

Full Length Research Paper

Analysis of academic self-efficacy, self-esteem and coping with stress skills predictive power on academic procrastination

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The goal of this research is to analyze the predictive power level of academic self-efficacy, self-esteem and coping with stress on academic procrastination behavior. Relational screening model is used in the research whose research group is made of 374 students in Kırıkkale University, Education Faculty in Turkey. Students in the research group are from different grades and demographic features. "Aitken Academic Procrastination Scale", "Academic Self-Efficacy Scale", "Rosenberg Self-Esteem Scale" and "Coping with Stress Scale" are used in the research. Path analysis modeling is used in the research in order to test the hypothesis models. Results indicate that, it is determined that the academic procrastination behavior of students is explained by academic self-efficacy, self-esteem and coping with stress strategies in scope of a model. It is seen that active planning, one of the coping with stress strategies explains academic procrastination on a negative and meaningful level; biochemical avoidance strategies explain on a positive and meaningful level. Research results are discussed in the light of related literature.

Key Words: Academic procrastination, academic self-efficacy, self-esteem, coping with.

INTRODUCTION

Students face with various problems in education/ academic field, just like the problems in personal-social field during education life. One of the most common problems in this scope is academic procrastination behavior. Rothblum et al. (1986), this behavior is defined as procrastination of academic duties such as preparing for exams or doing homework constantly or sometimes. This definition is one of the first definitions about academic

procrastination. It is seen that definitions about academic procrastination are related to students' intrinsic or extrinsic behaviors and results of them. Senécal et al. (1995) define academic procrastination as; staying out of academic duties until stress level increases to high level as these duties aren't completed in time. According to Ferrari et al. (1995), academic procrastination behavior is the behavior of avoiding academic duties which result to

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student academic failure. It is seen that all of the definitions about academic procrastination emphasize delaying academic duties and related negative results. On the other hand, students can have some short-term advantages by academic procrastination (Tice and Baumeister, 1997). In other words, they avoid academic concerns such as studying and preparing for exams for a short time. In a research by Kandemir (2012), it was found that there is a positive relation between students' fear of failure, exam anxiety and academic procrastination. In this context, it can be said that, students make academic procrastination a method of avoiding anxiety they relax for a short time.

It is known that academic procrastination behavior is the most common type of procrastination (Balkis, 2006; Clark and Hill, 1994). According to Hill et al. (1978), approximately 50% of university students; according to Solomon and Rothblum (1984), approximately 46%, according to Balkis and Duru (2009) approximately 23 % students make academic procrastination. Literature shows that this behavior is common. There are significant studies which indicate that students that make academic procrastination have negative results of this behavior (Burka and Yuen, 1983; Kandemir, 2010). Academic procrastination behavior has negative results such as having academic failure (Burka and Yuen, 1983; Ferrari et al. 1995; Knaus, 1998), falling behind in the class (Rothblum et al., 1986), not attending the school and dropping out (Knaus, 1998). When all of the results are taken into consideration, it is possible to say that academic procrastination is common in university life and cause some negative results. Other studies, have determined that academic procrastination is related to academic self-efficacy (Eerde, 2003; Farran, 2004; Kandemir, 2010; Klassen et al., 2007). Academic self-efficacy is defined as the belief of students that they can be successful in academic duties (Bandura, 1997). According to Sirois (2004), academic self-efficacy is the perception of a student about his/her abilities and aspects that direct him/her to the way of success. Farran (2004) says that students' belief in their abilities and talents will contribute to prevent academic procrastination behavior.

On the other hand, researches also show that academic procrastination is related to individuality (Eerde, 2003; Ferrari and Patel, 2004; Kandemir, 2012; Valkyrie, 2006). Self-esteem, which is defined as perceiving oneself as talented, important, successful and valuable, is a variable that has a negative relation to academic procrastination behavior. In a meta-analysis study by Eerde (2003), it was found that when students give more importance to themselves, academic procrastination behavior decreases. In a study by Uzun-Özer (2010) it was determined that there was a negative relation between self-worth and academic procrastination. It is emphasized in the literature that the abilities of coping with stress and discordant/avoidant coping with skills (Essau et al., 2008; Solomon and Rothblum, 1984). According to Lazarus and

