The Relationship between Time Management and Academic Burnout with the Mediating Role of Test Anxiety and Self-efficacy Beliefs among University Students

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Abstract

Background: Academic burnout is one of the most important problems throughout all levels of the education system.

Objectives: The present study aimed to investigate the relationship between time management and academic burnout with the mediating role of test anxiety and self-efficacy beliefs among university students in 2019.

Methods: The study was a descriptive correlation performed by path analysis. The statistical population included all students of Islamic Azad University of Ahvaz and 222 of which were selected as the sample of the study using convenience sampling. The research instruments included the Academic Burnout Questionnaire, the Time Management Questionnaire, the test anxiety inventory, and the General Self-Efficacy Scale. The proposed model was evaluated using path analysis with AMOS software.

Results: A direct and positive relationship was observed between time management and self-efficacy beliefs ($\beta = 0.345, P = 0.0001$) and between test anxiety and academic burnout ($\beta = 0.515, P = 0.0001$). The relationship between time management and test anxiety ($\beta = -0.586, P=0.001$) and between self-efficacy beliefs and academic burnout ($\beta = -0.305, P = 0.0001$) was negative. The relationship between time management and academic burnout was not significant ($\beta = -0.051, P = 0.425$). The results indicated that test anxiety and self-efficacy beliefs had a mediating role in the relationship between time management and academic burnout ($\beta = -3.964, P = 0.001$).

Conclusions: According to research results, the proposed model had good fitness and is considered an important step in identifying the effective factors in students’ academic burnout.

Keywords: Burnout, Time Management, Test Anxiety, Self-efficacy Beliefs, Students

1. Background

Academic burnout is a significant problem in the educational system at all levels of education, which weakens academic performance and wastes expenses and human resources. Burnout can be considered a type of disorder occurring in an individual for being exposed to stressful environments for long periods, and its symptoms appear in physical, psychological, emotional, and mental dimensions (1). Burnout is caused by hard and un motivating work, and its symptoms appear in different forms. The symptoms also vary from person to person (2). Academic burnout among learners is identified by fatigue due to academic demands and requirements, feeling pessimistic about merits, and low self-efficacy, which can be discussed as a chronic reaction of students who have been involved with academic requirements from the start. This is caused by the difference between the students’ abilities and expectations of academic success of themselves compared to others (3).

Students suffering from academic burnout usually experience a lack of willingness to attend classes continuously, lack of participation in-class activities, apathy towards the lessons, consecutive absences, and feeling meaningless and incompetent in learning lessons (4). Studies in the field of health, specifically academic burnout, have shown that time management is important when people face unsuitable situations. In general, academic programs are one of the life affairs with tasks and objectives that students often face difficulties in assigning time to. Academic performance also depends on students’ abilities in time management and performing tasks correctly. Support from family and friends anticipate high academic performance (5).

Time management is a personal discipline that, when performed, anything can be achieved. Time management
makes one spend time on targeted activities, while lack of time management leads to doing leisure activities. Hence, good time management increases academic performance and reduces academic burnout among students (4, 6, 7). Since time management skills can be taught and learned and since the inability in time management is one of the causes of not completing the homework among the learners, which per se can lead to academic failure in students and reduction of motivation to continue their studies, this strategy is selected to reduce the test anxiety among students (8).

Mediating factors play a role in the relationship between time management and academic burnout among students, which are better to be investigated in order to reduce academic burnout. One of these mediating factors is test anxiety. Test anxiety is a common phenomenon among students and is considered a problem in the educational system (9, 10). Test anxiety is situational anxiety that can be observed in all socioeconomic classes and is closely related to the academic performance of the learners in educational centers, and 10 to 20 percent of the pupils and students faces it during their education (11). Different studies have focused on the relationship between test anxiety and academic burnout (12) and the relationship between time management and test anxiety (13).

Besides test anxiety, the other variable that plays a mediating role in the relationship between time management and academic burnout in students is self-efficacy beliefs. So, the person trusts his/her abilities in controlling his/her feeling, emotions, and behavior and can affect the consequences of affairs (14). According to Buckworth (15), self-efficacy plays a more significant role in people’s motivations and behaviors, such that people who strongly believe in their abilities try and insist more on doing their homework. However, people who doubt their abilities stop doing their homework. Therefore, self-efficacy acts as a driving force in people (16). Different studies have addressed the role of self-efficacy beliefs in reducing academic burnout (17-19).

