

## Research Article

# Procrastination and Working Styles in High School Students: Does Gender Moderate This Relationship?

Zorica Marković<sup>a</sup>, Biljana Blazhevaska Stoilkovska<sup>\*b</sup>, Jasmina Nedeljković<sup>c</sup>

[a] Department of Psychology, Faculty of Philosophy, University of Niš, Serbia.

[b] Department of Psychology, Faculty of Philosophy, Ss Cyril and Methodius University in Skopje, Republic of North Macedonia.

[c] Faculty of Legal and Business Studies "dr. Lazar Vrkatic", Novi Sad, Serbia.

## Abstract

In this study were examined procrastination and working styles among 142 male and female high school students in Serbia. Specifically, the aim was to investigate the relationship between the tendency to procrastinate and working styles when gender was introduced as a moderator variable. Irrational Procrastination Questionnaire was used to assess procrastination, whereas working styles were measured by the Working styles Questionnaire. Conducted two-factorial MANOVA revealed that the relationship between procrastination behavior and a composite of work hard, hurry up, be strong, be perfect, and please others working styles was moderated by gender (i.e. procrastination x gender interaction was statistically significant). In addition, univariate analysis (two-way ANOVA) revealed that only the relationship between procrastination and working style hurry up was moderated by gender. Simple effects analysis indicated that this working style was almost equally expressed between male students with a low and high propensity to procrastinate their obligations, while female students with a highly expressed tendency to procrastination showed evidently stronger preference to work under the time pressure and to delay work until it becomes urgent in comparison to female students who tend to procrastinate less.

*Keywords:* High school students; procrastination; working styles; gender; moderated relationship.

## Table of Contents

Method  
Results  
Discussion  
References

Psychological Thought, 2021, Vol. 14(1), 94-114, <https://doi.org/10.37708/psyct.v14i1.545>

Received: 2020-10-23. Accepted: 2021-04-02. Published (VoR): 2021-04-30.

Handling Editor: Natasha Angelova, South-West University "Neofit Rilski", Blagoevgrad, Bulgaria.

\*Corresponding author at: Department of Psychology, Faculty of Philosophy, Ss Cyril and Methodius University in Skopje, Republic of North Macedonia. E-mail: [biljanabs@zfz.ukim.edu.mk](mailto:biljanabs@zfz.ukim.edu.mk)



This is an open access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Procrastination is usually defined as unnecessary delaying of obligations and their execution, even if objectively there was enough time to complete the obligation timely (Höcker et al., 2009) and despite the possible negative consequences of that delay (Klingsieck, 2013; Steel, 2007). Ferarri (1992) proposed a tripartite model of procrastination, i.e. arousal and avoidant as behavioral types and decisional when individuals put off the decisions. On the basis of conducted meta-analysis, Steel (2010) reported no empirical evidence for this model and stated that there is support for procrastination as a one-dimensional construct characterized by dysfunctional delay. That is, procrastination is irrationally putting tasks off (Steel, 2010) and working against own interests.

Studies are reporting that procrastinating behavior does not always have to lead to negative consequences, but sometimes can be related to constructive behavior and positive results (Schraw et al., 2007; Sokolowska & Zusho, 2006). Findings of Chu and Choi (2005) have shown that active procrastinators consciously choose to procrastinate because their work-relevant performance improves due to close deadline. As the deadline approaches, active procrastinators organize their time better and become more creative and more motivated to perform the tasks. Accordingly, it can be concluded that procrastination is not necessarily maladaptive behavior. In addition, Kim and Seo (2013) reported that active procrastination is positively related to flow and effort regulation.



However, many studies on procrastination emphasize its maladaptive nature (Ariely & Wertenbroch, 2002; Milgram, 1991) in students with low self-esteem and competence (Steel et al., 2001). The maladaptive aspect of procrastination is especially expressed in students with high fear of failure (Solomon & Rothblum, 1984) and a strong tendency towards perfectionism (Hewitt & Flett, 1991). In general, researchers are agreed that procrastination can be a serious problem leading to low performance, poor psychological health and well-being (Reinecke et al., 2016; Rozental & Calbring, 2014). Meta-analysis on causes and effects of procrastination conducted by Steel (2007) demonstrated that connection of procrastination with neuroticism, rebellion and desire for sensations is weak, whereas aversion to given task, delaying execution of the task, impulsivity, self-control as a trait, conscientiousness, distractibility, organization and achievement motivation were registered as strong and consistent predictors of tendency to procrastinate. In addition, Nedeljković (2012) reported on dominant negative attachment, high motivation and focus on negative past as predictors of procrastination behavior among students.

The term working styles refers to a person's characteristic behavior in the same or similar situations, developed in the period of early socialization and raised from powerful motivation (Franceško & Mirković, 2008). According to Hay (2009), working styles refer to how individuals approach the task. Working styles are subconscious attempts of the individuals to behave in a way they will gain needed recognition from the others and represent programmed responses to messages sent by important people from the past that we carry in ourselves (Hay, 2009). Basic working styles are *hurry up*, *be perfect*, *please people*, *work hard* and *be strong* (Hay, 2009).