Folkman (1984), coping with skills is a person's ever-changing cognitive and behavioral attempts to overcome specific intrinsic and extrinsic demands that are too much for him/ her. According to Tice and Baumeister (1997) making procrastination is escaping from a stress resource for a specific time period. Burns, Dittmann, Nguyen and Mitchelson (2000) state that students who want to cope with academic duties that include stress factor make procrastination by using avoidant coping strategy. In a research by Cao (2012), it was found to be a positive relation between avoiding studying behavior and academic procrastination at .52 level. Accordingly, co-existing with the increase of avoidance behavior is also increasing procrastination. In the same research, it was found that avoidant behavior predicts 16% of academic procrastination behavior. When the above mentioned explanation is taken into consideration, we see two basic problems. The first of these is that academic procrastination is a common problem among university students and the second is that academic procrastination behaviors result to some negative result such as failure, anxiety, failing the course, not going to school. In order to help cope with these problems, analyzing predictive level of the abilities of academic self-efficacy, self-esteem and coping with stress on academic procrastination is thought to worth being researched.

METHOD

Research model and research group

Relational screening model is used in this research, in which academic procrastination behavior of students is explained as coping with stress, academic self-efficacy, self-esteem abilities. According to Karasar (2005), relational screening model is a research model which attempts to determine the existence and level of change in and between two or more variables. The research group is made up of students studying at Kırıkkale University, education faculty. A total of 374 students participated in the research, sampling method is used in order to reach these students. In addition, 99 male, 265 female students participated in the process. 124 of participants (33.2%) was in the 1st grade, 56 (15%) in the 2nd grade, 96 (25.7%) in the 3rd grade and 98 (26.2%) in the 4th grade.

Data collection tools

Aitken Academic Procrastination Scale

The scale developed by Aitken (1982) was adapted to Turkish Language by Balkis (2007). The scale has one dimension and consists of a total of 16 items in 5 likert types. 293 students from different departments were assessed on the validity studies of the adaptation of the scale by Balkis (2007). Each item in the scale was examined for its measurement of inclination towards academic procrastination and the item-total correlation was found to range between .33 and .73. The internal consistency coefficient of the scale is Cronbach Alfa (α) = .89. The Pearson correlation coefficient was found to be significant at $r = .87$, $p < .001$ level in the analysis conducted for test-retest reliability. A factor analysis was conducted in order to examine the structural validity of the scale and it was

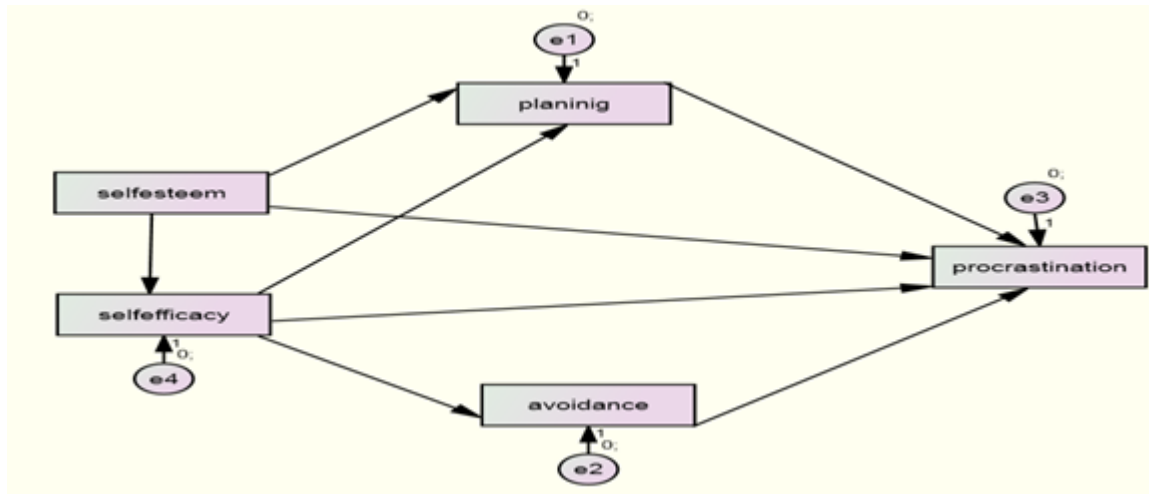


Figure 1. Hypothesis model that will be tested in the model.

revealed that the scale had a one factor structure. The variance explained by the one factor is 38% and the eigenvalue of this factor is 6.14.

