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Procrastination: Exploring the Role of Coping Strategy

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Honours Psychology Thesis

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## Abstract

The current study examined the relationship between procrastination styles, coping styles, perceived stress, personality traits, and academic outcomes in a sample of undergraduate students ( $n = 42$ ). Results suggest that active procrastination is associated with active coping and less perceived stress. In contrast, passive procrastination relates to greater perceived stress. In addition, the results indicate that active procrastination is positively associated with extroversion and conscientiousness. Passive procrastination is positively related to neuroticism. Moreover, procrastination styles are not associated with academic outcomes in the current study. Overall, the results suggest that procrastination style is associated with active coping, perceived stress, and different personality traits.

*Keywords:* active procrastination, passive procrastination, coping, perceived stress, personality traits, academic outcome

### Procrastination: Exploring the Role of Coping Strategy

Procrastination is a form of needless delay where an individual often needlessly postpones an assignment. It is a common phenomenon in everyday life and has attracted researchers' interests in past decades (Klingsieck, 2013). Studies indicated the prevalence rate of procrastination is around 20-25% in the general population (Ferrari & Díaz-Morales., 2007). In academic settings, previous research reported that 23-95% of college students suffer from procrastination (Boysan & Kiral, 2016). Students also reported that procrastination typically occupies more than one-third of their daily activities and is usually accomplished through sleeping, reading, or watching television (Psychl et al., 2000). Additionally, the prevalence of procrastination is reported to be growing (Steel, 2007). Therefore, the causes and effects of procrastination are an interesting and important research field.

The literature on procrastination varies in the definition of procrastination with different perspectives (Corkin et al., 2011; Seo, 2013). One agreement on the nature of procrastination is that it involves the act of delay. However, a variety of different definitions of procrastination exists. Some researchers use the term procrastination solely for the dysfunctional form of delay with an irrational nature and negative outcomes (Steel, 2007), while others focus on the positive form of delay and potential benefits (Chu & Choi, 2005). Thus, there is no consistent definition of procrastination currently. Regarding the dysfunctional form of procrastination, some researchers have found that procrastination is damaging to both physical and psychological well-being (Klingsieck, 2013). In terms of physical well-being, procrastination is related to many symptoms of physical illness (i.e., number of symptoms or number of feeling stress in the past week) (Ferrari & Diaz-Morales, 2014). Additionally, procrastination is related to negative psychological well-being, anxiety, depression, higher perceived stress, weak impulse control, and

lack of persistence (Sirois et al., 2003; Ferrari & Diaz-Morales, 2014). Procrastination is associated with the lack of work discipline, poor time management skills, and an inability to work methodically (Ferrari & Diaz-Morales, 2014). Furthermore, procrastination is linked to negative financial well-being (Klingsieck, 2013). In the academic area, studies suggested that students who procrastinate are more anxious (Rothblum et al., 1986) and stressed (Tice & Baumeister, 1997) and associated with poor academic performance (Kim & Seo, 2015). Moreover, self-help books convey the idea that procrastination is associated with psychological distress and need intervention to reduce its negative impacts (Klingsieck, 2013).

Recent research, however, proposes a new perspective on procrastination. According to Chu and Choi (2005), procrastination in a positive form was linked to positive psychological health and academic performance. They suggested that not all dilatory behaviour causes a negative outcome because the postponement can be purposely planned. Individuals can benefit from postponing doing something (Seo, 2013). Chu and Choi (2005) defined purposely delayed behaviour as active procrastination and what is commonly referred to procrastination as passive procrastination.

