new tool for time perspective with 66 items in five subscales (past-negative, present-hedonistic, future, past-positive, and present-fatalistic). The items are scored based on a 5-point Likert scale (from "strongly disagree" to "strongly agree"). This tool's minimum and maximum scores are 66 and 330, respectively. A score of 198 is the cut-off point, scores lower than this indicate a low level of time perspective, and scores higher than 198 indicate a high level of time perspective in students. Alizadehfard et al. (31) reported a Cronbach's alpha coefficient of 0.71 for the Persian version of the questionnaire. In our study, Cronbach's alpha coefficient was 0.80.

3.2. Data Analysis

The data were analyzed using descriptive statistics (mean and standard deviation) and inferential statistics (the Pearson correlation coefficient and stepwise regression) to investigate the power of stress and time perspective in predicting academic burnout. All statistical analyses were performed using SPSS software version 27.

4. Results

According to the demographic data, 52.05% of participants were bachelor's students, and 47.95% were master's students. In addition, 48.63% of the participants were female, and the rest were male. Table 1 shows the research variables' mean and standard deviation (SD).

Table 2 presents the correlation coefficients of theresearch variables.As shown in Table 2, there is a

Table 1. Mean and Standard Deviation (SD) of the Research Variables					
Variables	Mean ± SD				
Academic burnout	45.51± 7.60				
Stress	121.78 ± 38.32				
Time perspective	102.39 ± 30.87				

significant positive relationship between stress and academic burnout (r = 0.060). In contrast, there was a significant negative relationship between time perspective and academic burnout (r = 0.456). Stepwise regression analysis determined more effective variables in predicting academic burnout. To this end, stress and time perspective variables were added to the equation as predictor variables and academic burnout was added as a criterion variable (Table 3).

Table 2. Pearson Correlation Coeffici Variables	ents Among the Research Acaden	ong the Research Variables Academic Burnout				
	r	P-Value				
Stress	0.60	0.001				
Time perspective	-0.56	0.001				

Table 3 shows stress is the essential predictor of academic burnout in the first model. This variable's correlation coefficient with academic burnout was 0.60, predicting 36% of changes in academic burnout. "Time perspective" was introduced into the equation in the second model After stress. The correlation coefficient between these two variables and academic burnout is 0.65, and these two variables predicted 42% of changes in academic burnout. Adding "time perspective" increased the prediction power by 6%. In the order of adding variables to the model, stress (with a standard beta of 0.60) played the most crucial role in predicting changes in academic burnout, followed by the combination of "time perspective" and "stress" (with a standard beta of -0.31).

5. Discussion

The present study evaluated the relationship between stress and time perspective with academic burnout in paramedical students. The findings suggested a significant relationship between stress and time perspective with academic burnout. The first finding of this study indicated a significant positive relationship between stress and academic burnout in paramedical students. Consistent with the findings of this study,

Table 3. Results of Simultaneous Regression Analysis										
Model	Predictor Variable	F	R	R ²	В	SE	β	t	P-value	
1	Stress	162.69	0.60	0.36	0.12	0.009	0.60	12.75	0.001	
2	Stress and time perspective	105.65	0.65	0.42	-0.40	0.072	-0.31	-5.61	0.001	

Aghaeinejad et al. (32) reported a direct relationship between stress and academic burnout in university students, and with the increase in stress, the level of academic burnout in students increased. Moreover, Tayebati et al. (33) reported a significant positive relationship between undergraduate students' perceived stress and academic burnout.

Academic burnout results from exposure to chronic and long-term occupational and academic pressures. Stress often includes the student's perception of increasing academic demands and insufficient time to respond to those demands. Stress causes a student to lack motivation and energy, and since stress is the main obstacle to improving academic performance, academic burnout results. As a result, academic burnout should be more common among people who have been studying or working longer than those who have just begun studying or working (32). Symptoms of academic burnout include a lack of enthusiasm for course material, inability to continue attending classes, poor participation in class activities, a sense of meaninglessness in class activities, and a feeling of failure to learn the course materials (33). Any factor or stimulus, e.g., dealing with a patient, can cause stress, and academic burnout occurs when a person is exposed to prolonged stress (34). Students' evaluation of the inconsistency of demands with internal resources leads to their stress, which results in academic burnout as a negative reaction to these stresses (35).

Another study finding demonstrated a significant negative relationship between time perspective and academic burnout. According to Erdemir and Tomar (36), proper time management improves academic performance and reduces student burnout. Academic burnout is one of the severe challenges of educational systems at all levels, resulting in lower academic performance and the waste of human resources and costs. Academically burnt-out students typically feel inept at learning course materials (36). The literature shows the necessity for considering the time perspective in the health field, particularly when studying academic burnout in individuals confronted with unfavorable situations (37). Future time perspective is associated with purposeful behaviors. Therefore, futurism can act as a barrier to academic disengagement by postponing momentary pleasures. In addition, when the student has a vision of the future, the assignments become valuable for him and are placed toward his long-term goals. In this way, the student commits to doing the assigned task well and getting involved as he spends his time and energy in completing the task. Students with this sense of commitment are more likely to spend more time on their coursework. Conversely, a person with a past-negative time perspective is preoccupied with negative personal experiences. This orientation generally implies remembering the chaotic past, allowing for a pessimistic attitude toward the past and potentially traumatic life events. Accordingly, the past-negative time perspective is related to negative emotion and burnout (38). On the other hand, the present-fatalistic time perspective teems with a sense of failure, helplessness, and despair towards the present time. People with this type of orientation accept whatever happens, causing students to have a pessimistic attitude toward education and success and experience academic burnout.

Since this study was correlational, inferring causal relationships from the findings was impossible. The study findings should also be cautiously generalized to paramedical students in other regions of Iran because the study population only consisted of paramedical students in Ahvaz. Therefore, future studies should conduct similar investigations in other cities and towns to achieve more generalizable results.

5.1. Conclusions

The results indicated a significant positive relationship between stress and academic burnout but a significant negative relationship between time perspective and academic burnout. Based on the results, more attention should be paid to students' stress and academic burnout. Students should also be supported and guided to study the discipline they are more interested in and find jobs related to their field to motivate students academically and reduce the prevalence of academic burnout among university students. Stress is one of the major causes of academic burnout among learners. Therefore, academic burnout can be prevented or controlled by providing adequate support to students experiencing stress from various sources.

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Footnotes

Authors' Contribution: K.A.M. and H.J. developed the study concept and design. K.A.M. acquired the data. H.J. and B.M. analyzed and interpreted the data, and wrote the first draft of the manuscript. All authors contributed to the intellectual content, manuscript editing and read and approved the final manuscript. K.A.M., and H.J. provided administrative support.

Conflict of Interests: The authors confirm no relevant financial or non-financial competing interests in this study.

Data Availability: The dataset presented in the study is available on request from the corresponding author during submission or after publication.

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Informed Consent: The participants were briefed on the research objectives and procedure and then asked to complete the questionnaires. The participants were also assured that the research information would be used confidentially and anonymously to observe the principles of ethics in research.

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