Academic Self-Efficacy Scale

This scale, developed by Kandemir and Özbay (2012), aims to determine the academic self-efficacy levels of students. Reliability and validity studies of the scale included 468 students (243 female and 225 male) with different grades and different demographical features. Primarily, factor analysis was applied on data obtained from the research group. Confirmatory Factor Analysis was conducted in order to evaluate the four-factor structure of the Academic Self-Efficacy Scale (ASES), which was formed after Exploratory Factor Analysis (EFA). CFA results evaluated adaptive values of ASES, which were: $X^2 = 513.04$ ($sd=148$, $p<.001$), $(X^2/sd) = 3.47$, $GFI=.90$, $RMSEA=.073$, $RMR=.04$, standardized $RMR=.056$, $CFI=.97$ and $AGFI=.87$. In addition to CFA, Cronbach alpha internal consistency coefficients, calculated based on item analyses, were examined in order to evaluate the reliability of the scores obtained from ASES. The coefficients were found to be .90 for the first factor, .78 for the second factor, .77 for the third factor, .69 for the fourth factor and .91 for total scale. Item-total correlations for both dimensions ranged between .36 and .67

Rosenberg Self-Esteem Scale

The Self-Esteem Scale originally was developed by Rosenberg (1965) for the purpose of measuring global self-esteem. It taps the extent to which a person is generally satisfied with his/her life, considers him/herself worthy, holds a positive attitude toward him/herself, or, alternatively, feels useless, desires more respect. The instrument contains five positively scored and five negatively scored items. Reverse items are 3, 5, 8, 9, 10. For the purpose of this study, the RSES were summed. Rosenberg studied the scale's reliability and validity on two small college samples and had two week test-retest reliability coefficients of $r = .85$ and $.88$. Rosenberg's Self Esteem Scale was adapted to Turkish adolescents by Çuhadaroğlu (1986). Çuhadaroğlu (1986) found that the correlation coefficient between psychiatric interview scores and scores of RSES was .71.

Coping With Stress Scale

The original structure of this scale is the scale of coping with stress, methods developed by Özbay (1993) for foreign students in American universities. The test was adapted to Turkish by Özbay and Şahin (1997). The test was arranged by five likert type grading. Six factors determined with factor analysis were named as active planning, searching for external assistance, seeking refuge in religion, avoidance-abstraction (emotional-operational), avoidance-abstraction (bio-chemical) and acceptance-cognitive restructuring. The Cronbach Alfa internal consistency method was used to determine the reliability of the test. The test's General reliability coefficient was found to be .81.

FINDINGS

In this section, findings about the model test that explains students' academic procrastination behavior are presented. Path analysis is done in the research in order to determine if the model is meaningful in direct and indirect relations. (Figure 1)

For the model to be tested, it is predicted that students' self-esteem directly predicts academic procrastination and indirectly predicts academic procrastination through other variables; academic self-efficacy directly predicts academic procrastination and indirectly predicts academic procrastination through coping skills (planning and avoidance); coping with stress skills (planning and avoidance) directly predict academic procrastination. In this context, before doing the model test, correlation coefficients among variables are analyzed. (Table1)

At the end of correlation analysis, it is seen that there are meaningful relations between academic procrastination and related variables. It is found that academic procrastination is related to self-esteem at $r=-.15$, $p<01$ level, academic self-efficacy $r=-.15$, $p<01$, active planning coping with stress skills $r=-.19$, $p<01$ and bio-chemical avoidant coping with stress at $r=.17$, $p<01$ level. At the

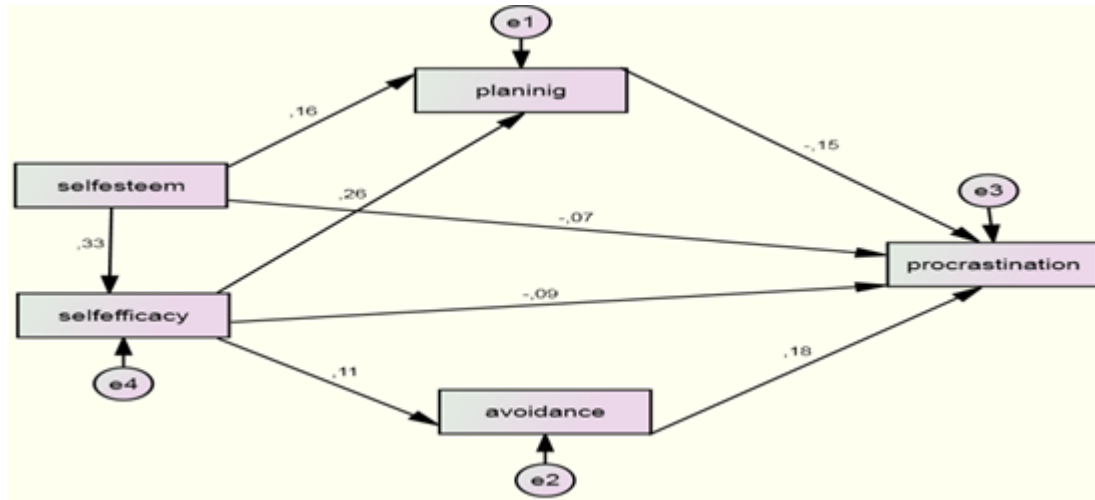


Figure 2. Findings related to Hypothesis Model.

