

Predicting Academic Burnout Based on Achievement Goals and Self-regulated Learning

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Abstract: The purpose of this study was to investigate the role of self-regulated learning and achievement goals in predicting academic burnout among 384 male and female students of Payam-e-Noor University of Shiraz in the 2018. The research method was correlational. Multi-stage random cluster sampling was used to select the sample. Finally, 204 female students and 180 male students were included in the study sample. Data collection was performed using the Pentrich and De Groot Self-regulated Learning Strategies Questionnaire, Middleton and Midgley Goal-Oriented Questionnaire, and Maslach Burnout Inventory. Structural Equation Modeling confirmed the good fit of the initial theoretical model with the data, and after modifying the model, excellent fit of the final model to the data was obtained. The results indicated self-regulated learning leads to students' motivational orientation and this can lead to long-term academic achievement and success or stress and burnout in students. In addition, the achievement goals have a critical role in predicting academic burnout because of its impact on the right or wrong approach of learning.

Keywords: Self-Regulated Learning, Achievement Goals, Academic Burnout, Student

Introduction

Researchers have been looking for ways to improve human health in many aspects of life for many years. Healthy people can use all of their existential capacities to attain personal and social goals. However, the threatening factors always endanger human health and make the energetic and happy activities towards burnout and depression. They are moving forward (Hashemi, Savadkouhi, Naami, & Beshlideh, 2018). Since the first time, Fruidenthal coined the term burnout; there has been extensive research into the significance and structure of this construct. At first, most research on burnout had of a qualitative nature. However, in recent decades, work on burnout has focused more on systematic empirical research involving the use of questionnaires, methodologies of surveying, and studies on different and larger populations (Maslach, Schaufeli, & Leiter, 2001; Mosadeghrad, 2004). In recent years, the physical, psychological, emotional and economic consequences of burnout have continued to attract the attention of experts and researchers.

In recent decades, the eagerness to pursue university and postgraduate education has sparked a wave of community competition to enter the universities, and one of the destinations welcomed by this huge flood of peo-

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ple, is Payam Noor University which has a variety of disciplines at different levels. However, despite continued efforts by university officials to improve the quality and quantity of training courses, we have witnessed a growing trend of student frustrations, dilemmas, and adverse academic outcomes each year that one of the most important problems is academic burnout. Gold described burnout as “the end result of stress” (Hashemi et al., 2018). Academic burnout is a type of burnout that occurs in learners and affects their academic performance. Academic burnout among students refers to a feeling of being tired of the demands and requirements of education, having a pessimistic and disinterested sense of homework, and feeling inadequate as a student. Academic burnout includes academic fatigue, academic disinterest, and academic inefficiency (Rostami, Abedi, Schaufeli, Ahmadi, & Sadeghi, 2013).

Based on previous studies, academic burnout is recognized in educational situations by characteristics such as fatigue due to study requirements, development of pessimistic and insensitive attitude towards lesson materials and poor personal improvement in the classroom. Academic burnout can decrease the academic achievement (Cam, Deniz, & Kurnaz, 2014). People with academic burnout usually have symptoms such as a lack of enthusiasm for the curriculum, inability to continue in the classroom, failure to participate in classroom activities, a sense of meaninglessness in the classroom, and a feeling of inadequacy. Therefore, academic fatigue, academic inattention, and academic inefficiency are common symptoms of academic burnout syndrome that can greatly impair students' academic performance and individual health.

According to most researchers in the domain of burnout, burnout represents an indicator of the dissonance between what individuals are and what they should do (Maslach et al., 2001). An example of this disorder can be seen in the student self-regulation process. Self-regulation is a process in which the learner chooses goals for their learning, attempts to control and regulate their cognition, motivation, and behavior. Self-regulation as a learnable phenomenon affects students' cognitive and motivational processes (Kharrazi & Kareshki, 2010). Therefore, the acquisition of this skill is not necessarily related to natural development and, like other abilities or capacities, must be clearly learned. Self-regulated learning is a type of learning in which the student begins and directs his or her own efforts to acquire knowledge and skills without relying on the teacher and others (Kharrazi & Kareshki, 2010; Pintrich, 1999). By definition, self-regulated learning is a type of learning in which individuals begin and direct their efforts to acquire knowledge and skills without relying on the teacher or others personally (Pintrich, 2003). Accordingly, self-regulated learning encompasses all cognitive, meta-cognitive, and motivational processes in which the individual aims and plans for his or her learning activities and applies the necessary managerial, supervisory, and evaluation strategies accordingly. The focus of this approach is on student self-learning and then emphasizes student-centered learning (Kharrazi & Kareshki, 2010).

