

Gender Differences in the Relationship between Academic Procrastination, Satisfaction with Academic Life and Academic Performance

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Abstract

Introduction. Procrastination has become one of the most researched topics due its adverse effects on the both general and student population in social sciences. The general tendency toward delaying academic tasks has been conceptualized as academic procrastination in academic setting. It is a prevalent issue among students and a numerous students have to deal with it at almost all stage of education, because of its negative consequences such as academic failure and poorer well-being. The current study examined the gender differences in relation to academic procrastination, academic performance and academic life satisfaction.

Method. The participants for this study were 441 undergraduate students (49.4 % of female and 50.6 % of male). Aitken procrastination inventory, Academic satisfaction scale and Demographic information form were used to gather data.

Results. The results noticed that academic procrastination was negatively related with academic performance and academic life satisfaction. Male students had higher level academic procrastination and lower level of academic performance and academic life satisfaction. The Manova and Hierarchical Regression analyses displayed that gender moderated the relationship between academic procrastination, academic performance and academic life satisfaction.

Discussion and Conclusion. The current study suggests that male students are more vulnerable to destructive effect of academic procrastination in terms of academic performance and academic life satisfaction

Keywords: Academic procrastination, satisfaction with life, academic performance, gender

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Resumen

Introducción. La dilación se ha convertido en uno de los temas más investigados debido a sus efectos adversos en la población general y estudiantil en ciencias sociales. La tendencia general hacia el retraso de las tareas académicas se ha conceptualizado como el retraso de tareas en el contexto académico. Es un tema frecuente entre los estudiantes y un gran número de estudiantes tienen que lidiar con él en casi todas las etapas de la educación, debido a sus consecuencias negativas como el fracaso académico y un bienestar más pobre. El presente estudio examinó las diferencias de género en relación con la dilación académica, el rendimiento académico y la satisfacción de la vida académica.

Método. Los participantes en este estudio fueron 441 estudiantes de pregrado (49,4% de las mujeres y 50,6% de los hombres). Se utilizó el inventario Aitken de procrastinación, la escala de satisfacción académica y un formulario de información demográfica se utilizaron para recopilar datos.

Resultados. Los resultados observaron que la dilación académica se relacionó negativamente con el rendimiento académico y la satisfacción de la vida académica. Los estudiantes varones tuvieron una mayor dilación académica y menor nivel de rendimiento académico y satisfacción en la vida académica. Los análisis Manova y Regresión Jerárquica mostraron que el género moderaba la relación entre la dilación académica, el rendimiento académico y la satisfacción de la vida académica.

Discusión y conclusión. El estudio actual sugiere que los estudiantes varones son más vulnerables al efecto destructivo de la dilación académica en términos de rendimiento académico y satisfacción de la vida académica

Palabras clave: Procrastinación académica, satisfacción con la vida, rendimiento académico, género.

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Introduction

Procrastination has become one of the most researched topics due its adverse effects on the both general and student population in social sciences. The general tendency toward delaying academic tasks has been conceptualized as academic procrastination in academic setting. Academic procrastination defined by Rothblum, Solomon and Murakami (1986), as a tendency to delay academic tasks to point of experiencing anxiety associated with it. It is a prevalent issue among students and a numerous students have to deal with it at almost all stage of education, because of its negative consequences such as academic failure and poorer well-being. Previous studies estimated that nearly 40-52 of 100 students exhibited dilatory behavior in academic settings (Solomon & Rothblum, 1984; Özer, Demir, & Ferrari, 2009). Considerable number of studies have revealed that academic procrastination is adversely associated with academic performance (e.g. Balkis, 2013; Kim & Seo, 2015; Steel, 2007), course withdrawal (Rothblum et al. 1986), academic life satisfaction (Balkis, 2013; Chow, 2011), satisfaction with studies (Grunschel, Patrzek, & Fries, 2013), and demographic variables such as gender and age (Balkis & Duru, 2009; Prohaska, Morrill, Atilas & Perez, 2000). For example, in their meta-analyses study, Kim and Seo (2015) and Steel (2007) found that procrastination is negatively correlated with academic performance. Balkis (2013) found that procrastinating students reported low academic satisfaction. Balkis and Duru (2009) reported that older students are less likely to procrastination. Male students are greater risk for procrastination (Balkis & Duru, 2009; Prohaska, Morrill, Atilas & Perez, 2000; Steel & Ferrari, 2013). Although the adverse effects of academic procrastination on students' performance and satisfaction with academic life, and gender differences in academic procrastination are well established in the literature, it is not clear to what extent male and female students are influenced by the negative consequences of dilatory behavior. By examining gender differences, we may contribute a better understanding of adverse effects of academic procrastination on academic performance and satisfaction with academic life for both female and male students.