The differences between passive procrastination and active procrastination involve two dimensions, the nature of delay (Klingsieck, 2013) and the emotional outcomes (Chu & Choi, 2005). The nature of delay distinguishes passive procrastination from active procrastination; if the delay is irrational, unnecessary, and harmful it is considered as passive procrastination (Klingsieck, 2013). In general, an individual with passive procrastination focuses on negative consequences caused by the delay, without recognizing potential positive outcomes. In contrast, an individual with active procrastination is not only aware of negative outcomes of delay, but also consider potential positive outcomes. Active procrastinators are confident that negative

outcomes will be outweighed by positive outcomes in the long-term (Klingsieck, 2013). In terms of emotional outcomes, passive procrastinators postpone tasks until the last minute with the feeling of guilt and depression. Long-term passive procrastination can lead to chronic distress, depression, and anxiety (Chu & Choi, 2005). While in the case of active procrastinators, they prefer to work under pressure and view the deadline as a challenge. This feeling immunizes them against the suffering feelings common in passive procrastinators (Chu & Choi, 2005). In a word, active procrastinators are able to achieve their goals with strong motivations before deadlines and this resulted in positive emotional outcomes.

As aforementioned, procrastination is linked to negative mental states, particularly higher perceived stress (Sirois et al., 2003; Sirois & Kitner, 2015). According to procrastination-health model, the role of coping is essential in explaining how procrastination relates to the poor health outcomes (Sirois et al., 2003). Coping is generally defined as cognitive and behavioural responses an individual adopted to deal with stress (Barendregt et al., 2014). In regard to procrastinators, procrastination can be considered as an avoidant behaviour an individual adopted to deal with aversive tasks (Blunt & Psychly, 2000). Coping will either exacerbate or alleviate potentially harmful outcomes caused by stress (Sirois & Kitner, 2015). That is, procrastination can be considered as an ineffective way to deal with stress, an avoidant behaviour, and the increase in stress due to procrastination then leads to poorer health.

Coping can either facilitate healthy adaptation to the stressor (adaptive coping) or result in avoidant and non-constructive responses leading to greater stress (maladaptive coping) (Sirois & Kitner, 2015). Therefore, coping can have direct or indirect effects on both physiological and psychological well-being. Moreover, procrastination is not only associated with stress but also can be viewed as a source of stress in long-term which contributes to negative health status

(Siroris et al., 2003). Characteristics coping responses also have an impact on procrastination. However, the relationship between coping responses and procrastination has not been fully investigated.

The aim of coping is reducing the anxiety and insecurity evoked by stress. Individuals experience stress when the demand of a challenge or threat exceed the available source for a challenge (Sirois & Kitner, 2015). There is a different classification of coping that can either be adaptive/maladaptive, or active/passive, but the basic concept of each category is similar. Active coping refers to an individual adopts meaningful ways to deal with problems and seeks social support and comfort (Barendregt et al., 2014), while passive coping refers to an individual is not doing anything to reduce or address the source of stress, such as withdrawal and social isolation (Ashkar & Kenny, 2007). The nature of active coping is to facilitate adaptation to the stressor, which is the same with adaptive coping. In the case of passive coping, it is similar to maladaptive coping that leads to further stress. In the specific definition of coping, active coping strategies involve taking actions or finding resources to deal with the problem, including planning and seeking out support. In contrast, passive coping includes any strategy that is not aiming to solve the problem, for instance, withdrawal and denial. Thus, coping strategies that focus on avoiding rather than solving the problem in order to enhance short-term mood regulation are considered as passive coping.

A considerable body of research has found that procrastination is associated with coping. Ferrari and Diaz-Morales (2014) found that procrastinators reported lower positive actions and were less likely to express feelings and needs compared to non-procrastinators, indicating that procrastinators were more likely to adopt passive coping in response to stress. Moreover, a recent meta-analysis suggested that procrastination was negatively associated with adaptive coping and

positively associated with maladaptive coping (Sirois & Kitner, 2015). However, some studies provide different findings. For example, Burns et al. (2000) found a negative relationship between procrastination and avoidant coping among college students. Although findings are inconsistent, possibly due to different samples and coping measures used, these results highlight the association between procrastination and coping. There is lack of research on how coping styles are related to procrastination styles. This question was a major focus in the current study to investigate the relation between procrastination styles and coping styles. Past research has indicated that there is both active and passive coping when dealing with a low priority or aversive task. Research has also found that people use active and passive coping strategies when dealing with stress. Finally, there is research that links procrastination and coping style. Taken together these results suggest that there may be an association between active procrastination and active coping and between passive procrastination and passive coping. Whether these relationships exist has not been directly assessed by past research.

