

Exploring Academic Procrastination Among Turkish Students: Possible Gender Differences in Prevalence and Reasons

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ABSTRACT. The authors examined the prevalence of and reasons, or excuses, for academic procrastination as a function of gender and academic grade level. In Study 1, a factor analysis of responses by 203 Turkish undergraduate students to an academic procrastination measure provided evidence of reliability and validity for the revised scale. In Study 2, 784 students (363 women, 421 men; *M* age = 20.6 years, *SD* age = 1.74 years) completed the validated Turkish Procrastination Assessment Scale-Students. The results were that 52% of students self-reported frequent academic procrastination, with male students reporting more frequent procrastination on academic tasks than female students. Significantly more female students than male students reported greater academic procrastination because of fear of failure and laziness; male students reported more academic procrastination as a result of risk taking and rebellion against control than did female students.

Keywords: academic procrastination, gender difference, prevalence, self-reported reasons

ALTHOUGH THERE IS NO CONSENSUS AMONG researchers on the definition of *procrastination* (Lay, 1986; Solomon & Rothblum, 1984), one characteristic common among these researchers is the delay component (Ferrari, Johnson, & McCown, 1995). For example, some authors have claimed that intentionality of delay is a crucial component (Hess, Sherman, & Goodman, 2000; Piccarelli, 2003; Senecal, Koestner, & Vallerand, 1995), whereas other authors have stated that an affective component including anxiety-related physical symptoms that led to task delays was essential (Rothblum, Solomon, & Murakabi, 1986; Sigall, Kruglanski, & Fyock, 2000). In academic settings, students have specific tasks to perform, such as writing term papers, studying for exams, reading assignments,

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and performing academic administrative and attendance tasks; however, for one reason or another, completion of these tasks is often postponed. The general propensity to engage in such dilatory behavior is called *academic procrastination* (Ferrari et al.; Schowuenburg, Lay, Pychyl, & Ferrari, 2004; Steel, 2004).

Academic procrastination appears to be a significant problem among English-speaking university students (Bishop, Gallagher, & Cohen, 2000; Onwuegbuzie & Collins, 2001; Semb, Glick, & Spencer, 1979), and students engage in this behavior in varying degrees (Steel, 2004). In fact, it has been estimated that approximately 70% of university students procrastinate (Ellis & Knaus, 1977). Solomon and Rothblum (1984) found that students procrastinated more often when writing term papers (46%) than they did when reading assignments (30%), studying for exams (28%), or attending to academic (23%) and administrative (11%) tasks. In another prevalence study, Clark and Hill (1994) found that high percentages of students reported nearly always or always procrastinating on studying for exams (28%), writing term papers (30%), and reading assignments (36%). However, relatively few studies examined the levels of academic procrastination in terms of grade levels of university students (Ferrari, 2004), and none focused on Turkish students. For instance, the results of a study by McCown and Roberts (1994) revealed that 23% of freshmen, 27% of sophomores, 32% of juniors, and 37% of seniors reported a tendency to procrastinate and that this behavior impeded their academic achievement. These findings also suggested that procrastination increases over years during university life at English-speaking schools (Ferrari, 2004).

When the sources of procrastination are considered, many causal factors contributing to academic procrastination have been found by several researchers (e.g., Brown, 1983; Kachgal, Hansen, & Kevin, 2001; Schowuenburg, Lay, Pychyl, & Ferrari, 2004). Early investigations into the reasons of procrastination by clinicians Burka and Yuen (1983) and Ellis and Knaus (1977) suggested that an individual's cognitive processes are causal factors. Burka and Yuen also suggested that a number of factors are related to procrastination, including evaluation anxiety, difficulty in making decisions, rebellion against control, lack of assertion, fear of the consequences of success, perceived aversiveness of the tasks, and overly perfectionistic standards about competency. On the basis of a principal component factor analysis of their procrastination measure, Solomon and Rothblum (1984) claimed two main reasons for student academic procrastination—namely, fear of failure and task aversiveness.

Gender difference with respect to academic procrastination is a controversial issue that may be hard to predict (Steel, 2004). Although some studies reported significant gender differences (Milgram, Marshevsky, & Sadeh, 1994; Pychyl, Coplan, & Reid, 2002), other studies reported no such gender difference (Ferrari, 1991; Ferrari, 2001; Schouwenburg, 1992). Nevertheless, to further understand the factors contributing to academic procrastination in university settings, we believed it was important to investigate the effects of gender and grade level on academic procrastination. The results of the present study may provide important

cues for counselors and university staff to develop new programs that may reduce the negative effects of such behaviors on students' academic performance. Consequently, it may be significant for the students who would like to reduce the power of procrastination. We expected that the present study would expand the limited literature about procrastination associated with gender, grade level, and academic achievement within Turkish higher education systems and, thus, possibly lead to cross-cultural comparisons of academic procrastination.