Academic procrastination and academic performance

It is not surprising that procrastinating students have poor academic performance because they are more likely to delay completing assignments and preparing for exams last minute (Balkis, Duru, & Buluş, 2013; Ferrari, Harriott, Evans, Lecik-Michna, & Wenger, 1997; Lay & Schouwenburg, 1993). Recent studies have noted that academic performance were

adversely affected by academic procrastination. These studies reported that procrastinating students had poor academic performance (Balkis, 2013; Duru & Balkis, 2014; Kim & Seo, 2015; Richardson, Abraham, & Bond, 2012; Rotenstein, Davis, & Tatum, 2009; Steel, 2007). Three meta-analyses study were conducted to test relationship between procrastination and academic performance. For example, Steel (2007) found that academic performance was negatively and moderately related with procrastination. Similarly, the findings of Richardson et al. (2012) showed that procrastination was negatively associated with academic performance. In a recent meta-analyses study was conducted by Kim and Seo (2015) confirmed that procrastination is negatively associated with academic performance. Although a growing body of research found that academic procrastination is negatively correlated with academic performance, Kim and Seo (2015) stated that relationship between procrastination and academic performance is influenced by nature of performance indicator, the choices of procrastination measures, and demographic profile of study sample. They emphasized that (a) self-reported procrastination was strongly associated with academic performance more than externally assessed procrastination, (b) procrastination is strongly related to externally assessed performance more than self-report performance, (c) procrastination is strongly correlated with academic performance among younger people more than older people, and procrastination is negatively related to performance in western and individualistic society (Kim & Seo, 2015). Considering the findings of above studies, it makes sense to assume that procrastination adversely impact students' academic performance and various variables play a role in this relationship.

Academic procrastination and satisfaction with academic life

Academic procrastination also often results unpleasant consequences. Initially, procrastination functions as a strategy of emotional regulation to cope with unpleasant emotions are triggered by tasks or assignments in short time, but this decision makes it hard to accomplish a task deadline draw near (Baumeister & Heatherton 1996), and results unpleasant emotions such as being upset, stress, anxiety, guilty, regret, etc. (Ferrari & Beck, 1998; Kennedy & Tuckman, 2013; Milgram, Batori, & Mowrer, 1993; Rothblum et al., 1986; Tice & Baumeister, 1997). Level of academic procrastination experienced could influence students' academic life satisfaction. Kumar and Dileep (2006) defined academic life satisfaction "as the expected satisfaction in one's life in school by the fulfillment of his/her important academic goals or aspirations" (p. 1). The studies regarding academic procrastination and satisfaction

with academic life notice that academic procrastination has great impact upon students' satisfaction with academic life (Balkis, 2013; Balkis & Duru, 2015; Chow, 2011; Grunschel, Patrzek, & Fries, 2013). For instance, Balkis (2013) found that procrastinating students reported lower academic satisfaction. Chow (2011) stated that students with high level procrastination expressed more dissatisfaction with their school life. Grunschel et al. (2013) found that procrastination was related with low satisfaction with studies. These evidences suggested that academic procrastination leads to an academic life rife with stress, anxiety, guilty, and regrets that adversely impacting students' academic life satisfaction.