Table 1. Correlation Values among Variables.

Variables	(1)	(2)	(3)	(4)	(5)
Academic Procrastination (1)	1				
Academic Self-Efficacy (2)	-.15**	1			
Self-Esteem (3)	-.15**	.34**	1		
Coping with stress / Active Planning (4)	-.19**	.32**	.25**	1	
Coping with stress / Biochemical Avoidance (5)	.17**	.12*	-.04	.04	1
Total	374	374	374	374	374

* $p < .05$, ** $p < .01$.

end of the research, it is seen that, relation coefficients between self-esteem and biochemical avoidance coping with stress skills and coping with stress skills aren't meaningful. Therefore, correlation sufficiency couldn't be ensured for the model. This is why path relations among these variables in the hypothesis model are removed and model test is applied. Analysis results of model test are given below. (Figure 2)

When the coefficient of concordance of the tested model is analyzed, it is seen that CFI, .97; IFI, .95; NFI, .96; TLI, .96 and RFI, .89. Chi square, 2.01; RMSEA values are .04. It is also determined that adaptive values such as CFI, IFI, NFI, TLI are over .90, Chi square is below 5 and RMSEA value is below .07, all these show that the model is a good one (Şimşek, 2007). This is why, there was no need to analyze improving indexes. The direct effect scores in the model test that explain students' academic procrastination behavior are as such; Self-esteem affects and explains academic procrastination at -.07 level, academic self-efficacy .33, active planning coping with stress skills .16 level; academic self-efficacy affect and predict academic procrastination at -.09 level, active planning and coping with stress

skills at.26 level, biochemical avoidance coping with stress skills at.11 level; active planning affect and explain academic procrastination at -.15 level and biochemical avoidance coping with stress skill affect and explain academic procrastination at .18 level. According to the research results, self-esteem, academic self-efficacy belief and active planning coping with skills are negatively explaining variables for academic procrastination while biochemical coping with skills is a positively explaining variable for academic procrastination.

DISCUSSION

In this research, which explains the academic procrastination behavior of university students, it is seen that self-esteem, academic self-efficacy, active planning and biochemical avoidance coping skills explain academic procrastination together. It is determined that self-esteem predicts academic procrastination negatively and at a meaningful level. It is seen that in the related literature, there are more studies that analyze the relation between self-esteem and academic procrastination (Balkis and

Duru, 2010; Beswick, Rothblum and Mann, 1988; Kandemir, 2012; Lekick, 2006; Solomon and Rothblum, 1984) but there is a limited number of researches in which regression models are used (Kandemir, 2010; Aydođan and Özbay, 2011). It can be said that these researches support the findings of this research. Findings imply that when students' faith in success increases, academic procrastination behavior decreases. In a research by Balkis and Duru (2010) it is found that there is a negative and meaningful relation between self-esteem and academic procrastination. Beheshtifar and Azadi (2013) found that there is a meaningful and negative relation between students' organization based self-esteem and academic procrastination. Ferrari (1991) compared individuals who have strong academic procrastination tendencies with individuals who have weak academic procrastination tendencies. According to the research results, individuals who have strong academic procrastination tendency have the tendency not to perceive or distort the experiences that may affect self-esteem in order to protect it. According to this, when students delay academic duties such as preparing for exam or doing homework, they may have some negative results which may decrease self-esteem. This is why; it is possible to decrease academic procrastination behavior in order to prevent negative results and decrease of self-esteem.