Although procrastination varies in terms of the nature of delay and context of tasks, procrastination can be viewed as a trait pattern that relies on personality (Boysan & Kiral, 2016). The procrastination-health model not only highlights the importance of coping but also underlines the importance of personality traits. Based on this model, personality contributes to characteristic ways of coping which is important to the development of procrastination. It is reasonable to assume that personality traits have direct impacts on procrastination. The most widely examined and recognized theory of the human personality is big five traits, also known as five-factor model (Boysan & Kiral, 2016). This theory defines five dimensions of personality including openness, conscientiousness, extroversion, agreeableness, and neuroticism. Research has supported the premise that procrastination is associated with personality. Conscientiousness

dimension of big five traits theory is consistently associated with academic procrastination (Boysan & Kiral, 2016). Neuroticism is another dimension that has been consistently associated with procrastination (Boysan & Kiral, 2016; Steel et al., 2001). The relationship between other personality traits and procrastination is reported inconsistently (Boysan & Kiral, 2016; Nadeem, 2016). Overall, the relationship between procrastination and personality traits is consistently reported in the literature.

Although there is research on the link between procrastination and personality, most studies have focused on the link between personality traits and passive procrastination. There is little research on the relationship the big five personality traits and active procrastination. One research study reported that passive and active procrastination were related differently to big five traits (Kim et al., 2017). The study results suggested that active procrastination was positively correlated to extraversion and neuroticism. The further investigation is necessary to include different types of procrastination as a result of inadequate research on active procrastination and personality. The relationship between personality traits and procrastination styles was examined in the current study.

Procrastination can result in negative effects on multiple aspects as well as on academic performance. There is a vast empirical research on the relationship between procrastination and academic performance. Some research has reported procrastination has negative effects on academic performance, including learning, achievement (e.g., lower grades), intrinsic motivation (Shin & Goh, 2011; Vansteenkiste et al., 2009), and course withdrawals (Balkis, 2013). For example, one study found that academic performance decreased due to academic procrastination, even after controlling for student quality (Rotenstein et al., 2009). This finding is also generalized to Indian undergraduate dental students in which students with higher level of

procrastination predicted lower academic scores (Lakshminarayan et al., 2013). The negative association between procrastination and academic performance is supported in different samples and different settings. Moreover, poor academic outcomes may result from time pressure from procrastination which reduces accuracy and punctuality (Van Eerde, 2003). Also, procrastination negatively impacts students' satisfaction with lifestyles and college experiences (Grunschel et al., 2016; Hinsch & Sheldon, 2013; Steel, 2007), because procrastination predicts academic performance and academic performance predicts academic satisfaction (Balkis, 2013; Kim & Seo, 2015). In other words, as procrastination increases, academic performance decreases and negatively influences academic satisfaction (Duru & Balkis, 2017). These studies support the association between procrastination and academic performance in general.

With the investigation of active procrastination, several studies investigated how different procrastinating styles are related to academic performance. Passive procrastinators and active procrastinators differ in the purposive use of time, perceived time control, self-efficacy, grade point average (GPA) (Chu & Choi, 2005), and in the level of self-regulation skills (Shin & Goh, 2011). Additionally, Corkin et al., (2013) found students who reported higher active procrastination received better grades compared to students with passive procrastination. Research emphasized the relationship between academic performance and procrastination. It is reasonable to assume that procrastination styles have different impacts on academic performance, which was investigated in the current study.

The current study investigated four hypotheses related to procrastination. The major hypothesis was that there was a relationship between stress coping styles and procrastination styles. It was predicted that active procrastinators prefer active coping and passive procrastinators prefer passive coping. The second hypothesis was that there was an association

between perceived stress and procrastination styles. It was predicted that active procrastinators would perceive lower stress and passive procrastinators perceive higher stress. The third hypothesis was that there was a relationship between procrastination styles and personality that personality traits contribute to procrastination styles distinctly. The last hypothesis was that there was an association between procrastination styles and academic performance. It was predicted that active procrastinators have better academic outcomes, and passive procrastinators have poor academic outcomes.