Despite the increasing number of students engaging in academic procrastination in Turkey (Uzun Özer & Demir, 2005), little empirical research has been conducted to determine the levels of academic procrastination and the causal factors contributing to the procrastination experience among Turkish students. Understanding and discussing the tendency of academic procrastination in the university setting may be best achieved by the adaptation of valid and reliable measures for non-English speaking populations. Turkish higher education could benefit greatly from research that demonstrates the utility of self-report measures that may apply to their student population. Thus, our aim in the present study was first to test the usability of the Procrastination Assessment Scale-Students (PASS) for Turkish university students. The present study explored the prevalence and reasons of academic procrastination associated with gender and academic grade level among Turkish university students. In this respect, Study 1 included the validity and reliability of the most widely used procrastination scale, the PASS (Solomon & Rothblum, 1984), with a Turkish sample. In Study 2, frequency, prevalence, and reasons for academic procrastination as a function of gender and academic grade level were assessed by validated Turkish-PASS.

STUDY 1

Method

Participants

A sample of 203 undergraduate Turkish students (109 women, 94 men) participated in Study 1. The average age of the participants was 20.60 years old ($SD = 1.78$ years) with an age range from 17 to 28 years. These participants were undergraduate students from different grade levels, enrolled in 37 departments at a reputable public, urban university in the capital of Turkey. The participants were 54 1st-year students (34 women, 20 men), 39 sophomores (19 women, 20 men), 48 juniors (27 women, 21 men), and 61 seniors (29 women, 32 men).

Instrument and Procedure

The PASS (Solomon & Rothblum, 1984) was used to collect data. The PASS is a 5-point Likert-type, self-report measure including 44 items divided

in two parts. Part 1 has 18 items that assess the prevalence of procrastination in six areas of academic functioning: (a) writing a term paper, (b) studying for an exam, (c) keeping up with weekly reading assignments, (d) performing administrative tasks, (e) attending meetings, and (f) performing academic tasks in general. Each of these six areas contains three items rated on 5-point Likert-type scales. The first scale was used to ascertain the frequency of procrastination on tasks (e.g., "To what degree do you procrastinate on writing a term paper?") and ranged from 1 (*never procrastinate*) to 5 (*always procrastinate*). The second scale measured the degree to which procrastination on the task was causing a problem for them (e.g., "To what degree is procrastination on writing a term paper a problem for you?") and ranged from 1 (*not at all a problem*) to 5 (*always a problem*). The third scale measured the extent to which they have a tendency to decrease their procrastination behavior (e.g., "To what extent do you want to decrease your tendency to procrastinate on writing a term paper?"), ranging from 1 (*do not want to decrease*) to 5 (*definitely want to decrease*). Part 2 of the PASS comprised 26 items, each rated on a 5-point Likert-type scale ranging from 1 (*not at all reflects why I procrastinated*) to 5 (*definitely reflects why I procrastinated*), assessing the reasons of academic procrastination. It first provides a procrastination scenario, which is about delaying writing a term paper, and then lists a variety of possible reasons of procrastination on the task. In Part 2, two statements are listed for each of these reasons. For example, the two risk-taking statements are "You looked forward to the excitement of doing this task at the last minute" and "You liked the challenge of waiting until the deadline." There are a number of studies indicating that PASS scores possessed adequate reliability and validity. Onwuegbuzie (2004), for example, found .82 for the first and .89 for the second part of the scale. Ferrari (1989) also found adequate levels of coefficient alpha with test-retest reliability over a six-week interval yielding .74 for prevalence and .65 for reasons. In the original PASS, results of the factor analysis yielded two main factors named *fear of failure* and *task aversiveness*.

The PASS was developed and used extensively with English-speaking university students and, therefore, needed to be translated and adapted for administration to Turkish students. Hence, for Study 1, three psychological counselors and two English instructors translated each item of the PASS independently. Items that best represented the original version were chosen among translations, and a back translation was then conducted among the selected items to check that the original constructs were assessed. To determine content-related validity, the Turkish version of the PASS was then given to field experts for evaluation; the field experts were actively working in the Department of Psychological Counseling and Guidance at the same university. These experts stated that the content of the Turkish version of the PASS reflected the content of the original PASS and would represent areas of academic procrastination experienced by Turkish students. Student opinion questionnaires also investigated to what extent the PASS

represented Turkish students at the university. Last, after obtaining feedback from experts and student opinion data, the Turkish version of the PASS was revised and the physical layout of Part 1 was changed. Then it was pilot tested with the students who participated in Study 1. We hypothesized that the first part of the PASS would reflect the same factor structure as it did in the original, although it would be possible to get different causal factors for Part 2 when the cultural factors were taken into consideration.