2. Objectives

The present study sought to investigate the relationship between time management and academic burnout with the mediating role of test anxiety and self-efficacy beliefs among university students.

3. Methods

The study was a descriptive correlation performed by path analysis. The statistical population included all students of Islamic Azad University of Ahvaz in 2019 and 222 of which were selected as the sample of the study using convenience sampling. In order to collect the required data, 250 questionnaires based on the research variables were administered. A total of 222 questionnaires were analyzed following the elimination of incomplete questionnaires. Willingness to participate in the research, information confidentiality (confidentiality principle), and observance of participants’ rights were the ethical considerations of the research. The proposed model was evaluated using path analysis with AMOS software.

3.1. Research Instruments

3.1.1. Academic Burnout Questionnaire

The Academic Burnout Questionnaire was designed by Bresó et al. (20). This questionnaire consists of 15 items that are rated based on the 5-point Likert scale (strongly disagree to strongly agree). Academic burnout consists of 5 items, academic apathy consists of 4 items, and academic inefficacy consists of 6 items of the measurable components of the questionnaire. Items 3, 6, 8, 9, 12, and 15 are scored in reverse. The validity of the questionnaire was calculated by factor analysis, and the Comparative Fit Index, Incremental Fit Index, and Root-Mean-Square Error were reported good, and the reliability of the questionnaire was reported to be 0.88 by Cronbach’s Alpha (21). Cronbach’s alpha coefficient was 0.87 for the questionnaire in the present study.

3.1.2. Time Management Questionnaire

The Time Management Questionnaire was designed by Trueman and Hartley (22) to measure time management. This research tool consists of 14 items, and the scoring method follows the 5-point Likert scale (from always, often, sometimes, rarely, to never). This questionnaire was translated by Savari (23). The reliability of this questionnaire was calculated by Cronbach’s alpha and bisection method to be 0.88 and 0.63, respectively. The validity of this scale was also tested by confirmatory factor analysis (CFA). All the items except for items 8, 11, and 13 had acceptable factor loads (23). In the current study, the reliability of the questionnaire was 0.83 using Cronbach’s alpha coefficient.

3.1.3. The Test Anxiety Inventory

The test anxiety inventory was designed by Spielberger et al. (24) for all levels of education. This questionnaire consists of 20 questions. The “Worry” subscale measures questions 3, 5, 7, 9, 12, 14, 16, 17, 19, and 20. The “emotionality” subscale measures questions 1, 2, 4, 6, 8, 10, 11, 13, 15, and 18. A four-point Likert Scale was used for scoring, which started from never 1, rarely 2, sometimes 3, and often 4. The minimum and maximum points in this questionnaire were 20 and 80, respectively. Students’ points are classified into
three groups of low (points of 20 - 40), moderate (points of 41 - 60), and high-test anxiety (points of 61 - 80). Taylor and Deane (25), reported a Cronbach’s alpha coefficient of 0.86 for the questionnaire. Cronbach’s alpha coefficient in the present study was 0.84 for the inventory

3.1.4. The General Self-efficacy Scale
This scale was developed by Sherer et al. (26). This scale includes 17 items, measuring three aspects of behavior, i.e., the desire to initiate a behavior, continuing to strive to complete the behavior, and resistance in the face of obstacles. This scale is scored based on a 5-option Likert scale from 1 to 5. Questions 1, 3, 8, 9, 13, and 15 are scored as 5 (completely agree), 4 (agree), 3 (neither agree nor disagree), 2 (disagree), and 1 (completely disagree), while the other items are scored in reverse. The minimum score for this scale is 17, while the maximum score is 85. Higher scores indicate a high sense of self-efficacy. In a study, Dougherty et al. (27) reported a Cronbach’s alpha coefficient of 0.84 for the scale. In the current study, the reliability of the scale was 0.82 using Cronbach’s alpha coefficient.