Successful students use motivational strategies and patterns to accomplish homework, such as striving for success and challenging activities and goal setting. In contrast, unsuccessful students spend less time and are less interested in activities, are unable to set goals and use learning strategies, have low self-efficacy, and rarely achieve high levels of success. Self-regulated students set specific goals for themselves and use strategies to achieve them. These learners begin to learn, monitor and evaluate their progress by themselves. Intrinsic motivation and self-motivation are other characteristics of self-regulated students in practice. Self-regulated learners employ appropriate cognitive strategies and are academically motivated. Learners who are active in self-regulation learning use the cognitive learning strategies such as regular repetition, elaboration, and orga-

nization. Self-regulated learners are superior to others in planning and organizing learning, time management and time planning, targeting, self-control and self-evaluation. Symptoms of self-regulated learning include goal-setting, time management, meaningful and directed practice, proper use of cognitive and meta-cognitive strategies, and a sense of self-efficacy (Ocak & Yamaç, 2013). Self-regulated learners design and review their assignments, are aware of their thinking processes and utilize cognitive strategies to achieve their goals (Kadivar, Farzad, Kavousian, & Nikdel, 2007). Self-regulating learners set goals for a task and use appropriate strategies to achieve those goals; they monitor and control their own progress, and adjust their learning strategies to the extent necessary. In short, self-regulated learners actively control important aspects of cognition, behavior, and the environment for their own learning goals (Alonso-Tapia & Panadero, 2010). Therefore, Self-regulation is a process in which the learner chooses goals for their learning, and then attempts to control and regulate their cognition, motivation, and behavior. As a result, independent learners need less attention from the teacher. They know how to apply learning strategies, they understand their abilities in specific areas, and they are committed to achieving their educational goals. These students are more resistant to academic burnout; on the contrary, low self-regulation leads to student energy wastage, academic burnout and poor performance.

The studies of Gailliot et al. (2007) and Diehl, Semegon, and Schwarzer (2006), have shown that self-regulated learning can decrease the risk of burnout by increasing happiness. Self-regulated students are able to prioritize their homework over some fun activities (such as going out with friends). Thus, after completing their assignments, they will enjoy both their enjoyable activities and achieve high marks at the end of their semester. However, students who are poor in self-regulation cannot delay their enjoyable activities (such as turning off their cell phones) and do impulsive activities; They do not get the desired education and become depressed (Steel, 2007). In this regard, Tikkanen, Pyhältö, Pietarinen, and Soini (2017), stated that self-regulation strategies act as shield against stressors. In practice, these strategies lead to improved planning for learning and to moderate the feeling of boredom and fatigue caused by homework (Poirel, Lapointe, & Yvon, 2012; Salkovsky & Romi, 2015). Keshavarzi et al. (2019), indicated the cognitive strategies and then meta-cognitive strategies have the main role in predicting academic burnout. Therefore, it seems that teaching cognitive and metacognitive skills and using more metacognitive strategies in addition to cognitive strategies can be acceptable to control burnout. Also, Pietarinen, Pyhältö, Soini, and Salmela-Aro (2013), Soini, Pyhältö, and Pietarinen (2010) and Verešová and Malá (2012), also showed that self-regulation strategies decrease the likelihood of stress and burnout.

In addition, early idealistic goals and aspirations are both sources of academic failure and one of the main causes of academic burnout. Because, choosing unrealistic goals can lead students to the fringe of academic failure and burnout (Pintrich, 2003). The goals and objectives that students have for engaging in a particular academic assignment indicate their achievement goals. Achievement goals represent a coherent pattern of beliefs, attributes, and emotions that determine one's behavioral intentions and cause them to be more inclined to act in certain situations and to act in those situations in particular. Individuals who choose performance-orientation goals emphasize displaying their skills over others. On the other hand, the attention of learners who choose avoidance-performance goals is focused on avoiding failure. Finally, learners who choose mastery goals emphasize the development of their skills, learning and mastery. However, it seems that the choice of performance-oriented and avoidance performance goals bring negative stress and in the