It is found in this research that academic self-efficacy explain academic procrastination behavior at -.11 level in total. Namely, when a university student believes that he/she has the ability to cope with academic problems, this decreases academic procrastination behavior. When the related literature is analyzed, it is seen that there are researches showing that academic self-efficacy belief negatively affects academic procrastination (Akbay and Gizir, 2010; Klassen et al., 2007; Özer and Altun, 2011). In the meta-analysis study of Eerde (2003) about academic procrastination, it is determined that self-efficacy belief affects procrastination behavior negatively. In the research by Klassen et al. (2007), it is found that there is a negative relation between the increase in self-efficacy belief and academic procrastination. In the research by Chow (2011) on 288 university students, regression model is used and it is found that students' self-efficacy belief negatively explains academic procrastination. According to Bandura (1986), who is one of the first people who analyzed self-efficacy concept hypothetically, when an individual's self-efficacy level increases and experiences sufficient motivation, he/she decreases procrastination behavior and increase determination in order to complete duties. Thus, students may have belief in academic planning skills, studying lesson methods, academic efforts in order to cope with academic problems. Students, whose belief in these is high, may attempt to cope with academic problems and duties instead of avoiding them.

It is determined in the research that coping with stress

skills is one of the variables that explain academic procrastination. It is seen that active planning, which is one of the coping with stress skills, affect academic procrastination negatively and at meaningful level. According to this, students who use planning skills in order to cope with stress factors do less academic procrastination. There are limited number of studies that support this finding in the related literature. According to Lazarus and Folkman (1984) active planning is one of the cognitive based coping skills. According to Essau et al., (2008), cognitive based coping skill is a variable that negatively explains procrastination behaviors. Milgram et al. (1995) state that the reason of academic procrastination behavior is low time planning skill. According to Lazarus and Folkman (1984), individuals who have cognitive based coping skills believe that they can control situations that create stress factor and they can overcome such situations. This is why, in scope of the cognitive based coping skills, in order to overcome stress factor, a plan and program can be used. This suggests that when academic duties and responsibilities create a stressful situation, students can overcome such situations by using the abilities of planning and organizing duties. Thus, instead of avoiding academic duties, they can attempt to complete academic duties by controlling the process. According to Lazarus and Folkman (1984), active planning is one of the cognitive based coping skills. According to Essau et al. (2008), cognitive based coping skill is a variable that negatively explains procrastination behaviors.

At the end of the research, it is seen that biochemical avoidance coping with skills affect academic procrastination positively and at a meaningful level. According to this, students who use avoidance skills in order to overcome stress factors make more academic procrastination. There are studies that support this finding in the related literature (Burns, Dittmann, Nguyen and Mitchelson, 2000; Essau et al., 2008; Solomon and Rothblum, 1984). In a study by Burns, Dittmann, Nguyen and Mitchelson (2000), they found that students who want to overcome academic duties that cause stress factor make procrastination by using avoidance coping with strategy. According to Lazarus and Folkman (1984), biochemical coping with strategy is one of the emotion based coping skills. According to Essau et al. (2008), emotion based coping skill is a variable that negatively explains procrastination behaviors. According to Tice and Baumeister (1997) making procrastination means avoiding a stress resource for some time. According to Sirois and Pychyl (2002), procrastination is about high stress and avoidance strategies. In a research by Cao (2012), an attempt was made to explain academic procrastination behavior with hierarchical regression model. At the end of the research, he determined that avoidance behavior predicts active procrastination .21; academic procrastination behavior at .16 level. In this context, it is possible to say that academic duty and responsibilities create stress and

students use avoidance coping with skills in order to avoid this stress. In other words, in biochemical coping with skills, individuals prefer suspending anxiety factors in order to avoid a situation that threatens ego or to decrease anxiety. Students may attend social activities with friends, surf in the internet, play game or do shopping in order to avoid the pressure of academic duties.

On the other hand, when correlation coefficients between self-esteem and academic self-efficacy and academic procrastination, it is seen that there is a meaningful and negative relation but their power decreases in the model. When the model is analyzed, it is seen that self-esteem and academic self-efficacy belief have the duty to explain other related variables. This is why, it is possible to say that total explaining power of self-esteem and academic self-efficacy belief is shared and their power to affect academic procrastination behaviors decrease. In addition to this, it can be said that there are also some other variables in the model that are more powerful than self-esteem and academic self-efficacy belief in explaining academic procrastination and these two variables' explaining power decrease because of that.

This study has some limitations. In order to see the real effects of independent variables on academic procrastination, experimental and longitudinal researches are necessary. This is why, one should be careful while analyzing results. On the other hand, in order to understand the reasons of students' academic procrastination behaviors better, some qualitative studies, such as interviews, can be carried out. This study is conducted on university students. For future studies, academic procrastination behaviors of students in different education levels can be analyzed through comparison.

Conflict of Interests

The author(s) have not declared any conflict of interests.

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