Individuals with working style *hurry up* work fast and can do a lot within short time. Because of their estimation that they need less time than planned in order to perform tasks and due to their preference to work under the time pressure, they show tendency to delay work until it becomes urgent. When work fast, they are prone to delay the deadlines and deliver work with poor quality but in general, these individuals can be efficient, react well under the pressure, and may be resourceful with short deadlines. Their orientation is to obtain gratification and to avoid deprivation (Hazell, 1989). Individuals with dominant working style *be perfect* strive for perfection, pay attention to details and thoroughly prepare themselves for performing the task. They are good planners, look ahead and try to have a plan for any unexpected situation, but can break deadlines because they need more time to check every detail. Their tendency is to acquire knowledge, to develop self-control and to avoid shame due to incompetence (Hazell,



1989). *Please people* is a working style that denotes orientation to other individuals' needs. Individuals with this working style are empathetic, friendly, generous, and take care of others, thus delaying their own obligations. Their behavior is oriented towards obtaining care (love, approval) and avoiding abandonment (rejection, solitude) (Hazell, 1989). Working style *Work hard* is characterized by motivation based on enthusiasm. That is, in individuals with this working style as dominant, motivation is at the highest level when they are supposed to do something new.

On the other hand, they are prone to frequent changes of their own interest and often accept new tasks before completing those already started. This leads to delay the work tasks to which they hardly ever return. For them, it is more important to work hard than to complete the work. These working style behaviors are directed towards gaining rewards for the completion of difficult tasks and avoiding defeat (Hazell, 1989). Working style *Be strong* is characterized both by strong self-criticism as well as high expectations from others. Individuals with a dominant be strong working style react rationally in crisis situations and remain calm under pressure. They are self-sufficient and have energy when facing obstacles or barriers. Their tendency is to gain security, better control of the emotions and to avoid vulnerability (Hazell, 1989).

#### *Literature review*

Studies on procrastination have most often been directed toward its four types of behavior: academic procrastination, procrastination at the workplace, everyday life, and decision-making. Academic procrastination was studied in the student population and referred to the consideration of procrastination regarding academic tasks (Solomon & Rothblum, 1984) and academic performance (Alp & Sungur, 2017; Cormak et al., 2020; Steel et al., 2001). Its difference to work procrastination concerns the consequences of such behavior. Academic tasks are mostly individual efforts, while tasks at the workplace are usually related to workers' whole team. Accordingly, procrastination at the workplace affects the overall efficiency and achievement of an organization and is far more costly than academic procrastination (Hammer & Ferrari, 2002; Lonergan & Maher, 2000). Everyday tasks and responsibilities may also become a target of procrastinating behavior (Lay & Brokenshire, 1997; Milgram et al., 1988; Sigall et al., 2000) and are related to everyday decision making.



Considering academic procrastination, [Onwuegbuzie's \(2004\)](#) study showed that this construct was significantly and positively related to statistics anxiety, test anxiety, social anxiety and generalized anxiety. Similarly, [Solomon and Rothblum \(1984\)](#) found that fear of failure as a facet of procrastination was associated with anxiety and depression, irrational cognition, low self-esteem, and lack of assertion. A negative relationship between tendency to procrastinate and self-appraisal (self-esteem and self-efficacy) was reported in research conducted by [Ferrari et al. \(1995\)](#). Further, this investigation demonstrated that procrastination behavior was positively linked to self-presentation strategies (avoiding effort and responsibility for potential failure that could damage self-esteem) and self-handicapping strategies (putting barrier or handicap in the way of one's own success). More recent studies showed that procrastination was related to experiences of stress among students ([Sirois, 2014](#)) and lower level of life satisfaction ([Özer & Saçkes, 2011](#)). Another study demonstrated that high propensity to procrastinate can be predicted by extrinsic attribution style (context and lack), low extrinsic motivation, and high perfectionism. These relationships were evidently stronger among female students compared to male students ([Brownlow & Reasinger, 2000](#)). [Fee and Tangney's \(2000\)](#) study conducted among undergraduates revealed a significant relationship between chronic procrastination and perfectionism, which was moderated by shame. Further, a stable relationship of procrastination to perfectionism and psychological distress in undergraduate students across time was registered ([Rice et al., 2012](#)).

In a recent study, [Kok \(2016\)](#) reported that procrastination correlated positively to extrinsic motivation and negatively to intrinsic motivation. Moreover, procrastination was related to self-regulatory strategies (Kok, 2016) and self-efficacy for self-regulation ([Klassen et al., 2009](#); [Klassen et al., 2008](#)). On the other hand, no correlation was found between academic procrastination and the Meyers-Briggs Types Indicator's personality dimensions ([Ferrari et al., 1992](#)). Contrary, it was reported that personality dimension conscientiousness was negatively and neuroticism was positively and significantly associated with procrastination among undergraduate students ([Johnson & Bloom, 1995](#)). In addition, the authors registered a significant and negative relationship of procrastination behavior to self-discipline as a facet of conscientiousness and impulsiveness as a facet of neuroticism. [Steel et al. \(2001\)](#) have stated that results on the association between procrastination and personality are uncertain depending upon how procrastination behavior is measured (i.e. through observation or using self-reported



measures). But, as Ferrari et al. (1992) have stressed, individuals who tend to procrastinate should be distinguished from non-procrastinators exploring personality styles. Díaz-Morales et al. (2008) found that personality styles are significant predictors of avoidant procrastination.

Results on gender differences regarding procrastination are not consistent. It was reported that the tendency to procrastinate was higher among male students in comparison to their female colleagues in America (Brownlow & Reasinger, 2000), in six North and Central European countries (Svardal et al., 2016), as well as in English-speaking countries (Steel & Ferrari, 2013). On the other hand, gender differences in procrastination among Iranian students were not found (Sepehrian & Lotf, 2011).