students and it can lead long-term consequence of burnout. However, students with mastery goals gain skills for mastery, which makes them more resistant to stress and negative emotions. As such, students pursuing a mastery goal rely on the growth and development of competence and capability in an academic assignment. In contrast, people who choose a performance goal tend to show competence over others (Schunk, 1989). Given this, learners who choose mastery goals are mainly focused on improving their competencies and acquiring new knowledge. These people are self-sufficient to achieve their goals, and are always looking for opportunities and challenges to enhance their learning and insist on overcoming failures and frustrations. However, learners who choose performance goals focus on achieving good performance and want to show that they are superior to others, so these people make little effort to succeed and easily give in to problems. Therefore, researchers emphasize the vulnerability of performance goals to learning burnout but at the same time note that individuals who have a good assessment of their abilities will exhibit somewhat adaptive behaviors if they choose performance goals (Nario-Redmond, Noel, & Fern, 2013; Wehmeyer & Shogren, 2017). In summary, the choice of performance goals increases the student stress which in the long term will increase the likelihood of academic burnout; but, if the student chooses mastery goals, it is less likely to cause academic burnout.

In their research, Urdan and Schoenfelder (2006) and Anderman and Patrick (2012), showed that performance goals are followed by negative outcomes such as reluctance to seek help, cheating, and academic failure. Many studies have shown that mastery-approach goals are associated with positive outcomes including metacognitive self-regulation, pleasant emotions, and intrinsic motivation (Hulleman, Schrager, Bodmann, & Harackiewicz, 2010; Lavasani, Malahmadi, & Amani, 2010); on the contrary, performance-avoidance goals are associated with the inefficiency of learning strategies and negative emotions (Diseth & Kobbeltvedt, 2010; Liem, Lau, & Nie, 2008; Linnenbrink-Garcia, Tyson, & Patall, 2008). But this is the case of performance-approach goals — it be a little confused due to the dual nature of these goals — on the one hand is approach and on the other hand involve social comparison (Elliot, 2005; Elliot & Moller, 2003; Elliot & Murayama, 2008). Thus, although performance-orientation goals drive students toward success, they do not appear to be as effective as mastery-orientation goals in facilitating student learning (Elliot & Moller, 2003; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002).

Therefore, given the concerns about controlling and decreasing the academic burnout among students, led the researcher to the idea that self-regulated learning and how to select student achievement goals can influence his/her academic burnout. In the other words, if the student performs poorly on self-regulation learning and chooses performance, there is an increased likelihood of expected burnout; but, if the student has a high self-regulation, he chooses mastery goals, and less likely to experience burnout. In this regard, the present study seeks to test the following hypothesis: Self-regulated learning and the selection of achievement goals play a significant role in predicting academic burnout among students of Shiraz Payame Noor University.