Results

To examine the factor structure of the Turkish-PASS, we performed factor analysis separately for the first and second parts of this revised measure. We conducted principal component analysis with oblimin rotation on a sample size of 203 students for the first part of the PASS. The results of the analysis yielded three factors, which explained 44.5% of the total variance. The items loading on the three factors represented the original three-factor structure for the first part of the PASS proposed by Solomon and Rothblum (1984). That is, the first factor, frequency of procrastination, included six items, and it accounted for 13.7% of the variance. The second factor, causing a problem, included six items and accounted for 12.9% of the total variance. The third factor, tendency to decrease, explained 17.8% of the total variance and included six items. Factor loadings and the items of the first part of the Turkish version of the PASS are presented in Table 1. Internal consistencies were .68 for frequency of procrastination, .65 for causing a problem, and .81 for tendency to decrease subscales. For Part 2 of the PASS, 26 items for reasons of academic procrastination were subjected to a principal component analysis. We used three criteria to determine the number of factors to rotate the a priori hypothesis, which stemmed from the original study, that the measure has two main factors and the scree test together with the eigenvalues and interpretability of the factor solution (Green & Salkind, 2003). The scree plot and eigenvalues indicated that the initial hypothesis of two dimensionality was not suitable for the Turkish sample. Instead, the scree test demonstrated that a four-factor solution was a better fit. Consequently, four factors were oblimin rotated. Oblimin rotation of a principal axis produced a four-factor solution explaining 46.5% of the total variance. The first factor with 11 items accounted for 18.2% of the total variance and focused on fear of failure as a task delay. The second factor, which explained 10.5% of the total variance, contained seven items and focused on risk taking. The third factor, containing five items, explained 9.5% of the total variance and focused on laziness. The last factor, containing three items, explained 8.2% of the total variance and focused on rebellion against control. The results of the factor analysis showed that the present factor structure does not match up with the Solomon and Rothblum (1984) study, which produced two main factors—fear of failure and aversiveness of task. Because the items of the first factor contained a structure similar to

TABLE 1. Factor Loadings of the First Part of the Prevalence of Procrastination Items

Items	Factors		
	3	1	2
To what extent do you want to decrease your tendency to procrastinate on writing a term paper?	.75	.10	.04
To what extent do you want to decrease your tendency to procrastinate on studying for exams?	.75	.08	-.01
To what extent do you want to decrease your tendency to procrastinate on reading weekly assignments?	.74	-.08	.11
To what extent do you want to decrease your tendency to procrastinate on attendance tasks?	.74	.12	.22
To what extent do you want to decrease your tendency to procrastinate on academic administrative tasks?	.65	.01	.14
To what extent do you want to decrease your tendency to procrastinate on school activities in general?	.55	-.14	.23
To what degree do you procrastinate on studying for exams?	.17	.74	-.07
To what degree do you procrastinate on writing a term paper?	.18	.73	-.13
To what degree do you procrastinate on reading weekly assignments?	.08	.73	-.12
To what degree do you procrastinate on academic administrative tasks?	-.05	.59	.17
To what degree do you procrastinate on attendance tasks?	-.13	.54	.24
To what degree do you procrastinate on school activities in general?	-.09	.31	.15
To what degree is procrastination on writing a term paper a problem for you?	.11	.14	.67
To what degree is procrastination on studying for exams a problem for you?	.10	.12	.64
To what degree is procrastination on attendance tasks a problem for you?	.23	-.03	.58
To what degree is procrastination on academic administrative tasks a problem for you?	.12	-.07	.53
To what degree is procrastination on school activities in general a problem for you?	.00	-.00	.50
To what degree is procrastination on reading weekly assignments a problem for you?	.07	-.07	.49

Note. Bolded values represent the greater loading of the item. 1 = frequency of procrastination; 2 = causing a problem; 3 = tendency to decrease.

the original study, this factor was named *fear of failure*. The names of the other causal factors were assigned to a given factor when loading on that factor was higher than the loading on the other factors (Milgram et al., 1994). Factor loadings and the items of the second part of the PASS are given in Table 2. Internal consistencies were found to be .86 for fear of failure, .69 for risk taking, .61 for laziness, and .66 for rebellion against control factors. Thus, Cronbach's alpha for the entire Turkish-PASS with the pilot sample was 0.86 (M score = 123.9, SD = 18.2 score), with the first part at 0.76 (M score = 37.3, SD = 5.7 score) and the second part at .86 (M score = 66.2, SD = 13.7 score).

Discussion

Study 1 was a factor analysis of the PASS (Solomon & Rothblum, 1984), assessed on a sample of Turkish university students. Scores on Part 1 of the PASS replicated the same factor structure of the original version. In contrast, the factor structure of scores on Part 2 showed variations with the original scale; however, such differences were expected (Milgram, Batori, & Mowrer, 1993). Watson (2001) clarified that data having to do with reasons for procrastination are affected by the population and methods used for collecting data. The population is different in that the present sample was drawn from a different culture, which may account for the differences in the findings. Considering the empirical studies carried out with different cultures (e.g., Brownlow & Reasinger, 2000; Onwuegbuzie, 2004; Watson, 2001), it is possible to see different factor structures for Part 2 of the PASS. Overall, Part 1, prevalence of procrastination, and Part 2, reasons of procrastination, of the PASS yielded satisfactory reliabilities, although the factors showed poorer reliabilities.

STUDY 2

We conducted a second study to examine the rates, prevalence, and reasons for academic procrastination as a function of gender and academic-grade level by the validated Turkish-PASS. Therefore, this study extends the utility of the Turkish-PASS with a different sample of students.

Method

Participants

A total of 784 undergraduate students (363 women, 421 men) participated in Study 2. The participants consisted of 215 1st-year students (128 women, 87 men), 182 sophomores (78 women, 104 men), 194 juniors (89 women, 105 men), and 193 seniors (68 women, 125 men). The average age was 20.6 years old (SD = 1.74 years), with an age range between 16 and 30.