4. Results
According to the descriptive statistics, the participants were in the age range of 19 - 30 years. Moreover, 64.56% of students were female, and 35.44% of students were male. In terms of marital status, 59.50% of students were single, and 40.50% of students were married. Also, 73.74% of the participants were undergraduate students; 22.09% were master, and 4.17% were Ph.D. students. Table 1 represents the mean and standard deviation (SD) and Pearson correlation coefficients matrix among the study variables.

The primary proposed model was achieved based on time management, test anxiety, and self-efficacy beliefs to determine academic burnout. Figure 1 shows the first proposed model.

According to Table 2, the initial model required modification (RMSEA = 0.446). To this end, the non-significant relationship between time management and academic burnout was removed. Figure 2 shows the final model in which the root means square error of approximation (RMSEA = 0.079), $\chi^2/df = 2.383$ and CFI = 0.990, indicated a good model fit.

Figure 2. Final modified model

The findings of Table 3 showed that there was no significant relationship between time management and academic burnout ($\beta = -0.051, P = 0.425$). The relationship between time management and self-efficacy beliefs was positive and significant ($\beta = 0.345, P = 0.0001$). There was a negative and significant relationship between time management and test anxiety among the university students ($\beta = -0.586, P = 0.0001$) and between self-efficacy beliefs and academic burnout ($\beta = -0.305, P = 0.0001$). The relationship between test anxiety and academic burnout was positive and significant ($\beta = 0.515, P = 0.0001$). The bootstrap method was utilized to determine the significance of the mediating-based relations.

The indirect path from time management to academic burnout through the mediating role of test anxiety and self-efficacy beliefs was significant ($\beta = -3.946, P = 0.001$) (Table 4).

5. Discussion
The present study aimed to investigate the relationship between time management and academic burnout with the mediating role of test anxiety and self-efficacy beliefs among university students. In general, results showed that all direct relationships between the variables were significant except for the relationship between time management and academic burnout. The indirect relationships became significant by the mediating role of test anxiety and self-efficacy beliefs in academic burnout. According to research results, the proposed model has good fitness and is considered a significant step in identifying the influential factors in students’ academic burnout. It can also be used as an appropriate model in designing academic burnout prevention programs.
The first finding of this study showed that there was no direct and significant role between time management and academic burnout. This finding is inconsistent with the findings of studies carried out by Erdemir and Tomar (7), Charkhabi et al. (17), Butcher (6), and Ghadampour et al. (4). It can be stated that in the aforementioned studies, the relationship between time management and academic burnout was significant according to the correlation coefficient and regression tests. However, path analysis was used in the present study. The relationship between time management and academic burnout was also significant according to Pearson test. However, in the present model, the effect of time management on academic burnout was indirect and through the mediating variables. In other words, time management also affects academic burnout in this study but indirectly. Hence, it can be stated that this finding is somehow consistent with the findings of previous studies. It should also be noted that the statistical population of these studies has been quite different. In general, students should find out how to learn their lessons in a relatively specific period. They should also increase their insight into making the best use of time to have a more accurate estimation of the time required for their tasks. Mastering time is an essential step in learning lessons. Time is a strategic source to advance objectives and making dreams come true. An investigation of the behavior of successful and influential people shows that time has an irreplaceable role to them to the extent that they focus on time even before beginning a task. Moreover, they manage their time by eliminating useless and irrelevant activities.

The second finding showed that there was a negative association between time management and test anxiety. That is, by improving students’ time management skills, test anxiety can be expected to reduce in them. Hence, their academic achievements and performance will improve. As an explanation for this finding, it can be stated that students can use lesson planning to manage their time and reduce tension and anxiety due to homework overload. Accordingly, it can be stated that time management reduces tension and anxiety. Consequently, the cognitive reactions to tension increase by
time management. Time management includes individual perceptions and different attitudes toward time. It can be stated that people’s different attitudes to time are derived from their personality traits. That is, some people need more time to finish their tasks, and some need shorter periods. If students have a good understanding of themselves, they can manage their tasks better and be prepared for their homework and exams to reduce test anxiety (13).