Gender, Academic Procrastination, Academic Performance, and Satisfaction with Academic life

Gender differences in frequency of procrastination has been one of the most discussed issue due to inconsistent research findings. Some studies have failed to find gender differences in procrastination (e.g. Hess, Sherman, & Goodman, 2000; Şirin, 2011). Some authors have argued that females are greater risk for procrastination (e.g. Doyle & Paludi, 1998, Washington, 2004). The other group researcher reported that males are greater risk for procrastination (e.g. Özer et al. 2009; Steel, 2007; Steel & Ferrari, 2013). For instance, in a recent study with large sample conducted by Steel and Ferrari (2013) confirmed that males more likely to procrastinate than females.

Although previous studies have revealed inconsistent findings about gender differences in procrastination, there is evidence regarding gender differences in academic achievement among undergraduate students (Chapel et al. 2005; Dayıoğlu & Türük-Aşık, 2007; Khwaileh & Zaza, 2011; Voyer & Voyer, 2014). For instance, in a recent meta-analyses study, Voyer and Voyer (2014) found female students advantage in school marks for all course content areas. Chapell et al. (2005) found that female college students reported higher cumulative GPAs than male students.

Beyond gender differences in academic procrastination and academic performance, a considerable body of empirical research emphasizes the gender differences in academic life satisfaction. Previous studies showed that female students tend to express satisfaction with their academic life higher than male students (Kim & Sax, 2009; Maceli, Fogliasso, & Baack, 2011; Tessema, Ready, & Malone, 2012). For instance, Tessema et al. (2012) found that female students tend to rate their academic satisfaction higher than male students. In the lights of existing finding, it can be concluded that male students tend to procrastinate academic

tasks more and female students have higher level of academic performance and satisfaction with academic life.

On the other hand, it is not clear that whether or not the relationships between academic procrastination, academic performance, and satisfaction with academic life might differ according to gender. Put it differently, the associations between academic procrastination, academic performance, and satisfaction with academic life may vary for male and female students. Consequently, new studies are needed to clarify the gender differences in the associations between academic procrastination, academic performance, and satisfaction with academic life.

The present study

Although relationships between gender, academic procrastination, academic performance and satisfaction with academic life are well-established in the procrastination literature, the role of gender in these relations is not clear. Thus, the current study aimed to investigate the gender differences in relation to academic procrastination, academic performance and academic satisfaction. In accordance with the literature, the following *hypotheses* have been generated:

1. Academic procrastination and gender interacts to predict academic performance and satisfaction with academic life. The negative relationships between academic procrastination, academic performance, and academic life satisfaction are stronger for male students than for females
2. Satisfaction with academic life and gender interacts to predict academic procrastination.

Method

Participants

The participants for this study were 441 undergraduate students (49.4 % of female and 50.6 % of male). They ranged in age from 18 to 26 years ($M = 21.49$, $SD = 1.51$). Participants included 16.1 % of sophomores, 55.3 % of juniors, and 28.6 % of seniors. Students participating in this study are from the different departments of Education Faculty such as elementary

education, early childhood education, counseling and guidance, science education, social studies education, and music education.

Instruments

Demographic Information Form. Demographic information form was used to gather participants' demographic information such as age, gender, and major field.

Academic Procrastination (API). Aitken Procrastination Inventory was used to determine students' level of academic procrastination (Aitken, 1982). API includes a 19- item self-report using a 1 (false) to 5 (true) scale for responses. A sample item is: 'I delay starting things until the last minute'. Turkish version of API includes 16 items. Balkis (2006) found that the internal consistency coefficient for Turkish version of API was $\alpha = .89$ and four weeks test-retest reliability correlation for Turkish version API was .87. The internal consistency coefficient for Turkish version of API was $\alpha = .89$ for the current sample.