TABLE 2. Factor Loadings of the Second Part of the Prevalence of Procrastination Items

Items	Factors			
	1	2	3	4
You were worried you would get a bad grade.	.77	.03	-.01	.05
You didn't trust yourself to do a good job.	.70	.12	.05	.30
You were concerned the professor wouldn't like your work.	.67	.12	-.09	.01
You set very high standards for yourself and you worried that you wouldn't be able to meet those standards.	.65	.03	.11	.34
You had difficulty requesting information from other people.	.64	.19	.14	.22
There's some information you needed to ask the professor, but you felt uncomfortable approaching him/her.	.63	.25	.06	-.10
You had a hard time knowing what to include and what not to include in your paper.	.62	.01	.11	-.17
You didn't think you knew enough to write the paper.	.55	.05	.22	.30
You felt overwhelmed by the task.	.50	-.10	.42	.17
You waited to see if the professor would give you some more information about the paper.	.49	.47	.10	-.08
You couldn't choose among all the topics.	.41	.26	.14	.01
You liked the challenge of waiting until the deadline.	-.00	.73	.17	.10
You were concerned that if you did well, your classmates would resent you.	.16	.62	-.14	.29
You were concerned that if you got a good grade, people would have higher expectations of you in the future.	.25	.59	-.11	.29
You knew that your classmates hadn't started the paper either.	.15	.53	.44	-.08
You looked forward to the excitement of doing this task at the last minute.	-.23	.51	.09	.36
You waited until a classmate did his or hers, so that he/she could give you some advice.	.31	.45	-.03	-.16
Your friends were pressuring you to do other things.	.21	.36	.22	.19
You felt it just takes too long to write a term paper.	.15	.24	.66	.09
You didn't have enough energy to begin the task.	.24	-.00	.65	.03
You just felt too lazy to write a term paper.	.05	.00	.63	.13
You really disliked writing term papers.	.01	.00	.52	.25
You had too many other things to do.	-.13	.06	.49	-.30
You resented people setting deadlines for you.	.00	.28	.20	.68
You resented having to do things assigned by others.	.11	.12	.08	.66
You were concerned you wouldn't meet your own expectations.	.47	.02	.12	.50

Note. Bolded values represent the greater loading of the item. 1 = fear of failure; 2 = risk taking; 3 = laziness; 4 = rebellion against control.

Procedure

The demographic information sheet and the Turkish-PASS were administered to 784 undergraduate students enrolled in 37 departments at the university. None of these participants was involved in Study 1. To identify the procrastinators and nonprocrastinators, we used a median split procedure that has been frequently used in several other academic procrastination studies (e.g., Brownlow & Reasinger, 2000; König & Kleninmann, 2004; Van Eerde, 2003). With the present sample, students with Turkish-PASS scores at or below 36.0 were identified as *nonprocrastinators* (186 women, 193 men; M score = 32.4, SD score = 3.51), and students who scored 37.0 or above were labeled *academic procrastinators* (177 women, 228 men; M score = 40.9, SD score = 4.11).

To ascertain the prevalence of academic procrastination across six academic-related areas, we followed the procedures developed by Solomon and Rothblum (1984). That is, the PASS items in the first part of the inventory that pertained to the frequency with which respondents procrastinate on each of the six tasks and whether academic procrastination was a problem on each task were summed separately, producing scores for each task ranging from 2 to 10 (Rothblum et al., 1986). Students who reported on the PASS that they nearly always or always procrastinate on each task, and that such deleterious behavior nearly always or always creates a problem, were considered to be *high procrastinators* on each task. In other words, students who were labeled as high procrastinators had total scores ranging from 8 to 10 on these academic areas. All of the other subjects (with scores ranging from 2 to 7) were labeled as *low procrastinators*.

Results

Levels and Prevalence of Academic Procrastination

The overall mean of academic procrastination was 36.8 ($SD = 5.7$). Among 784 students, 405 of them (52%) were labeled as procrastinators, whereas 379 of the students (48%) were nonprocrastinators. Results revealed that students procrastinated more when studying for exams (33%), reading assignments (30%), and writing term papers (30%) than they did in the other three academic areas: academic administrative tasks (10%), attendance tasks (8%), and school activities in general (5%).

Gender and Grade Level in Academic Procrastination

A 2 (gender) \times 4 (grade levels) analysis of variance yielded a significant main effect for gender, $F(1, 776) = 6.879$, $p < .05$, partial $\eta^2 = .009$. Specifically, male participants ($M = 37.39$, $SD = 5.71$) reported procrastinating significantly more than did female participants ($M = 36.15$, $SD = 5.65$); however, the find-

ings revealed no grade difference in academic procrastination. Similarly, no significant interaction effect was found in academic procrastination. Means and standard deviations for academic procrastination by gender and grade level are presented in Table 3.