The third research finding showed a direct and significant relationship between time management and self-efficacy beliefs. This finding is in accordance with that of Poudel et al. (28). As an explanation, it can be stated that, in general, students who have control over their homework schedules get higher marks. Hence, doing homework on time creates the concept of positive self in students. Time management strategies increase students perceived self-efficacy against the threatening experiences of hard lessons and test anxiety. As a result, the anxiety will decrease, and the students’ social performance and self-efficacy will improve (28).

The fourth research finding showed that there is a direct and significant relationship between test anxiety and academic burnout. This finding is consistent with the findings of studies carried out by Faramarzi and Khafri (12) and Ebrahimi et al. (13). As an explanation, it can be expected that test anxiety is a type of undesirable emotional reaction to school and class assessments. This emotional condition is usually accompanied by worry, nervous system arousal, and confusion. At the time of test anxiety crisis, that is, situations accompanied by imminent danger or disintegration, the student will feel helpless and unable to find any reason for his/her emotional condition. These anxieties are almost always accompanied by physical symptoms such as paleness, shivering, rapid heartbeat, respiratory problems, etc., and the individual is unable to actualize their potential abilities (13). These negative symptoms caused by test anxiety in learners and students are accompanied by academic burnout symptoms such as mental and emotional fatigue, psychological pressure such as lack of required resources to do tasks and homework, mental fatigue, time restrictions, role overload, inability to constantly attending the classes, not participating in-class activities, being uninterested in courses, feeling unable to learn the lessons. These symptoms gradually pave the way for academic burnout in students with test anxiety (12).

The fifth research finding showed that there is an indirect and significant relationship between self-efficacy beliefs and academic burnout. That is, by the increase of self-efficacy beliefs in students, their academic burnout is expected to reduce. This finding is in accordance with that of Felaza et al. (18), Charkhabi et al. (17), Yu et al. (21), and Lee et al. (29). To explain this finding, it can be stated that students with high self-efficacy have higher levels of energy and show more self-devotion, and are less probable to experience academic burnout (21). Self-efficacy beliefs are indirectly related to deindividuation and emotional fatigue and directly related to diminished personal success. Findings also showed that people with higher self-efficacy points experience less burnout (29). Results also showed that people with high self-efficacy face problems instead of running away and have a higher commitment to achieving their goals. These people attribute failure to not trying, which is compensable. Hence, they feel less burnout and academic stress.

The sixth research finding showed that test anxiety and self-efficacy beliefs played a parallel mediating role in the relationship between time management and academic burnout. In the first hypothesis, it was shown that there was no significant relationship between time management and academic burnout. However, the present study showed that a reduction in time management skills is related to an increase in test anxiety and self-efficacy beliefs, and it can lead to academic burnout through them. As an explanation, it can be stated that naturally, various factors affect students’ progress and academic performance. Some of them improve academic performance, and some others weaken it. Academic burnout is one of the factors that negatively affect students’ progress and academic performance. Students’ burnout addresses feeling fatigued and uninterested in learning lessons and/or feeling pessimistic and unworthy as a student (17).

The present study had some limitations. Some of the limitations of this study included the fact that the study was carried out among the students of the Islamic Azad University of Ahwaz, and the attention should be turned in generalizing the results of this study to other students in other universities of Iran. Moreover, there are influential variables such as gender and age in academic burnout that have not been controlled in the present study and are recommended to be controlled in future studies. Since the present study was carried out on students, it is recommended that it should be carried out on other populations such as the students in other levels of education. Some of the practical recommendations include the fact that the university experts and officials in Iran note that universities should be programmed such that students can make better use of their positive personality traits and behaviors and take steps in progressing by increasing their self-efficacy and get away from academic burnout that prevents them from improving and progressing academically.

Footnotes

Authors’ Contribution: Zahra Kordzanganeh: Study concept and design, acquisition of data, analysis, and interpretation of data, and statistical analysis. Saeed Bakhtiarpour:
Administrative, technical, and material support, study supervision. Fariba Hafezi and Zahra Dashtbozorgi: Critical revision of the manuscript for important intellectual content.

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Informed Consent: Questionnaires were filled with the participants' satisfaction, and written informed consent was obtained from the participants in this study.

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