#### *Aim of the study*

Taking into account that additional research on procrastination and its association with personality characteristics/styles is needed and given that tendency to procrastinate work obligations/academic tasks is closely associated with motivation and self-regulation, this study was focused on the relationship between procrastination and working styles as personal characteristics that determine approaching to work/academic tasks and motivate/shape work behavior. Namely, procrastination in general, presents motivational problem (Klingsieck et al., 2013; Senécal et al., 1995), while working styles, as was elaborated, can operate as motivational factors (Hay, 2009) and along with their other characteristics can influence work/academic tasks completion or their delay in different ways.

Considering aforementioned, the aim of the study was to investigate how working styles *hurry up, be perfect, please people, work hard, and be strong* differentiate between high and low procrastination in male and female high school students. Namely, it was explored how propensity to procrastination is related to these five working styles and if this relationship is moderated by gender. Accordingly, the intention was to contribute to the enlargement of the existing empirical evidence on procrastination behavior and its link to working styles as personal characteristics, i.e. motivational factors that influence work behavior, as well as, to add new data to the previous findings on the role of gender in procrastination.



## METHOD

### *Sample*

One hundred and forty-two high school students from two high schools in Niš, Serbia, participated in the study. Gender structure comprised 72 boys and 70 girls aged from 15 up to 19 years. The average age was 16.11 years ( $SD = 1.26$ ).

### *Measures*

Procrastination was assessed using *Irrational Procrastination Scale (IPS)* (Steel, 2010) with nine statements (e.g. *I delay tasks longer than I should*). Recent studies suggested that it is a better measure of core procrastination in comparison to other scales (Svartdal & Steel, 2017; Svartdal et al., 2016). Respondents gave their responses on a five-point Likert's scale (from 1 - Not at all true for me to 5 - Completely true for me). Items 2, 5 and 9 have been re-coded before calculating the coefficient of procrastination. Sample of re-coded items is: *I will do everything when I believe that it needs to be done*. Higher score indicated highly expressed tendency to procrastination. The internal consistency of the scale obtained in this study was  $\alpha = .68$  (9 items).

*Working Styles Questionnaire* (Hay, 2009) with 25 statements was used to measure five working styles *hurry up, be perfect, work hard, please people and be strong*. Answers were given on 9 point scale ranging from 0 - the lowest level of agreement to 8 - the highest level of agreement. Higher obtained score denoted to higher expression of the measured working styles. The reliability of the scale in this study sample was  $\alpha = .75$  (25 items).

### *Procedure*

The study was carried out during regular classes and with the previous consent of the high schools' principals. Students were invited to participate in the study and informed that it was anonymous and voluntary and that the results will be used for research purposes only. Respondents were also asked to carefully check whether they had answered all the questions in the survey. The time needed for completing the questionnaires was around 30 minutes.





*Data analysis*

Two-way multivariate analysis of variance was performed to test procrastination (low/high), gender (male/female) and procrastination x gender differences regarding working styles. Study participants were separated into groups of a low and high expressed tendency to procrastination using mean as cut score ( $M = 3$ , expressed on a scoring scale from 1 to 5). The sample size requirements of 20 participants per group (Hair et al., 2014) were met. Bartlett test of sphericity was statistically significant ( $\chi^2 = 48.26, p < .001$ ) and thus indicated that continuous variables in the analysis are correlated. Variance-covariance matrices of the working styles were not equal across different levels of procrastination and gender (Box's  $M = 75.63, F = 1.57, p < .01$ ). For that reason, Pillai's Trace, as recommended in Meyers et al. (2013), was reported to test differences between students with a low and high tendency to procrastination in regard to a composite of five working styles when gender was introduced as a moderator variable.

## RESULTS

Mean and standard deviation of working styles in study groups of low and high expressed procrastination and gender groups are summarized in Table 1. In general, study participants reported a moderate tendency to procrastinate ( $M = 3.03$ ) compared to scale midpoint, which was 3, ranging from 1 to 5. Sixty-four participants scored up to 3 on a measurement scale of procrastination, while 78 have obtained a score 3 or higher. Accordingly, they were categorized as low procrastination group and high procrastination group, respectively.

Considering examined working styles, please people was highly expressed among students who participate in the study, while be perfect working style was assessed at the lowest level of preference. More precisely, the tendency to please people in work was relatively highly expressed ( $M = 6.35$ ) in comparison to scale's midpoint, which was four ranging from 0 to 8, work hard, be strong and hurry up styles were above the average ( $M = 5.23, M = 4.8, \text{ and } M = 4.72$ , respectively). To be perfect in performing work activities, as was found, was of moderate importance for study participants ( $M = 4.37$ ).





Table 1.  
*Mean differences in five working styles in male and female students with low and high procrastination.*