Gender and Grade Level in the Reasons of Academic Procrastination

A 2 (gender) \times 4 (grade levels) multivariate analysis of variance revealed a significant main effect for gender, $F(4, 773) = 18.729, p < .05$, partial $\eta^2 = .088$ in the reasons for academic procrastination. Follow-up univariate tests showed a significant main effect for gender, $F(1, 776) = 17.685, p < .01$, partial $\eta^2 = .022$. Female participants ($M = 29.15, SD = 7.60$) had higher academic procrastination scores for the reason of fear of failure than did males ($M = 26.73, SD = 7.10$). However, neither significant effects regarding grade differences nor interaction was found in the reason of fear of failure. Regarding the reason of risk taking, follow-up univariate tests revealed a significant main effect for gender, $F(1, 776) = 16.128, p < .01$, partial $\eta^2 = .020$. Male participants had higher academic procrastination scores ($M = 17.82, SD = 4.60$) on the reason of risk taking than did female participants ($M = 16.55, SD = 4.87$). However, no significant main effect regarding grade differences in the reason of risk taking was found. Similarly, no interaction effect was found. Regarding the reason of laziness, univariate tests showed a

TABLE 3. Means and Standard Deviations for Academic Procrastination, by Gender and Grade Levels

Gender	Grade level	<i>n</i>	<i>M</i>	<i>SD</i>
Female	Freshman	128	35.70	6.00
	Sophomore	78	37.45	5.45
	Junior	89	35.64	5.41
	Senior	68	36.16	5.37
	Total	363	36.15	5.65
Male	Freshman	87	36.99	6.72
	Sophomore	104	36.80	5.15
	Junior	105	36.94	5.83
	Senior	125	38.55	5.15
	Total	421	37.39	5.71
Total	Freshman	215	36.22	6.32
	Sophomore	182	37.08	5.28
	Junior	194	36.35	5.66
	Senior	193	37.71	5.34
	Total	784	36.82	5.71

Note. For all values, $p < .05$.

significant main effect for gender, $F(1, 776) = 9.003, p < .05$, partial $\eta^2 = .011$, with female students reporting higher academic procrastination scores ($M = 17.20, SD = 3.56$) than male students ($M = 16.49, SD = 3.40$). No significant main effects in terms of grade differences in laziness were revealed. Similarly, no interaction effect was found. Last, univariate tests for the reason of rebellion against control showed a significant main effect for gender, $F(1, 776) = 5.431, p < .05$, partial $\eta^2 = .007$. Male students reported higher academic procrastination level on the reason of rebellion against control ($M = 4.57, SD = 2.04$) than did female students ($M = 4.23, SD = 2.03$). Neither significant main effect for grade difference nor interaction effect was found. Means and standard deviations for the reasons of academic procrastination by gender and grade level are presented in Table 4.

DISCUSSION

In Study 2, we examined the levels and prevalence of academic procrastination. Fifty-two percent of university students reported being procrastinators, which is consistent with the previous studies (Damacela-Orellana, Tindale, & Balcazar-Suarez, 2000; Hill, Hill, Chabot, & Barral, 1978). The results regarding the prevalence of academic procrastination showed that a substantial proportion of students have strong tendencies to procrastinate on their academic tasks. For example, 33% of students reported nearly always and always procrastinating on studying for exams. A similar pattern of responses was also found on the tasks of writing term papers (30%) and reading assignments (30%). Moreover, small percentages of students reported procrastinating on academic administrative tasks (10%), attendance tasks (8%), and school activities in general (5%). Consistent with the results of previous studies (e.g., Clark & Hill, 1994; Kachgal, Hansen, & Kevin, 2001), the present findings revealed that Turkish students procrastinate more when studying for exams, reading assignments, and writing term papers than they do when performing the other tasks. The higher frequency of procrastination on studying for exams, reading assignments, and writing term papers indicated that “these tasks are likely to be viewed as most important by students” (Solomon & Rothblum, 1984, p. 505) because these are probably the tasks that have the greatest effect on a student’s academic life and academic success. Tasks such as academic administrative tasks, attendance tasks, and school activities in general seem to be less important for students because these tasks have little effect in determining the students’ performance. As revealed by the factor analysis drawn from Part 2 of the PASS—reasons of procrastination—Turkish students procrastinate on important tasks, such as studying for exams, reading assignments, and writing term papers, because of fear of failure, risk taking, laziness, and rebellion against control. In this respect, procrastination may be viewed as less of a problem with such tasks as academic administrative tasks, attendance tasks, and school activities in general, and consequently, students may tend to procrastinate less on these tasks (Kachgal et al., 2001).

TABLE 4. Means and Standard Deviations for the Reasons of Academic Procrastination, by Gender and Grade Level