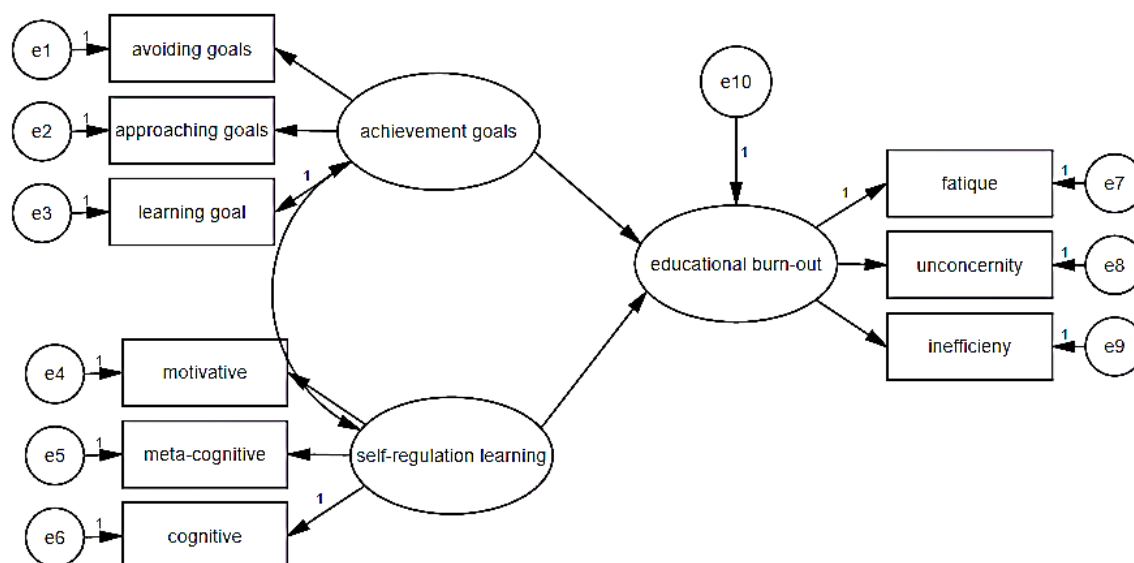


Figure 1. The Conceptual model of present study

Material and Method

The method of this study is correlational. In terms of data collection, the methodology used is a combination of library and field methods. The statistical population of the study includes all four semester students of Payam-e-Noor University of Shiraz who were studying in the academic year 2018. The sample size was 384 which were selected by multistage cluster random sampling method. For sampling, 4 out of 8 faculties were randomly selected, then 12 classes were randomly selected from each faculty and finally, all students in the selected classes were selected as sample. Of these, 204 were female and 180 were male. The main requirement for students to enter the statistical sample was to have a 4th semester above the undergraduate level. The most of the sample members were single undergraduate students aged 21-24. Data collection was performed using the Pentrich and De Groot Self-regulated Learning Strategies Questionnaire, Middleton and Midgley Goal-Orientation Questionnaire, and Maslach Burnout Inventory.

1- Middleton and Midgley Goal-Orientation Questionnaire: Middleton and Midgley (2012) designed the Goal-Orientation Questionnaire to determine the type of students' achievement goals. This questionnaire has 18 questions and aims to examine the goals of academic achievement in different dimensions (mastery goals, approach - performance goals, avoidance - performance goals). Its response spectrum was the 5-point Likert type. In the study of Anderman and Patrick (2012), the validity of this questionnaire was confirmed and the reliability of the questionnaire was calculated using Cronbach's alpha method which had acceptable reliability. In addition, in the study of Rastegar et al. (2011), Cronbach's alpha coefficient for mastery goals, approach-performance goals, avoidance-performance goals were reported 0.78, 0.73, 0.76, respectively. In addition, the validity of the questionnaire was calculated by confirmatory factor analysis which reported good fit (0.98), incremental fit (0.97) and root mean square error of approximation error (0.03). It showed the appropriate construct validity of this tool. In the present study, the Cronbach's alpha coefficient for this scale was 0.85.

2- Maslach Burnout Inventory: Pines and Maslach (1980), developed a burnout questionnaire to measure students' academic burnout. This questionnaire measures three domains of academic burnout, namely academic fatigue, academic disinterest, and academic inefficiency. The questionnaire has 15 items that were scored by 5-point Likert rating method from completely disagree to completely agree. However, given that the sub-

scale (Positive Sentence Scale) has been used as a measure of curriculum efficacy, questions on this subscale are scored inversely. In Rostami et al. (2013), research, the validity of the questionnaire was calculated by confirmatory factor analysis method which reported matching fitness indices, incremental fitness index and root mean square error of approximation error. Also, the reliability of this questionnaire was calculated by Cronbach's alpha for the subscales of academic fatigue 0.88, academic disinterest 0.90, and academic inefficiency 0.84, which indicated appropriate reliability of this tool. Also, convergent validity for the subscales of academic fatigue, academic disinterest, and academic inefficiency were calculated as 0.74, 0.68, and 0.50, respectively. the Cronbach's alpha coefficient for this scale was 0.74.

3. Self-regulated Learning Strategies Questionnaire: The questionnaire was developed by Pintrich and De Groot (1990), and consists of 47 items measuring two parts of motivational beliefs and self-regulatory learning strategies (cognitive and meta-cognitive); Scores between 47 and 94 indicate a low level of self-regulatory learning strategies. Scores between 94 and 141 indicate an average use of self-regulatory learning strategies, and scores above 141 indicate a high rate of use of self-regulatory learning strategies. In Musanejad's research (1997), the validity of this questionnaire was reported in good level and its reliability was calculated using Cronbach's alpha coefficient of 0.84 to 0.98, indicating good internal consistency. In the present study, the Cronbach's alpha coefficient for this scale was 0.79. Individuals filled out the consent form and ethical justification for the study and were informed that their information would be kept confidential.

Results

Descriptive findings including mean, standard deviation, lowest and highest scores of the research variables are presented in Table 1 and the correlation matrix of the model variables is presented in Table 2. In addition, the hypothesis of this study was tested by maximum likelihood method through structural equation modeling analysis. Modified model of the present study is presented in standard coefficients mode in Figure 2. Summary results of the non-standardized and standard effect coefficients are reported in Table 3.