Work styles	Gender	Procrastination	<i>M</i>	<i>SD</i>	<i>N</i>
Work hard	male	low	6.20	1.92	30
		high	4.86	2.46	42
		Total	5.42	2.33	72
	female	low	5.20	2.01	34
		high	4.89	1.99	36
		Total	5.04	1.99	70
	Total	low	5.67	2.01	64
		high	4.87	2.24	78
		Total	5.23	2.17	142
Please others	male	low	5.97	2.02	30
		high	6.38	2.02	42
		Total	6.21	2.02	72
	female	low	6.62	1.88	34
		high	6.39	2.03	36
		Total	6.50	1.95	70
	Total	low	6.31	1.96	64
		high	6.38	2.01	78
		Total	6.35	1.98	142
Be perfect	male	low	5.13	1.91	30
		high	3.52	2.26	42
		Total	4.19	2.26	72
	female	low	5.00	2.30	34
		high	4.11	2.55	36
		Total	4.54	2.45	70
	Total	low	5.06	2.11	64
		high	3.79	2.40	78
		Total	4.37	2.35	142
Be strong	male	low	5.33	2.12	30
		high	4.59	1.91	42
		Total	4.90	2.02	72
	female	low	4.91	1.82	34
		high	4.52	2.70	36
		Total	4.71	2.30	70
	Total	low	5.11	1.96	64
		high	4.56	2.29	78
		Total	4.81	2.16	142
Hurry up	male	low	4.43	2.39	30
		high	4.28	2.36	42
		Total	4.35	2.36	72
	female	low	3.94	2.33	34
		high	6.22	2.00	36
		Total	5.11	2.44	70
	Total	low	4.17	2.35	64
		high	5.18	2.39	78
		Total	4.72	2.42	142



In table 2, results from applied two-way MANOVA are presented. Pillai's Trace statistic showed that the relationship between procrastination behavior and a composite of work hard, hurry up, be strong, be perfect, and please others working styles was moderated by gender (i.e. procrastination x gender interaction was statistically significant, *Pillai's Trace* = .115,  $F(5, 134) = 3.47$ ,  $p < .01$ ,  $\eta^2 = .115$ ).

Table 2.

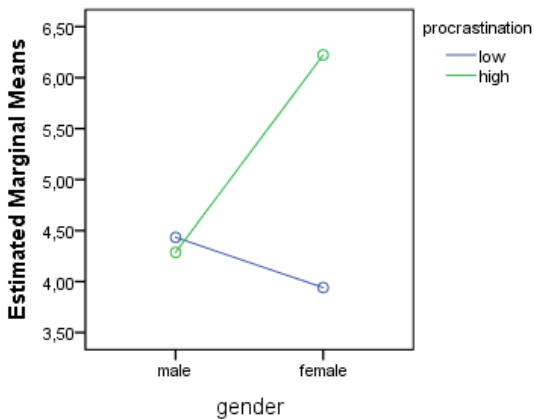
*Two-way multivariate analysis of variance in working styles across high and low procrastination and gender.*

	Pillai's Trace	$F(5, 134)$	Partial $\eta^2$
Main effect of gender	.049	1.40	.05
Main effect of procrastination	.126	3.86**	.13
Interaction effect gender x procrastination	.115	3.47**	.12

Univariate analysis (two-way ANOVA) revealed that only the relationship between procrastination and working style hurry up was moderated by gender ( $F(1, 138) = 9.97$ ,  $p < .01$ ,  $\eta^2 = .067$ ) (Table 3). Further, one-way ANOVA was conducted to estimate simple effects, i.e. differences in the tendency to hurry up while working among male students scored low and high in regard to procrastination and female students with a low and high propensity to procrastinate. Results indicated statistically significant simple effects ( $F(3, 138) = 7.12$ ,  $p < .001$ ). Post hoc comparisons using the Tukey test indicated that this working style was almost equally expressed between male students with a low ( $M1 = 4.43$ ) and high ( $M2 = 4.28$ ) propensity to procrastinate their obligations. Contrary, female students with a highly expressed tendency to procrastinate showed evidently stronger preference to work under time pressure and delay work until it becomes urgent compared to female students who tend to procrastinate less ( $M4 = 6.22$  vs.  $M3 = 3.94$ , respectively).

In addition, female students with high procrastination, as was found, were more prone to practice this working style in comparison to male students from both low and high procrastination groups. Graphical representation of the procrastination x gender interaction is given in Graph 1.





Graph 1. Relationship between procrastination and hurry up working style in male and female students.

Table 3. Two-way analysis of variance in five working styles across high and low procrastination and gender.

		MS	F(1, 138)	Partial $\eta^2$
Main effect of gender	Work hard	8.10	1.78	.013
	Please others	3.80	.96	.007
	Be perfect	1.8	.35	.003
	Be strong	2.09	.45	.003
	Hurry up	18.25	3.53	.025
Main effect of procrastination	Work hard	24.10	5.30*	.037
	Please others	.30	.08	.001
	Be perfect	54.60	10.50**	.071
	Be strong	11.01	2.36	.017
	Hurry up	39.81	7.69**	.053
Interaction effect of gender x procrastination	Work hard	9.20	2.03	.014
	Please others	3.62	.91	.007
	Be perfect	4.54	.87	.006
	Be strong	1.10	.24	.002
	Hurry up	51.59	9.97**	.067
Error	Work hard	4.544		
	Please others	3.97		
	Be perfect	5.20		
	Be strong	4.67		
	Hurry up	5.17		

However, hurry up working style, as well as work hard, be perfect, please others, and be strong did not differ significantly between two gender groups neither separately (all two-way ANOVA's



results n.s.), nor as a composite variable (*Pillai's Trace* = 0.05,  $F(5, 134) = 1.40$ ,  $p > .05$ ). On the other hand, conducted two-way MANOVA revealed that examined five working styles are statistically significantly related to procrastination in high school students who participated in the study (significant main effect of procrastination (*Pillai's Trace* = 0.126,  $F(5, 134) = 3.86$ ,  $p < .01$ ,  $\eta^2 = .126$ ). Specifically, two-way ANOVA showed that students who procrastinate more expressed a higher tendency to complete work/academic obligations in a hurry/in the last moment ( $F(1, 138) = 7.69$ ,  $p < .01$ ,  $\eta^2 = .053$ ), are less prone to perfectionism ( $F(1, 138) = 10.50$ ,  $p < .01$ ,  $\eta^2 = .071$ ) and are less committed to hard work ( $F(1, 138) = 5.30$ ,  $p < .01$ ,  $\eta^2 = .037$ ) if compared to students with a low tendency towards procrastination ( $Mhp = 5.18$  vs.  $Mlp = 4.17$ ,  $Mhp = 3.79$  vs.  $Mlp = 5.06$ ,  $Mhp = 4.87$  vs.  $Mlp = 5.67$ , respectively) (Table 3).