Gender	Grade	n	Fear of failure		Risk taking		Laziness		Rebellion against control	
			M	SD	M	SD	M	SD	M	SD
Female	Freshman	128	30.09	7.33	16.85	4.15	17.25	3.61	4.24	2.03
	Sophomore	78	28.92	7.17	16.29	4.46	17.71	3.85	4.73	2.27
	Junior	89	28.53	7.69	16.91	5.21	16.77	3.22	3.98	1.68
	Senior	68	28.44	8.42	15.79	4.71	17.07	3.50	3.96	2.08
	Total	363	29.15	7.60	16.55	4.60	17.20	3.56	4.23	2.03
Male	Freshman	87	26.83	7.65	18.39	5.42	15.99	3.86	4.68	2.07
	Sophomore	104	27.06	7.79	17.73	5.14	16.26	3.40	4.44	2.14
	Junior	105	26.42	6.53	17.71	4.77	16.46	2.92	4.54	1.77
	Senior	125	26.66	6.60	17.58	4.30	17.07	3.41	4.62	2.14
	Total	421	26.73	7.09	17.82	4.87	16.49	3.40	4.57	2.04
Total	Freshman	215	28.77	7.61	17.47	4.76	16.74	3.76	4.42	2.06
	Sophomore	182	27.86	7.57	17.11	4.90	16.88	3.66	4.57	2.20
	Junior	194	27.39	7.15	17.34	4.98	16.61	3.06	4.28	1.75
	Senior	193	27.29	7.32	16.95	4.52	17.07	3.43	4.39	2.14
	Total	784	27.85	7.43	17.23	4.79	16.82	3.49	4.41	2.04

Male students reported significantly higher levels of academic procrastination than did female students. The literature concerning gender differences on academic procrastination is somewhat inconsistent. Although some studies have indicated no significant gender difference in the incidence of procrastination (Hess et al., 2000; Johnson & Bloom, 1995; Schouwenburg, 1992; Watson, 2001), others have suggested that women are at more risk for being procrastinators than are men (Doyle & Paludi, 1998; Kutlesa, 1998; Solomon & Rothblum, 1984). However, the present findings were consistent with studies conducted by Milgram et al. (1994) and Senecal et al. (1995), in which male students reported procrastinating more on academic tasks than did female students. Making inferences from the aforementioned studies, one could argue that the difference in the results was attributed to cultural differences.

Behavior patterns such as procrastination may be affected by culture and may show variations. For instance, Lay (1995) explained the cultural differences with the impact of individualistic and collectivistic cultural forces. Culture is an important determinant in shaping human behavior (Eskin, 2003; Triandis, 1989). More specifically, procrastinators in Western cultures are more likely to experience actual-ideal discrepancy than are procrastinators in more collectivistic or interdependent societies, such as Turkey (Mocan-Ayдын, 2000), because they are more likely to experience actual-ought discrepancies (Lay, 1995; Verkuyten, Thijs, & Canatan, 2001). In the collectivistic cultures, women may be expected to be more successful and procrastinate less on their academic tasks because they are dependent on the traditional segment of the Turkish society, and it may be difficult for them to express their individualistic concerns (Karakitapođlu & İmamođlu, 2002). In terms of behaviors and gender roles, women are subject to stricter control (Kumru & Thompson, 2003), which may mean they are assigned more responsibility in school. Their motivation to achieve is strongly determined by feelings of loyalty and obligation toward their parents and family (Verkuyten et al.). In light of this information, the cultural issues may account for the result that the Turkish female students procrastinate less than do male students.

The present findings are consistent with those of Senecal, Lavolie, and Koestner (1997) and reveal that female students procrastinate more on their academic tasks as a result of fear of failure and laziness than do male students. Archer and Lloyd (1982) stated that when masculine and feminine stereotypes were considered, women were found to be more fearful and avoidant than were men, as a result of hormonal constitution. Different than men, women show a fear of strangers and unfamiliar events at an earlier age. They then develop an avoidance of a fearful object. When they consider getting low grades in university courses to be a fearful event, it is more likely for female students to avoid than it is for male students. On one hand, in line with Archer and Lloyd, female students may procrastinate or avoid performing their academic tasks because of fear of failure. On the other hand, male students more often reported that they were procrastinators on academic tasks because of risk taking and rebellion against control. Their tendency to engage in academic procrastination because of risk taking validated

a meta-analytic study (see Lippa, 2002). The results revealed that men proved to take more risk than did females. Similarly, another study revealed that men show more aggressive behavior than do women toward psychological and social pressures (see Lippa, 2002). Such findings can be an indirect explanation for the reasons of rebellion against control for male students.

Cultural issues may also account for this finding. That is, when one considers that adolescence is a transition period characterized by relative differentiation from family, it is seen as increasing on the demands for freedom and enjoyment (Ericson, 1968). In line with this, adolescents from collectivistic societies such as Turkey may emphasize values that serve individualistic concerns (Karakitapoğlu & İmamoğlu, 2002). Also, perception of external control is strongly related to academic performance and failure (Hortaçsu & Üner, 1993). Accordingly, when family or society pressure for becoming successful is considered an external control, it could be speculated that male students, who are more dominant and independent in the Turkish culture, engage in procrastination on academic tasks more often than do female students because of risk taking and rebellion against control. The female gender role is assumed to be more communal or passive, whereas the male gender role is assumed to be more agentic and active (Eskin, 2003). Considering this assumption, the differences between women's and men's reasons for academic procrastination seem reasonable. Further research across varied cultures should be conducted.