Table 1. Descriptive findings related to the research variables

Variables	Mean	SD	Skewness	Kurtosis	Min.	Max.	Quartiles		
							25	50	75
Achievement goals	3.49	0.65	-0.67	-0.08	1.28	5	3	3.55	3.95
Mastery	3.61	0.90	-0.67	-0.26	1	5	3	3.83	4.33
Approach – performance	3.60	0.86	-0.47	-0.27	1	5	3	3.66	4.25
Avoidance – performance	3.26	0.74	0.12	-0.28	1	5	2.66	3.16	3.83
Self-regulation strategies	3.51	0.26	0.24	0.83	2.02	4.45	3.29	3.51	3.74
Cognitive strategies	3.75	0.50	-0.39	0.11	2.23	4.92	3.46	3.76	4.15
Metacognitive strategies	3.32	0.47	0.11	1.14	1.50	4.88	3.08	3.26	3.61
Motivational beliefs	3.44	0.42	0.06	3.94	1.48	5	3.20	3.44	3.68
Academic burnout	2.53	0.52	-0.10	-0.40	1.13	4.13	2.13	2.56	2.93
Fatigue	2.33	0.41	-0.09	-0.33	1.01	4.19	2.18	2.64	2.80
Disinterest	2.70	0.50	-0.11	-0.46	1	4.10	2.30	2.82	2.99
Low efficiency	2.65	0.49	-0.14	-0.47	1.21	4	2.41	2.79	2.85

Table 2. Zero order correlation relationship between variables

Variables		1	2	3	4	5	6	7	8
1	Achievement goals	1							
2	Mastery	0.82**	1						
3	Approach – performance	0.84**	0.50**	1					
4	Avoidance – performance	0.64**	0.34**	0.33**	1				
5	Self-regulation strategies	0.21**	0.20**	0.18**	0.10*	1			
6	Cognitive strategies	0.32**	0.33**	0.28**	0.11*	0.78**	1		
7	Metacognitive strategies	0	-0.03	-0.02	0.08	0.57**	0.35**	1	
8	Motivational beliefs	0.13*	0.13*	0.12*	0.06	0.89**	0.48**	0.32**	1
9	Academic burnout	0.22**	-0.37**	-0.21**	0.11*	-0.21**	-0.35**	0.07	-0.14**

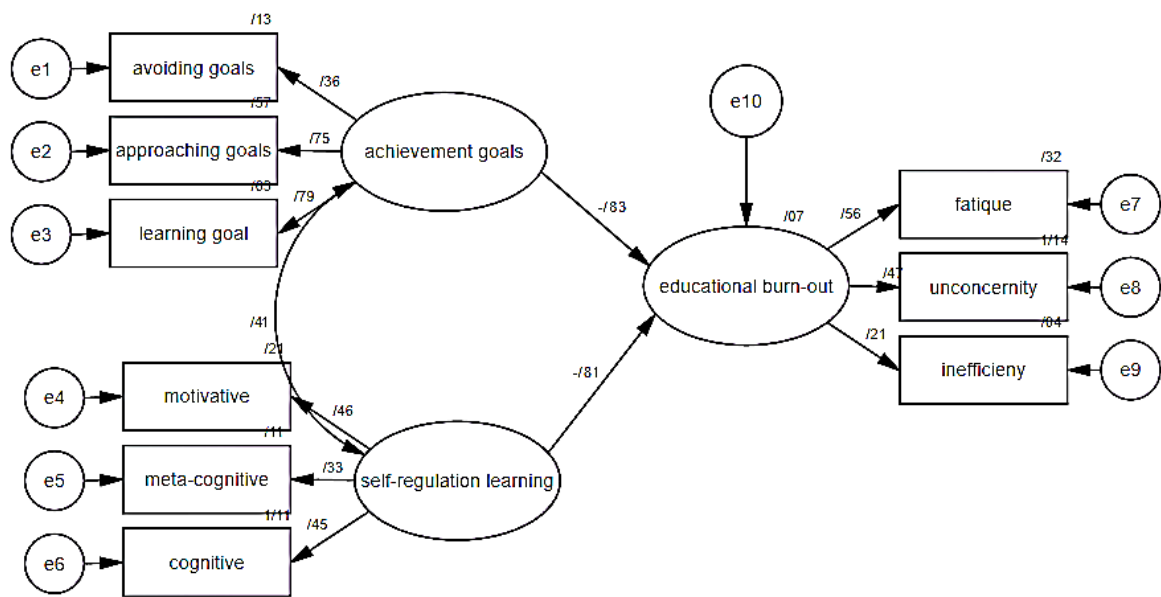


Figure 2. Modified model of the present study in the standard coefficients (beta) mode