## Discussion

This study aimed to investigate how procrastination behavior is related to five working styles, i.e. hurry up, be perfect, please people, work hard and be strong among high school students in Serbia when gender was introduced as a moderator of this relationship. In general, Serbian high school students who participated in the study reported a moderate tendency to postpone academic tasks, i.e. to manifest irrational delay of planned activities. In regard to working styles, please people was found to be dominant, which implies that they tend to be altruistic and help others perform academic activities, putting their own tasks off. This behavior is in line with collectivistic cultural orientation, still characteristic of the Balkan region. On the other hand, setting high standards and striving for perfection in completing academic requirements as attributes of be perfect working style were expressed at the lowest level among surveyed students. In sum, young people in this cultural context probably are more oriented to satisfy others' needs and expectations than to strive to as better achievements as possible.

As was found, high procrastination was associated with a highly expressed hurry up working style. High school students whose usual approach to work/studying is to delay their academic obligations and, consequently, to do academic tasks in a short period of time or in a hurry, expectedly are more prone to procrastination behavior. Considering that they prefer to work under pressure, expecting gratification in return, it is possible to see procrastination as a way to express their own capability to study in those circumstances managing many academic tasks that previously were voluntarily delayed. Similarly, Kok (2016) found a positive relationship



between extrinsic motivation and procrastination behavior. Differentiation between low vs. high procrastination in regard to hurry up as an approach to work obligations should be explained through the intention-action gap as a core characteristic of procrastination (Steel, 2007). As a result of distraction by short-term gratification, the author stressed that individuals could easily put off their planned tasks with long-term rewards. In addition, this study's results are in line with Svartdal et al. (2018) recent findings that procrastination is linked to onset delay of the intended behavior and preferences to take actions later than sooner.

On the other hand, the tendency to procrastinate and work in a hurry probably will result in performed tasks but with poor quality. As was reported, procrastination is significantly related to performance (Kim & Seo, 2015; Steel et al., 2001). This finding, also, might be explained through lack of self-determination. In that line, previous studies have shown that lack in self-determined motivation is related to high procrastination (e.g. Lee, 2005).

More importantly, conducted analysis revealed that gender statistically significantly moderated the relationship between procrastination and hurry up working style. That is, the registered association was significant in females, but not among male high school students. While male students, regardless of their level of procrastination, did not differ in expressed tendency to hurry up in performing tasks, female students with a high propensity to procrastinate approach tasks in a hurry and tend to complete them in the last moment compared to female students with low procrastination. Similarly, Özer et al., (2009) showed that boys and girls manifest procrastination behavior for different reasons.

Further, results indicated that students' propensity to procrastinate was significantly related to be perfect working style. Accordingly, respondents who tend to be perfect in performing their academic tasks, who carefully plan their activities in advance and are well organized, were less prone to procrastination behavior. It could be noted that a perfect working style implies high self-control, which may prevent procrastination. This probably could be supported by the registered negative relationship of procrastination behavior to consciousness and self-discipline as its facet (e.g. Johnson & Bloom, 1995). More recent studies have revealed that consciousness (Tibbett & Ferrari, 2015) and consciousness with all its facets (Steel and Klingsieck, 2016) are strong predictors of procrastination. However, negative correlation between procrastination behavior



and be perfect working style found in this research is not consistent with existing results (e.g. [Brownlow & Reasinger, 2000](#); [Fee & Tangney, 2000](#), [Rice et al., 2012](#)).

This inconsistency might be explained through the type of perfectionism studied. Namely, this research's focus was on work behavior characterized by tendency to perform academic tasks as better as possible, having good/positive work habits and high self-discipline, whereas in the mentioned studies, trait perfectionism was examined. In that line, [Özer et al. \(2014\)](#) have reported that procrastination is positively associated with perfectionism expressed as doubt about actions but negatively related to perfectionism in regard to personal standards.

As was reported, along with the styles be perfect and hurry up, the work hard style was significantly related to procrastination. Since the main feature of work hard style is enthusiasm ([Hay, 2009](#)), then can be assumed that students who approach tasks eagerly and actively, who prefer challenging tasks and are ready to put continuous effort into tasks completion, will be less inclined to delay academic requirements.

### **Limitations and further implications of the study**

This study has few limitations. Firstly, self-reported measures were used, which might bring distorted and socially desirable responses. Secondly, the study does not permit to make conclusions on causality between variables. Further, the sample was convenient and only consisted of students from high schools in one city that did not permit generalizing the results. Further, relationship between procrastination to working styles only was examined. It would be valuable to explore the role of self-appraisal or self-protective behavior in the link between the tendency to procrastinate and working styles and the mediation effect of working styles on the relation between procrastination behavior and academic outcomes in future studies. Also, heterogeneous samples in regard to age, type of study, nationality might be used.