General Conclusions

In Study 1, PASS was translated and adapted into Turkish to obtain evidence of reliability and validity of the scale to use in a Turkish sample. Part 1 represented the same structure as in the original PASS, whereas Part 2 showed variation in factor analysis producing four causal factors. The results showed that reliabilities of Parts 1 and 2 of the Turkish PASS were satisfactory. Internal consistencies in the factors drawn from Part 1—prevalence of procrastination—and Part 2—reasons of procrastination—of the Turkish PASS were found adequate. Study 2 demonstrated that more than half of the students frequently engaged in academic procrastination, especially when studying for exams, writing term papers, and maintaining reading assignments. Although male students procrastinated more, in general, than did female students, the results differentiated that female students procrastinated more because of fear of failure and laziness than did males. The lack of literature regarding procrastination in Turkey made it difficult to compare the findings with Turkish students.

Therefore, the present findings may be logically compared with the original academic procrastination studies by Solomon and Rothblum (1984) and others (see Ferrari, 2004) with students from Europe, Australia, and the United States. In this respect, several implications arise out of the present study for counselors and educators. The results indicate that more than half of university students engage

nearly always or always in procrastination. Hence, the present findings may provide valuable data for university counselors and educators who should be aware of the procrastination levels of the students on academic tasks. Another important implication that can be drawn from the present study is gender differences among the reasons for procrastination. Therefore, counselors working on procrastination should understand that what indicates reasons for procrastination among males may not be the same among females. Considering the gender differences in the procrastination issue will aid counselors in setting appropriate techniques and treatment goals.

Because the present study is one of the first attempts at investigating the levels and reasons for academic procrastination in the university population in Turkey, results should be considered to be preliminary. However, further research with larger and more demographically diverse populations would strengthen the findings of the present study. We suggest that future studies be conducted with samples from different universities, and different regions of Turkey. Last, because findings in the present study reveal cultural differences, future researchers may consider investigating cross-cultural issues regarding academic procrastination.

AUTHOR NOTES

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REFERENCES

- Archer, J., & Lloyd, B. (1982). *Sex and gender*. NY: Cambridge University Press.
- Bishop, J. B., Gallagher, R. P., & Cohen, D. (2000). College students' problems: Status, trends, and research. In D. Davis, & K. Humphrey (Eds.), *College counseling: Issues and strategies for a new millennium*. American Counseling Association.
- Brown, C. J. (1983). The joys of Fs: A student guide for getting lousy grades. *Teaching of Psychology, 10*, 176-177.
- Brownlow, S., & Reasinger, R. D. (2000). Putting off until tomorrow what is better done today: Academic procrastination as a function of motivation toward college work. *Journal of Social Behavior and Personality, 15*, 15-34.
- Burka, J. B., & Yuen, L. M. (1983). *Procrastination: Why do you do it, what to do about it*. Reading, PA: Addison-Wesley.
- Clark, J. L., & Hill, O. W. (1994). Academic procrastination among African-American college students. *Psychological Reports, 75*, 931-936.
- Damacela-Orellana, L. E., Tindale, R. S., & Balcazar-Suarez, Y. (2000). Decisional and behavioral procrastination: How they relate to self-discrepancies. *Journal of Social Behavior and Personality, 15*, 225-238.
- Doyle, J. A., & Paludi, M. A. (1998). *Sex and gender: The human experience*. Boston: McGraw Hill.

- Ellis, A., & Knaus, W. J. (1977). *Overcoming procrastination*. New York: Signet.
- Ericson, E. H. (1968). *Identity: Youth and crises*. New York: Norton.
- Eskin, M. (2003). Self reported assertiveness in Swedish and Turkish adolescents: A cross-cultural comparison. *Scandinavian Journal of Psychology*, *44*, 7–12.
- Ferrari, J. R. (1989). Reliability of academic and dispositional measures of procrastination. *Psychological Reports*, *64*, 1057–1058.
- Ferrari, J. R. (1991). Compulsive procrastination. *Psychological Reports*, *68*, 455–458.
- Ferrari, J. R. (2001). Procrastination and attention: Factor analysis of attention deficit, boredomness, intelligence, self-esteem, and task delay frequencies. *Journal of Social Behavior and Personality*, *16*, 185–196.
- Ferrari, J. R. (2004). Trait procrastination in academic settings: An overview of students who engage in task delays. In H. C. Schowuenburg, C. Lay, T. A. Pychyl, & J. R. Ferrari (Eds.), *Counseling the procrastinator in academic settings* (pp. 19–28). Washington, DC: American Psychological Association.
- Ferrari, J. R., Johnson, J. L., & McCown, W. G. (1995). *Procrastination and task avoidance: Theory research, and treatment*. New York: Plenum Press.
- Green, S. B., & Salkind, N. J. (2003). *Using SPSS for Windows and Macintosh: Analyzing and understanding data* (3rd ed.). Upper Saddle River, New Jersey: Prentice Hall.
- Hess, B., Sherman, M. F., & Goodman, M. (2000). Eveningness predicts academic procrastination: The mediating role of neuroticism. *Journal of Social Behavior and Personality*, *15*, 61–74.
- Hill, M., Hill, D., Chabot, A., & Barral, J. (1978). A survey of college faculty and student procrastination. *College Students Personel Journal*, *12*, 256–262.
- Hortaçsu, N., & Üner, H. (1993). Family background, sociometric peer nominations, and perceived control as predictors of academic achievement. *The Journal of Genetic Psychology*, *154*, 425–431.
- Johnson, J. L., & Bloom, A. M. (1995). An analysis of the contribution of the five factors of personality to variance in academic procrastination. *Personality and Individual Differences*, *18*, 127–133.
- Kachgal, M. M., Hansen, L. S., & Kevin, N. J. (2001). Academic procrastination, prevention/intervention strategies and recommendations. *Journal of Developmental Education*, *25*, 14–20.
- Karakitapoğlu, A. Z., & İmamoğlu, E. O. (2002). Value domains of Turkish adults and university students. *The Journal of Social Psychology*, *142*, 333–352.
- König, C. J., & Kleninmann, M. (2004). Business before pleasure: No strategy for procrastinators? *Personality and Individual Differences*, *37*, 1045–1057.
- Kumru, A., & Thompson, R. A. (2003). Ego identity status and self-monitoring behavior in adolescents. *Journal of Adolescent Research*, *18*, 481–495.
- Kutlesa, N. (1998). *Effect of group counseling with university students who complain of procrastination*. Unpublished master's thesis, University of Western Ontario, London, Ontario, Canada.
- Lay, C. H. (1986). At last my research article on procrastination. *Journal of Research in Personality*, *20*, 474–495.
- Lay, C. H. (1995). Trait procrastination, agitation, dejection, and self-discrepancy. In J. R. Ferrari, J. L. Johnson, & W. G. McCown (Eds.), *Procrastination and task avoidance: Theory, research and treatment*. New York: Plenum Press.
- Lippa, R. A. (2002). *Gender, nature, and nurture*. London: Erlbaum.
- McCown, W., & Roberts, R. (1994). *A study of academic and work-related dysfunctioning relevant to college version of an indirect measure of impulsive behavior*. (Integra Technical Paper, 94–128). Randor, PA: Integra.