Academic Life Satisfaction (ASS). Academic Satisfaction Scale was used to determine students' satisfaction with academic life. The ASS includes a 5- item self-report using a 1 (Strongly Disagree) to 5 (Strongly Agree) scale for responses (Schmitt, Oswald, Friede, Imus, & Merritt, 2008). A sample item is: "I'm satisfied with the extent to which attending this school will have a positive effect on my future career". The psychometric characteristics of ASS was examined by Balkis (2013) for the Turkish college students. The internal consistency coefficient for the ASS was $\alpha = .86$ for college students (Balkis, 2013). The internal consistency coefficient for the ASS was $\alpha = .84$ for current sample

Academic performance. Academic performance referred the GPA of students which they had attained for the previous semester before the questionnaire was filled out.

Procedure

Permissions for this study were asked from the related departments in the University. A paper-pencil survey which included data collection instruments described above and demographic variables were distributed to the students who accepted to participate in the study. Completed questionnaires were returned to the researchers.

Data analyses

Data was analysis by SPSS 22. Coefficient of Pearson Correlation was utilized to set the relationships between variables. The gender differences in the associations between to academic procrastination, academic performance and satisfaction with academic life was tested via Manova and hierarchic regression analyses.

Results

Preliminary analyses

In order to examine whether academic procrastination was associated with academic performance and satisfaction with academic life or not, initially the association between academic procrastination, academic performance and satisfaction with academic life was examined via utilizing a bivariate correlational analysis. Results noticed that academic procrastination was negatively related to academic performance and academic satisfaction. The results were presented in Table 1.

Table 1. *Descriptive Statistics and Correlations (N=441)*

	M	Sd	1	2	3
For total Sample (N = 441)					
1-Academic procrastination	36.23	10.20	(.89)	-.315**	-.320**
2-Academic performance	2.80	.36		-	.306**
3-Satisfaction with academic life	18.17	3.48			(.86)
For Male (N = 223)					
1-Academic procrastination	39.71	10.03	-	-.250**	-.274**
2-Academic performance	2.62	.36		-	.226**
3- Satisfaction with academic life	16.17	3.90			-
For Female (N =218)					
1-Academic procrastination	32.66	9.11	-	-.063	-.106
2-Academic performance	2.99	.26		-	.075
3- Satisfaction with academic life	19.57	2.29			-

Note: Reliability coefficients are reported on the diagonal. ***p* < .001

Gender differences

Initially, academic procrastination scores were divided into two groups based on the median of academic procrastination in order to determine level of academic procrastination as low and high. Results from Manova analyses indicated that there was significant multivariate effect for *gender* [$F(2,416) = 78.184, p < .001$; Pillai's Trace = .273, partial $\eta^2 = .273$] for levels of academic procrastination [$F(2,416) = 10.663, p < .001$; Pillai's Trace = .049, partial $\eta^2 = .049$], and for *interaction effect* [$F(2,416) = 5.524, p < .01$; Pillai's Trace = .026, partial $\eta^2 = .026$]. Univariate analyses showed significant main effects for *gender* in respect of academic life satisfaction [$F(1,417) = 56.823, p < .001$, partial $\eta^2 = .120$] and academic performance [$F(1,417) = 115.051, p < .001$, partial $\eta^2 = .216$]. Secondly, univariate analyses showed significant main effects for *levels of academic procrastination* in respect of academic life satisfaction [$F(1,417) = 16.238, p < .001$, partial $\eta^2 = .037$] and academic performance [$F(1,417) = 7.151, p < .01$, partial $\eta^2 = .017$]. Finally, univariate analyses noticed significant interaction effect for *gender x levels of academic procrastination* in respect of satisfaction with academic life [$F(1,417) = 5.518, p < .05$, partial $\eta^2 = .013$] and academic performance [$F(1,417) = 6.702, p < .01$, partial $\eta^2 = .016$]. Sidak post hoc tests showed that female college students had higher levels of academic life satisfaction ($p < .001$) and academic performance ($p < .001$) than male counterparts. These results suggested that male students' levels of academic life satisfaction and academic performance differed with respect to their level of academic procrastination. To facilitate the interpretation of these results, this significant interaction effect has been represented in Figure 1 and Figure 2.