Nevertheless the limitations, this study has theoretical as well as practical significance. Theoretical significance is reflected in obtaining new empirical data considering the relationship of procrastination behavior to working styles be perfect, hurry up, work hard, be strong and please people in a sample of high school students from Serbia.



Previous studies suggested that procrastination among students can be decreased by using assignments consistent with their interests (Ackerman & Gross, 2005) and are concrete (McCrea et al., 2008). This study's results have practical implications in forcing work habits oriented to planning, organizing and realizing work/academic goals, managing time and efforts and persisting in performing all requirements and tasks to prevent procrastination behavior. This implies what was concluded by Klingsieck et al. (2013) that intervention programs to help students overcome procrastination are needed. Eckert et al. (2016) suggested that, in order to overcome procrastination, emotion-focused strategies that strengthen emotion regulation skills should be considered as well.

### **Conclusions**

According to the obtained findings, it could be concluded that persistence, effort and high standards in tasks completion, are related to lower tendency to procrastination among students regardless of their gender. On the other hand, relationship between procrastination behavior and way of planning and organizing work activities and tasks differ across students' gender. That is, female students with highly expressed procrastination behavior, as was found, tend to complete work tasks in a short period of time and under pressure.

### **Funding/Financial Support**

The authors have no funding to report.

### **Other Support/Acknowledgement**

The authors have no support to report.

### **Competing Interests**

The authors have declared that no competing interests exist.





## References

- Ackerman, D. S., & Gross, B. L. (2005). My instructor made me do it: Task characteristics and procrastination. *Journal of Marketing Education*, 27(1), 5-13.  
<https://psycnet.apa.org/doi/10.1177/0273475304273842>
- Alp, S. , & Songur, S. (2017). Investigating Relationships between Undergraduate Students' Flow Experience, Academic Procrastination Behavior, and Calculus Course Achievement. *Eurasian Journal of Educational Research*, 72, 1-22. <http://dx.doi.org/10.14689/ejer.2017.72.1>
- Ariely, D., & Wertenbroch, K. (2002). Procrastination, deadlines, and performance: self-control by recommitment. *Psychological Science*, 13(3), 219 – 224. <https://doi.org/10.1111/1467-9280.00441>
- 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(5), 15-34.
- Chu, A.H., & Choi, J.N. (2005). Rethinking procrastination: Positive effects of “active” procrastination on attitudes and performance. *Journal of Social Psychology*, 145, 245-264.  
<https://doi.org/10.3200/SOCP.145.3.245-264>
- Cormack, S.H., Eagle, L.A., & Davies, M.S. (2020). A large-scale test of the relationship between procrastination and performance using learning analytics. *Assessment & Evaluation in Higher Education*, 45(7), 1046-1059. <https://doi.org/10.1080/02602938.2019.1705244>
- Díaz-Morales, F., Cohen, J. R., & Ferrari, J. R. (2008). An integrated view of personality styles related to avoidant procrastination. *Personality and Individual Differences*, 45(6), 554–558.  
<https://doi.org/10.1016/j.paid.2008.06.018>
- Eckert, M., Ebert, D.D., Lehr, D., Sieland, B., & Berking, M. (2016). Overcome procrastination: Enhancing emotion regulation skills reduce procrastination. *Learning and Individual Differences*, 52, 10–18.  
<https://doi.org/10.1016/j.lindif.2016.10.001>
- Fee, R. L., & Tangney, J. P. (2000). Procrastination: A means of avoiding shame or guilt? *Journal of Social Behavior & Personality*, 15(5), 167-184.
- Ferrari, J. R. (1992) Psychometric validation of two procrastination inventories for adults: Arousal and avoidance measures. *Journal of Psychopathology & Behavioral Assessment*, 14(2), 97-110.  
<https://doi.org/10.1007/BF00965170>
- Ferrari, J. R., Johnson, J. L., & McCown, W. G. (1995). *Procrastination and task avoidance: Theory, research, and treatment*. Plenum Press. <https://psycnet.apa.org/doi/10.1007/978-1-4899-0227-6>



- Ferrari, J. R., Parker, J. T., & Ware, C. B. (1992). Academic procrastination: Personality correlates with Myers-Briggs types, self-efficacy, and academic locus of control. *Journal of Social Behavior & Personality*, 7(3), 495–502.
- Franceško M., & Mirković, B. (2008). *Organizaciono ponašanje: moć poznavanja organizacionog ponašanja*. USEE, Prometej.
- Hammer, C. A., & Ferrari, J. R. (2002). Differential incidence of procrastination between blue and white-collar workers. *Current Psychology*, 21, 333-338. <https://doi.org/10.1007/s12144-002-1022-y>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate Data Analysis* (7th ed.). Pearson Education Limited.
- Hay, J. (2009). *Working It Out At Work – Understanding Attitudes and Building Relationships* (2<sup>nd</sup> ed.). Sherwood Publishing.
- Hazell, J. W. (1989). Drivers as Mediators of Stress Response. *Transactional Analysis Journal*, 19(4), 212-223. <https://psycnet.apa.org/doi/10.1177/036215378901900406>
- Hewitt, P.L., & Flett, G.L. (1991). Perfectionism in the self and social contexts: conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, 60(3), 456-470. <https://psycnet.apa.org/doi/10.1037/0022-3514.60.3.456>
- Höcker, A., Engberding, M., Beißner, J., & Rist, F. (2009). Reduktion von Prokrastination: Module zum pünktlichen Beginnen und realistischen Planen. *Verhaltenstherapie*, 19(1), 28-32. <https://doi.org/10.1159/000202339>
- Johnson, J. L., & Bloom, M. A. (1995). An analysis of the contribution of the five factors of personality to variance in academic procrastination. *Personality and Individual Differences*, 18(1), 127-133. <https://doi.org/10.1016/0191-8869%2894%2900109-6>
- Kim, K. R., & Seo, E. H. (2015). The relationship between procrastination and academic performance: A meta-analysis. *Personality and Individual Differences*, 82, 26–33. <https://doi.org/10.1016/j.paid.2015.02.038>
- Klassen, R. M., Ang, R. P., Chong, W. H., Krawchuk, L. L., Huan, V. S., Wong, I. Y. F., & Yeo, L. S. (2009). A Cross-Cultural Study of Adolescent Procrastination. *Journal of Research on Adolescence*, 19, 799-811. <https://doi.org/10.1111/j.1532-7795.2009.00620.x>
- Klingsieck, K. B. (2013). Procrastination: When Good Things Don't Come to Those Who Wait. *European Psychologist*, 18, 24-34. <http://dx.doi.org/10.1027/1016-9040/a000138>
- Klassen, R. M., Krawchuk, L. L., & Rajani, S. (2008). Academic procrastination of undergraduates: low self-efficacy to self-regulate predicts higher levels of procrastination. *Contemporary Educational Psychology*, 33(4), 915-931. <https://doi.org/10.1016/j.cedpsych.2007.07.001>