- Milgram, N., Batori, G., & Mowrer, D. (1993). Correlates of academic procrastination. *Journal of Social Psychology, 31*, 487–500.
- Milgram, N., & Marshevsky, S., & Sadeh, A. (1994). Correlates of academic procrastination: Discomfort, task aversiveness, and task capability. *The Journal of Psychology, 129*, 145–155.
- Mocan-Aydın, G. (2000). Western models of counseling and psychotherapy within Turkey: Crossing cultural boundaries. *The Counseling Psychologist, 28*, 281–298.
- Onwuegbuzie, A. J. (2004). Academic procrastination and statistics anxiety. *Assessment & Evaluation in Higher Education, 29*(1), 3–19.
- Onwuegbuzie, A. J., & Collins, K. M. T. (2001). Writing apprehension and academic procrastination among graduate students. *Perceptual and Motor Skills, 92*, 560–562.
- Piccarelli, R. (2003). How to overcome procrastination. *The American Salesman, 48*(5), 27–29.
- Pychyl, T. A., Coplan, R. J., & Reid, P. A. M. (2002). Parenting and procrastination: Gender differences in the relations between procrastination, parenting style and self worth in early adolescence. *Personality and Individual Differences, 33*, 271–285.
- Rothblum, E. D., Solomon, L. J., & Murakabi, J. (1986). Affective, cognitive and behavioral differences between high and low procrastinators. *Journal of Counseling Psychology, 33*, 387–394.
- Schouwenburg, H. C. (1992). Procrastinators and fear of failure: An exploration of reasons for procrastination. *European Journal of Personality, 6*, 225–236.
- Schouwenburg, H. C., Lay, C., Pychyl, T. A., & Ferrari, J. R. (Eds). (2004). *Counseling the procrastinator in academic settings*. Washington, DC: American Psychological Association.
- Semb, G., Glick, D. M., & Spencer, R. E. (1979). Student withdrawals and delayed work patterns in self-paced psychology courses. *Teaching of Psychology, 6*(1), 23–25.
- Senecal, C., Koestner, R., & Vallerand, R. J. (1995). Self-regulation and academic procrastination. *The Journal of Social Psychology, 135*, 607–619.
- Senecal, C., Lavoie, K., & Koestner, R. (1997). Trait and situational factors in procrastination: An interactional model. *Journal of Social Behavior and Personality, 12*, 889–903.
- Sigall, H., Kruglanski, A., & Fyock, J. (2000). Wishful thinking and procrastination. *Journal of Social Behavior and Personality, 15*, 283–296.
- Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology, 31*, 503–509.
- Steel, P. (2004). *The nature of procrastination (a meta analytic study)*. Retrieved May 18, 2004, from http://www.ucalgary.ca/mg/research/media/2003_07.pdf
- Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review, 96*, 506–520.
- Uzun Özer, B., & Demir, A. (2005, July). *Academic procrastination among Turkish students*. Paper presented at the Fourth Biennial Conference on Procrastination, London.
- Van Eerde, W. (2003). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences, 35*, 1401–1418.
- Verkuyten, M., Thijs, J., & Canatan, K. (2001). Achievement motivation and academic performance among Turkish early and young adolescents in the Netherlands. *Genetic, Social, and General Psychology Monographs, 127*, 378–408.
- Watson, D. C. (2001). Procrastination and the five-factor model: A facet level analysis. *Personality and Individual Differences, 30*, 149–158.

Received May 23, 2007

Accepted February 29, 2008

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