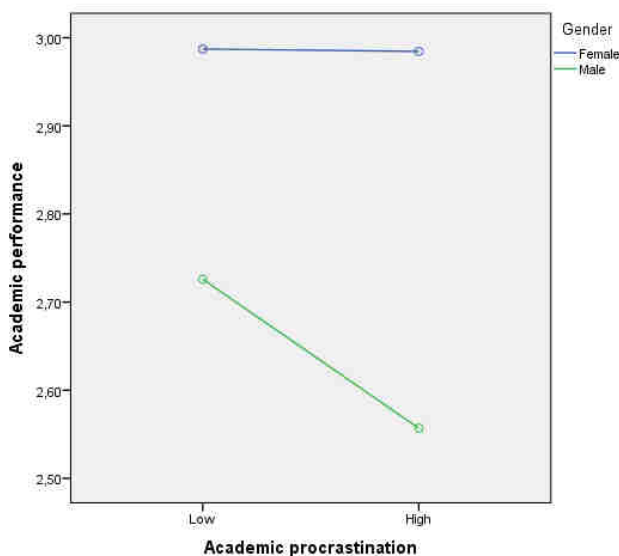


Figure1. Interaction of gender and academic procrastination on academic performance

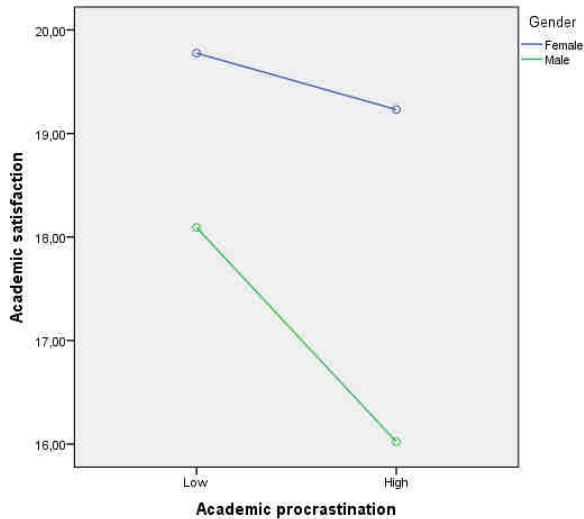


Figure2. Interaction of gender and academic procrastination on academic satisfaction

In order to test the reverse model, academic life satisfaction scores were divided into two groups based on the median of its in order to determine levels of academic life satisfaction as low and high. Univariate analyses noticed significant main effects for gender in respect of academic procrastination [$F(1,392) = 32.553, p < .001, \text{partial } \eta^2 = .077$]. Secondly, univariate analyses showed that significant main effects for levels of academic life satisfaction in respect of academic procrastination [$F(1,392) = 16.928, p < .001, \text{partial } \eta^2 = .041$]. Finally, univariate analyses indicated that there was not significant interaction effect for gender x levels of academic life satisfaction in respect of academic procrastination [$F(1,392) = 1.761, p > .05, \text{partial } \eta^2 = .004$]. These results noticed that levels of academic procrastination did not differ with regard to levels of academic life satisfaction for both gender.

In order to confirm the moderate role of gender in the association between academic procrastination, satisfaction with academic life, and academic performance, hierarchic regression analyses were used. To test interaction effect of gender and academic procrastination, these variables were standardized. Reducing problems associated with multicollinearity between the interaction term and the main effects when testing for moderator effects (Frazier, Tix, & Baron, 2004), z-scores were calculated for academic procrastination, academic per-

formance and academic life satisfaction. Gender was coded as dummy variable (females = 0 and males =1). For three equation, the main effects were entered first, followed by the interaction term. The results were presented in Table 2.