- Klingsieck, K., Grund, A., Schmid, S., & Fries, S. (2013). Why Students Procrastinate: A Qualitative Approach. *Journal of College Student Development, 54*(4), 397-412. <http://doi.org/10.1353/csd.2013.0060>
- Kok, J. K. (2016). The relationships between procrastination and motivational aspects of self-regulation. *Jurnal Psikologi Malaysia, 30*(1), 30-39.
- Lay, C. H., & Brokenshire, R. (1997). Conscientiousness, procrastination, and person-task characteristics in job searching by unemployed adults. *Current Psychology, 16*, 83–96. <https://doi.org/10.1007/s12144-997-1017-9>
- Lee, E. (2005). The relationship of motivation and flow experience to academic procrastination in university students. *The Journal of Genetic Psychology, 166*(1), 5-14. <https://doi.org/10.3200/GNTP.166.1.5-15>
- Lonergan, J. M., & Maher, K. J. (2000). The relationship between job characteristics and workplace procrastination as moderated by locus of control. *Journal of Social Behavior and Personality, 15*(5), 213-224.
- Meyers, L. S., Gamst, G., & Guarino, A. J. (2013). *Applied multivariate research: Design and interpretation* (2nd ed.). Sage Publications, Inc.
- McCrea, S., Liberman, N., Trope, Y., & Sherman, S. (2008). Construal level and procrastination. *Psychological Science, 19*, 1308-1314. <https://doi.org/10.1111%2Fj.1467-9280.2008.02240.x>
- Milgram, N. (1991). Procrastination. In R. Dulbecco (Ed.), *Encyclopedia of human biology* (Vol. 6, pp. 149-155). Academic Press.
- Milgram, N.A., Sroloff, B., & Rosenbaum, M. (1988). The procrastination of everyday life. *Journal of Research in Personality, 22*(2), 197-212. [https://psycnet.apa.org/doi/10.1016/0092-6566\(88\)90015-3](https://psycnet.apa.org/doi/10.1016/0092-6566(88)90015-3)
- Nedeljković, J. (2012). *Integrativni model psiholoških prediktora akademske neefikasnosti*. Neobjavljena Doktorska disertacija. Filozofski fakultet, Niš, Serbia. [An Integrative model of psychological predictors of academic procrastination, Unpublished Doctoral Dissertation. Faculty of Philosophy, Niš, Serbia].
- Onwuegbuzie, A.J. (2004). Academic procrastination and statistics anxiety. *Assessment and Evaluation in Higher Education, 29*(1), 3-19. <https://doi.org/10.1080/0260293042000160384>
- Özer, B. U., Demir, A. & Ferrari, J. R. (2009). Exploring Academic Procrastination among Turkish Students: Possible Gender Differences in Prevalence and Reasons *The Journal of Social Psychology, 149*(2), 241–257. <https://doi.org/10.3200/socp.149.2.241-257>
- Özer, B. U., O'Callaghan, J., Bokszczanin, A., Ederer, E., & Essau, C. (2014). Dynamic interplay of depression, perfectionism and self-regulation on procrastination. *British Journal of Guidance & Counselling, 42*(3), 309-312. <https://doi.org/10.1080/03069885.2014.896454>