Table 3. Non-standardized and standard coefficients of study model

Predictors	Criterion	Non-standardized coefficients	Standard coefficients	Sig.	Status
Achievement goals	Academic burnout	-1.19	-0.83	0.01	Confirmed
Self-regulated learning	Academic burnout	-0.94	-0.81	0.01	Confirmed

As shown in Table 3, the reported standard coefficient of the achievement goals variable was -- 0.83. That is, one unit increase in standard deviation of achievement goals reduces 83% of standard deviation in academic burnout and the reported standard coefficient of self-regulated learning variable on academic burnout is -0.81. That is, one unit increase in standard deviation of self-regulated learning reduces 81% of standard deviation of academic burnout;

Finally, the fit indices of the conceptual model are presented in Table 4. As can be seen in Table 4, the reported fitting indices of the conceptual model are at the optimal level. According to the findings of this study, the structural equation modeling analysis confirmed the good fit of the theoretical model with the data; as a re-

sult, the good fit of the final model with the data was obtained. Therefore, it can be stated that, self-regulated learning variables and achievement goals have a significant relationship with the academic burnout variable.

Discussion

According to the results, there was a negative and significant relationship between the achievement goals and self-regulated learning with the academic burnout, and the predictor variables had a significant effect on the criterion variable. This finding was consistent with earlier studies (Pekrun, Elliot, & Maier, 2006; Tikkanen et al., 2017). Academic burnout in educational situations is characterized by features such as fatigue arising from study requirements, the development of a pessimistic and insensitive attitude toward lesson materials, and a sense of poor personal development in the classroom (Parker & Salmela-Aro, 2011). Academic burnout and its consequences, in fact, are caused by chronic stress syndrome and excessive stressors at work, leading to a person's involvement in feelings of extreme anxiety and lowered defensive and immune strength in the student body.

The descriptive findings revealed that the goal of further improvement of Payame Noor University students was performance-avoidance goals and that selection of performance-avoidance goals was responsible for the adverse effects of anxiety and academic burnout. Performance-avoidance goals are associated with the inefficiency of learning strategies and negative emotions (Diseth & Kobbeltvedt, 2010; Liem et al., 2008; Linnenbrink-Garcia et al., 2008). But this is the case for performance goals — a tendency to be a little confused and possibly due to the dual nature of these goals — on the one hand tend to approach and on the other hand involve social comparison (Elliott & Muller, 2003; Elliot & Murayama, 2008; and Eliot, 2005). Thus, although performance-orientation goals drive students to succeed, they do not appear to be as effective as mastery-orientation goals in facilitating student learning (Elliott & Moller, 2003; Harackiewicz et al., 2002). The results of the present study also support this point. Thus, performance-avoidance goals motivate avoidance of failure, comparing oneself with others and trying to be better than others, increasing situational anxiety, resulting in poor performance and increasing the probability of academic burnout. On the other hand, mastery-oriented goals are associated with positive outcomes including metacognitive self-regulation, pleasant emotions, and intrinsic motivation for students; therefore, students who have mastery goals exhibit a low level of burnout.

Based on the findings, it can be concluded that the achievement goal of more than 50% of students of Payam Noor University is avoidance- performance goal and this causes them to feel fatigue, inefficiency and disinterest. In addition, given the findings of the present study, it can be concluded that the self-regulated learning strategy of half of Payame Noor University students is based on motivational beliefs (such as getting a pass mark), and this has caused to the extent that cognitive and metacognitive strategies for self-regulation are less used by these students, and this can have adverse effects such as academic burnout. Because self-regulation of learning, such as choosing goals for good development, can reduce the risk of burnout by increasing happiness, self-regulated students are able to prioritize their homework over some fun activities. Indicators of self-regulated learning include purposefulness, time management, meaningful and directed practice, proper application of cognitive and meta-cognitive strategies, and a sense of self-efficacy. For this reason, learners who are active in self-regulation learning use cognitive learning strategies such as regular repetition, elaboration, and organization. Self-regulated learners are superior to others in planning and organizing learning, time management and time planning, targeting, self-control, and self-evaluation. However, students who are poor in self-regulation cannot delay their enjoyment of homework assignments; therefore, they do not achieve

the desired academic results and become depressed (Steel, 2007). In this way, self-regulation strategies act as protection against stressors. In practice, these strategies lead to improved planning for learning and to reduce the feeling of boredom and fatigue caused by homework (Salkovsky & Romi, 2015). Therefore, the application of these strategies reduces the likelihood of stress and burnout.

Declaration of Conflicting Interests

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