Table 2. *Hierarchical regression analysis for moderating effect of gender on the relationships between academic procrastination, academic performance, and Satisfaction with academic life (N = 441)*

Variables	B	SEB	B	ΔR^2	ΔF
Academic performance					
Step1				.009*	5.352*
Academic procrastination	-.162	.043	-.162**		
Gender	-.883	.087	-.442**		
Step2					
Academic procrastination	.151	.142	.151		
Gender	-.891	.087	-.446**		
Academic procrastination x Gender	-.201	.087	-.325*		
Satisfaction with academic life					
Step1				.012*	6.519*
Academic procrastination	-.207	.046	-.207**		
Gender	-.650	.091	-.325**		
Step 2					
Academic procrastination	.155	.149	.155		
Gender	-.660	.091	-.330**		
Academic procrastination x Gender	-.233	.091	-.377**		
Academic procrastination					
Step1				.002	.786
Satisfaction with academic life	-.216	.048	-.216**		
Gender	.519	.095	.260		
Step 2					
Satisfaction with academic life	-.046	.198	-.046		
Gender	.539	.098	.270**		
Satisfaction with academic life X Gender	-.097	.110	-.171		

Note: * $p < .05$, ** $p < .001$

In the first equation, first at Step1 the predictor (academic procrastination) and moderator (gender) were entered successively in to regression equations. At step 2 interaction of

academic procrastination x gender were added. In the model significant change in R^2 for interaction term indicates a significant moderator effect. Results indicated that academic performance was predicted by academic procrastination ($\beta = -.162, p < .001$), by gender ($\beta = -.446, p < .001$), and by interaction of academic procrastination x gender ($\beta = -.325, p < .05$). Regarding interaction effects, the R^2 change = .09, $p < .05$. These results showed that gender had moderation role in the relationships between academic procrastination and academic performance.

In the second equation, results indicated that academic life satisfaction was predicted by academic procrastination ($\beta = -.207, p < .001$), by gender ($\beta = -.325, p < .001$), and by interaction of academic procrastination x gender ($\beta = -.377, p < .05$). Regarding interaction effects, the R^2 change = .012, $p < .05$. These results showed that gender had moderation role in the association between academic procrastination and satisfaction with academic life, but this effect is low.

In the third equation, results indicated that academic procrastination was predicted by satisfaction with academic life ($\beta = -.216, p < .001$), by gender ($\beta = .260, p < .001$), and did not predicted by interaction of satisfaction with academic file x gender ($\beta = -.171, p > .05$). Gender did not moderate the relationship between satisfaction with academic life and academic procrastination.

Discussion and Conclusions

The current study was designed to test the gender differences in the associations between academic procrastination, academic performance and satisfaction with academic life. The finding from current study noticed that (a) academic procrastination was adversely associated with academic performance and satisfaction with academic life (b) female students reported lower levels of academic procrastination, and higher level of academic performance and satisfaction with academic life than male counterparts. These findings confirm previous research indicating that academic procrastination is adversely related with academic performance (Kim & Seo, 2015; Richardson et al., 2012; Rotenstein, et al. 2009; Steel, 2007), academic life satisfaction (Balkis, 2013; Balkis & Duru, 2015; Chow, 2011; Grunschel et al., 2013), male students are more likely to procrastinate academic tasks and assignments (Balkis & Duru, 2009; Özer et al. 2009; Steel & Ferrari, 2013), female students perform better (Chap-

el et al. 2005; Khwaileh & Zaza, 2011; Voyer & Voyer, 2014), and rate higher satisfaction with their academic life than their male counterparts (Kim & Sax, 2009; Maceli et al., 2011; Tessema et al., 2012). The findings of this study also noticed that there is gender differences on the relationships between academic procrastination- academic performance and academic procrastination- satisfaction with academic life. In other words, academic procrastination adversely impacts male students' academic performance and satisfaction with academic life, but this effect is not strong.

The present finding reveals that male students who obtain high score on academic procrastination report poor academic performance. Apart from skills of time management and determining purposes and priorities for tasks, another basic requirement for academic achievement can be considered as performing tasks and responsibilities on time and developing a systematic studying habits and skills. Otherwise, studying late and under time pressure causes sleeplessness and along with it causes concentration problems and low academic performance (Balkis & Duru, 2009). Previous studies on gender differences in time management, motivation, self-handicapping, impulsiveness, and self-discipline stressed that male students have lack of time management, achievement motivation, self-discipline; and higher level of impulsivity, poor study habits and more engage in self-handicapping (Aluja & Blanch, 2004; Cross, Copping, & Campbell, 2011; McCrea, Hirt, & Milner, 2008; Meit, Borges, Cubic, & Seibel, 2007; Trueman & Hartley, 1996; Üstünoğlu, 2009). These factor could contribute level of male students' dilatory behavior.