- Özer, B., & Saçkes, M. (2011). Effects of academic procrastination on college students' life satisfaction. *Procedia Social and Behavioral Sciences*, *12*, 512-519. <https://doi.org/10.1016/j.sbspro.2011.02.063>
- Reinecke, L., Meier, A., Aufenanger, S., Beutel, M., Dreier, M., Quiring, O., Stark, B., Wöfling, K., & Müller, K. (2016). Permanently online and permanently procrastinating? The mediating role of Internet use for the effects of trait procrastination on psychological health and well-being. *New Media and Society*, *20*(3), 862-880. <https://doi.org/10.1177%2F1461444816675437>
- Rice, K. G., Richardson, C. M., & Clark, D. (2012). Perfectionism, procrastination, and psychological distress. *Journal of Counseling Psychology*, *59*(2), 288-302. <https://doi.org/10.1037/a0026643>
- Rozental, A., & Carlbring, P. (2014). Understanding and Threatening Procrastination: A Review of a Common Self-Regulatory Failure. *Psychology*, *5*, 1488-1502. <http://dx.doi.org/10.4236/psych.2014.513160>
- Schraw, G., Wadkins, T., & Olafson, L. (2007). Doing the things we do: A grounded theory of academic procrastination. *Journal of Educational Psychology*, *99*(1), 12-25. <https://psycnet.apa.org/doi/10.1037/0022-0663.99.1.12>
- Senécal, C., Koestner, R., & Vallerand, R.J. (1995). Self-regulation and academic procrastination. *The Journal of Social Psychology*, *135*(5), 607-619. <https://psycnet.apa.org/doi/10.1080/00224545.1995.9712234>
- Sepehrian, F. & Lotf, J. J. (2011). The effect of coping styles and gender on academic procrastination among university students. *Journal of Basic and Applied Scientific Research*, *5*(10), 1202-1206.
- Sigall, H., Kruglanski, A., & Fyock, J. (2000). Wishful Thinking and Procrastination. *Journal of Social Behavior and Personality*, *15*(5), 283-296.
- Sirois, F. (2014). Procrastination and stress: Exploring the role of self-compassion. *Self and Identity*, *13*(2), 128-145. <https://doi.org/10.1080/15298868.2013.763404>
- Sokolowska, J., & Zusho, A. (2006). "Effective" procrastination strategies? Self-regulation of academic procrastination among high achievers. Paper presented at the *American Psychological Association Annual Convention*, New Orleans.
- Solomon, L. J., & Rothblum, E. D. (1984). Academic Procrastination: Frequency and Cognitive - Behavioral Correlates. *Journal of Counseling Psychology*, *31*(4), 503-509. <https://psycnet.apa.org/doi/10.1037/0022-0167.31.4.503>
- Steel, P. (2010). Arousal, avoidant and decisional procrastinators: Do they exist? *Personality and Individual Differences*, *48*, 926-934. <http://dx.doi.org/10.1016/j.paid.2010.02.025>
- Steel, P. (2007). The Nature of Procrastination: A Meta-Analytic and Theoretical Review of Quintessential Self-Regulatory Failure. *Psychological Bulletin*, *133*(1), 65-94. <https://psycnet.apa.org/doi/10.1037/0033-2909.133.1.65>



- Steel, P., Brothen, T., & Wambach, C. (2001). Procrastination and personality, performance, and mood. *Personality and Individual Differences, 30*(1), 95–106. [https://psycnet.apa.org/doi/10.1016/S0191-8869\(00\)00013-1](https://psycnet.apa.org/doi/10.1016/S0191-8869(00)00013-1)
- Steel, P. & Ferrari, J. (2013). Sex, education and procrastination: An epidemiological study of procrastinators' characteristics from a global sample. *European Journal of Personality, 27*(1), 51-58. <https://psycnet.apa.org/doi/10.1002/per.1851>
- Steel, P. & Klingsieck, K. (2016). Academic procrastination: Psychological antecedents revised. *Australian Psychologist, 51*(1), 36-46. <https://doi.org/10.1111/ap.12173>
- Svartdal, F., Pfuhl, G., Nordby, K., Foschi, G., Klingsieck, K.B., Rozental, A., Carlbring, P., Lindblom-Ylänne, S. & Rębekowska, K. (2016). On the measurement of procrastination: Comparing two scales in six european countries. *Frontiers in Psychology, 7*, 1-11. <https://doi.org/10.3389/fpsyg.2016.01307>
- Svartdal, F., & Steel, P. (2017). Irrational Delay Revisited: Examining Five Procrastination Scales in a Global Sample. *Frontiers in Psychology, 8*, 1-10. <https://doi.org/10.3389/fpsyg.2017.01927>
- Svartdal, F., Granmo, S., & Færevaaag, F. S. (2018). On the Behavioral Side of Procrastination: Exploring Behavioral Delay in Real-Life Settings. *Frontiers in Psychology, 9*, 746. <https://doi.org/10.3389/fpsyg.2018.00746>
- Tibbett, T. P., & Ferrari, J. R. (2015). The portrait of the procrastinator: Risk factors and results of an indecisive personality. *Personality and Individual Differences, 82*, 175–184. <https://doi.org/10.1016/j.paid.2015.03.014>

## About the authors

**Zorica Marković** is an Associate Professor in Work and Organizational Psychology. Her main interests are in the field of leadership. She studies leaders and followers behavior, leadership styles as well as working styles.

**Biljana Blazhevaska Stoilkovska** is an an Associate Professor at Faculty of Philosophy, Ss Cyril and Methodius University in Skopje. She teaches Work and Organizational Psychology, Vocational Psychology, Statistics in Psychology and Advanced statistical methods. Her interests are in the field of career choice and development, work-life balance, well-being at work, work and academic procrastination.

**Jasmina Nedeljković** is an Associate Professor Faculty of Legal and Business Studies “dr Lazar Vrkatic”. She teaches Psychometrics. Her main interest are in the field of psychological testing.



## Corresponding Author's Contact Address

Biljana Blazhevska Stoilkovska  
Department of Psychology,  
Faculty of Philosophy,  
Ss Cyril and Methodius University in Skopje,  
blvd. Goce Delčev, 9A,  
1000 Skopje,  
Republic of North Macedonia.  
E-mail: [biljanabs@zf.ukim.edu.mk](mailto:biljanabs@zf.ukim.edu.mk)