## **Method**

### **Participants**

Participants were 42 university students enrolled in an introductory psychology course. Participants completed all measures in exchange for extra course credit. They were aged between 18 and 43. The mean age was 19.57 ( $SD = 4.06$ ) and greater proportion were females ( $n = 40$ ; 95%), and less proportion were males ( $n = 2$ ; 5%).

### **Material**

A demographic form was used to gather a participant's demographic information.

A self-report 16-item scale was used to assess active delay from four aspects: outcome satisfaction, preference for pressure, intentional decision, and ability to meet deadlines (Choi & Moran, 2009). The present study used the overall measure of active procrastination. Response options range from 1 (that's me for sure) to 4 (that's not me at all). The lower score on the scale indicates higher levels of active procrastination.

Tuckman's (1991) 35-item Procrastination Scale was modified to measure passive procrastination. Ratings were made on the four-point scale with endpoints labelled 1 (that's me

for sure) to 4 (that's not me at all) to measure the extent of passive procrastination. The lower score on the scale indicates the higher level of passive procrastination.

The coping strategy was assessed with Carver's (1997) Brief Cope inventory. The Brief Cope inventory was modified into two components measuring passive and active coping. Each component was comprised of six items. Response options range from 1 (never at all) to 4 (a lot).

The stress level was measured by the Perceived Stress Scale (PSS) from Cohen (1994). The overall measure of perceived stress level was adopted in the current study. Response options range from 1 (never) to 5 (always).

The personality was assessed with the Interpersonal Adjective Scale Revised-Big 5 (IASR-B5) (Trapnell & Wiggins, 1990). The IASR-B5 was modified by using 10 items for each personality trait. Response options range from 1 (extremely inaccurate) to 8 (extremely accurate). All scales have been reported to have good reliability and validity.

### **Procedure**

Participants completed a survey booklet consisting of demographic questions and 116 Likert-scaled items from the scales described under Materials. All items pertained to university students. Participants were tested in small groups and they have been verbally informed the basic instruction first. Then they would follow the instructions on the questionnaires to finish the study. Students' Psychology 1000 grade were also gathered from their instructors.

### **Results**

The participants were assigned into three groups based on the dominant procrastination style by using difference scores between active and passive procrastination scales. The three groups were the active procrastinator (Group 1), mixed procrastinator (Group 2), and passive procrastinator (Group 3). One-way analyses of variance (ANOVAs) were conducted to

determine if the means for active coping, passive coping, perceived stress, personality traits, and academic outcomes differed between groups. Tukey's HSD test was used for *post hoc* analysis of the variables.

The results suggested there was a significant group difference on active coping,  $F(2, 39) = 3.56, p = .038, \eta^2 = .154$ . The result of post hoc analysis indicated that participants in Group 1 scored significantly higher on active coping than Group 3,  $p < .05$  (see Figure 1). However, the result suggested there was no significant group difference on passive coping,  $p > .05$  (see Figure 1). Significant group difference was also found for perceived stress,  $F(2, 39) = 7.94, p = .001, \eta^2 = .289$ . Participants in Group 1 and Group 2 scored significantly lower on perceived stress than Group 3 respectively,  $p < .05$  (see Figure 2).

In the analysis of personality traits, significant group differences were found for extroversion,  $F(2, 39) = 7.22, p = .002, \eta^2 = .270$ , conscientiousness,  $F(2, 39) = 5.65, p = .007, \eta^2 = .225$ , and neuroticism,  $F(2, 39) = 6.71, p = .003, \eta^2 = .256$ . Results of *post hoc* demonstrated that Group 1 scored significantly higher on both extroversion and conscientiousness than Group 3,  $p$ 's  $< .05$ . However, Group 1 scored significantly lower on neuroticism than Group 3,  $p < .05$  (see Figure 3).