The current finding also showing that procrastinating male students were dissatisfied with their academic life. The definition of academic procrastination states that procrastinating students experience subjective discomfort (Rothblum et al., 1986). If procrastinating students are continuously uncomfortable, he or she may wish to be more comfortable and therefore is not satisfied with his or her academic life. However, if a student is able to accomplish school related tasks of academic life without conflict, in a well-disciplined manner, he or she is more satisfied with academic life. Misra and McKean (2000) found that effective time management behaviors had buffering impact upon academic stress was triggered by change, conflict, frustration, pressure, and self-imposed. Misra and McKean (2000) also reported that "male college students reduced their academic stress due to changes and frustration (daily hassles) when they perceived themselves to be in control of their time, able to set goals, and organized" (p .47). Other elements and causes of procrastination such as poor organization and

time management skills, inadequate study habits, depression, perfectionism, anxiety, low task capability, high level of stress and fear of failure could be unattractive causing the student to be less satisfied (Howell & Watson, 2007; Haycock, McCarthy, & Skay, 1998; Schouwenburg & Lay, 1995; Milgram, Marshevsky, & Sadeh, 1995; Saddler & Buley, 1999; Sadler & Sacks, 1993). Briefly, these contributing factors assert that academic life for the procrastinating students are more likely to be dissatisfied. Specifically, working under limited time result in physical discomfort and emotional upsetness (Kennedy & Tuckman, 2013; Milgram et al. 1993; Tice & Baumeister, 1997). Considering unfavorable association between academic procrastination and satisfaction with academic life, helping students for coping with procrastination may positively impact upon their well-being.

As conclusion, the results of the current study confirm the previous findings in the procrastination literature. The most remarkable conclusion resulting from this study is that the detrimental impact of academic procrastination on academic performance and satisfaction with academic life varies depending to gender. Although previous studies reported that males are at greater risk for procrastination (e.g. Özer et al. 2009), and procrastination negatively effects academic performance (e.g. Kim & Seo, 2015) and academic life satisfaction (e.g. Balkis & Duru, 2015), it is not clear whether gender plays a role on the effect of academic procrastination on academic performance and academic life satisfaction. As far as we know, previous studies have not examined whether or not the effect of academic procrastination on academic performance and academic life satisfaction differs by gender. The finding of present study indicates that academic procrastination adversely influences male students' academic performance and academic life satisfaction more than female counterparts. Although sample size of the present study allow the generalizability of findings, further research is still needed to determine factors related gender differences in relationships between academic procrastination, academic performance and satisfaction with academic life as well as their possible causes.

The findings of the current study have a number of practical implications. These findings suggested that male students are more at risk for procrastination, achieving lower grades, and dissatisfied with academic life. College psychologist and counselor should develop intervention program especially targeting male students. Psychoeducational workshop could be offered specifically to males to help them gain strategies to cope with their dilatory behavior.

In addition, it may also improve their opportunity of successfully and satisfyingly completing their courses.

Finally, a number caveats need to be noted regarding the present study. The current findings are limited by the use of a cross sectional design. Future research should be carried out to clarify gender differences in the associations between academic procrastination, academic performance and satisfaction academic life satisfaction by using longitudinal methods. Another limitation related to the present study is that the data in this study were collected only through self-report measures. In their meta-analyses study, Kim and Seo (2015) have reported that relationship between procrastination and academic performance is influenced by nature of performance indicator and the choices of procrastination measures. Further research could be conducted by using different performance indicators and procrastination measures can help a better understanding of the gender differences in the association between academic procrastination, academic performance, and satisfaction with academic life

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