The relationship between procrastination and the other measures was further explored using a correlational analysis. Active procrastination was significantly correlated with perceived stress, extroversion, and neuroticism. As expected, students who reported greater active procrastination perceived less stress,  $r(40) = -.266, p < .05$ , one-tailed. In terms of personality, active procrastination was positively correlated with extroversion,  $r(40) = .331, p < .05$ , and negatively associated with neuroticism,  $r(40) = -.318, p < .05$ .

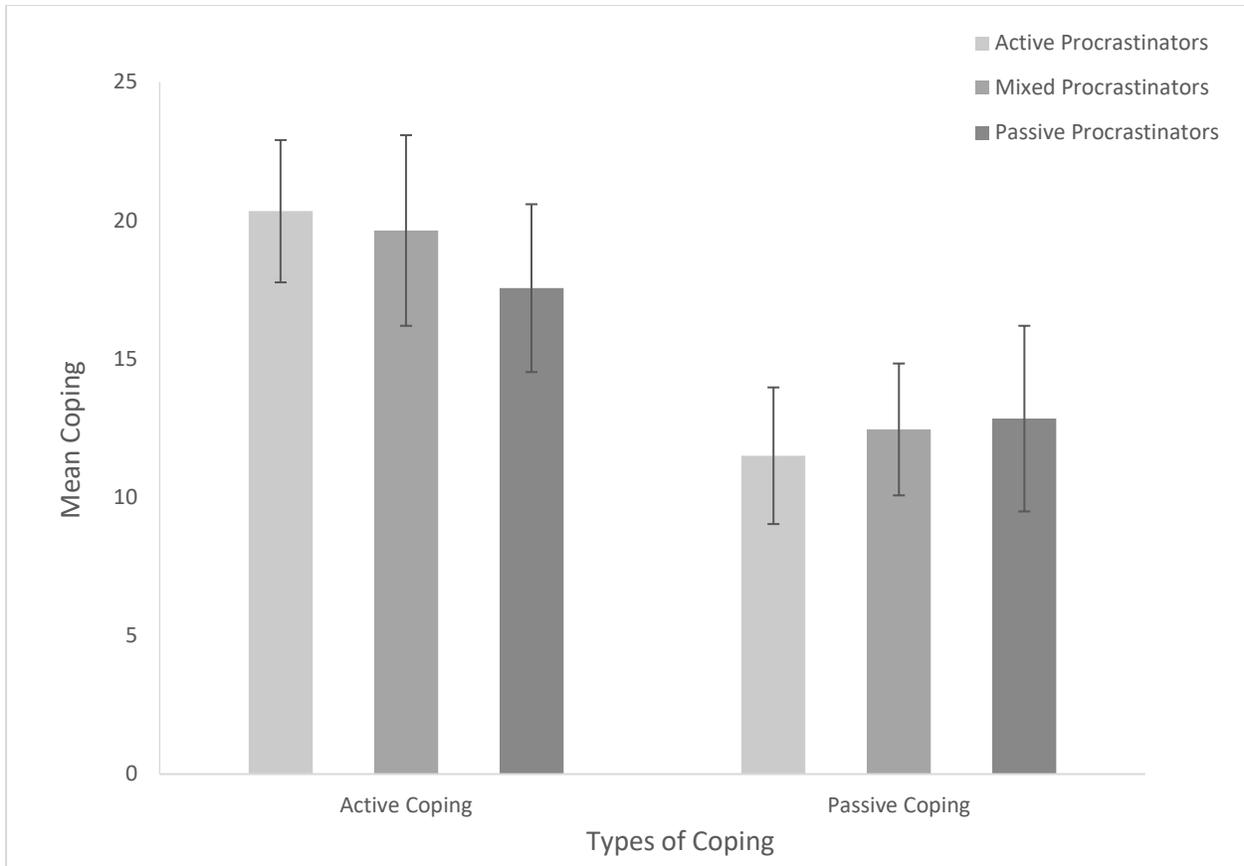
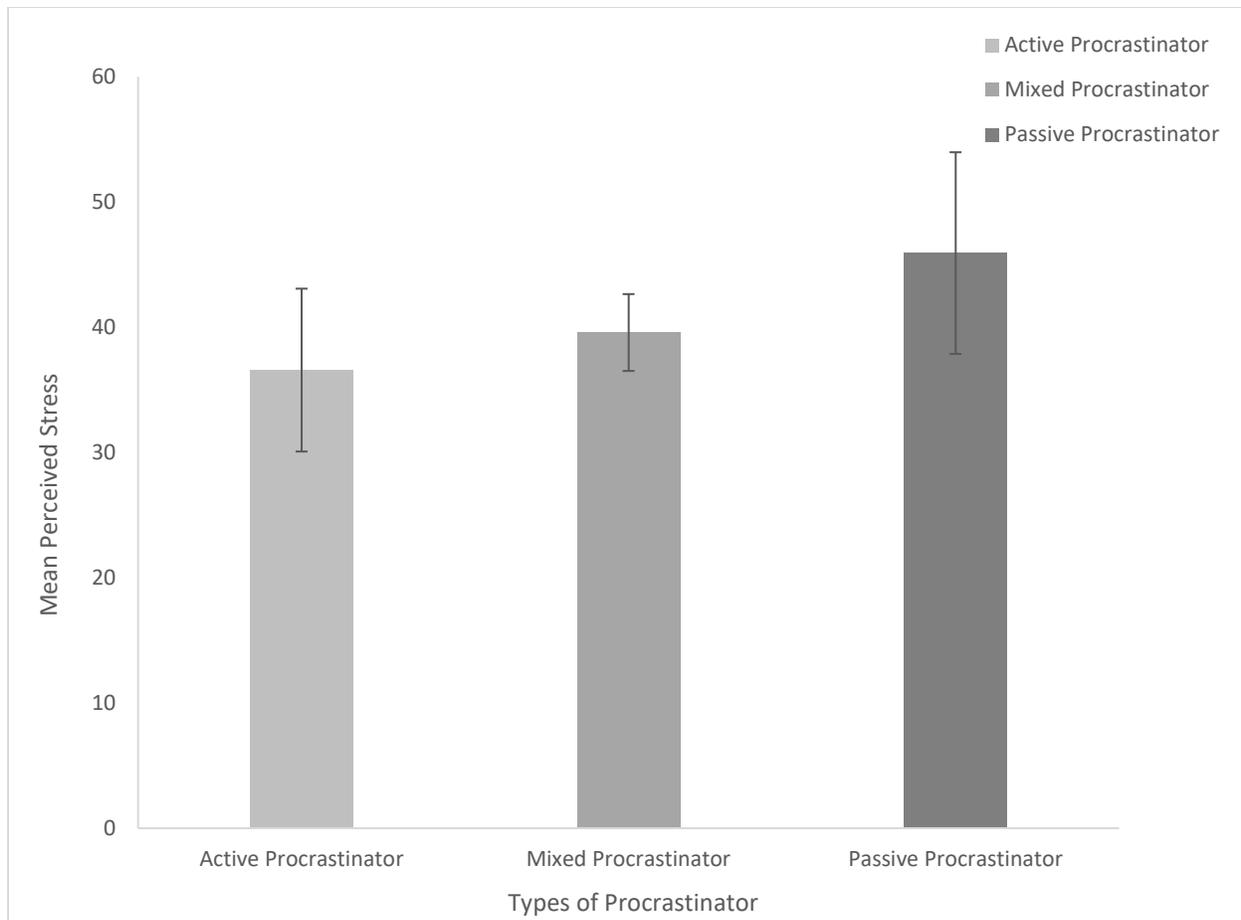


Figure 1. Bar graph depicting mean coping scores for groups of participants who were active (n = 12), mixed (n = 11), and passive (n = 19) procrastinators in active and passive coping styles. The error bars represent standard deviation. Groups differed in Active Coping ( $p < .05$ ), but not Passive Coping ( $p > .05$ )



*Figure 2.* Bar graph depicting mean perceived stress scores for groups of participants who were active (n = 12), mixed (n = 11), and passive (n = 19) procrastinators. The error bars represent standard deviation. Groups differed in Active Procrastinator and Mixed Procrastinator ( $p$ 's < .05).

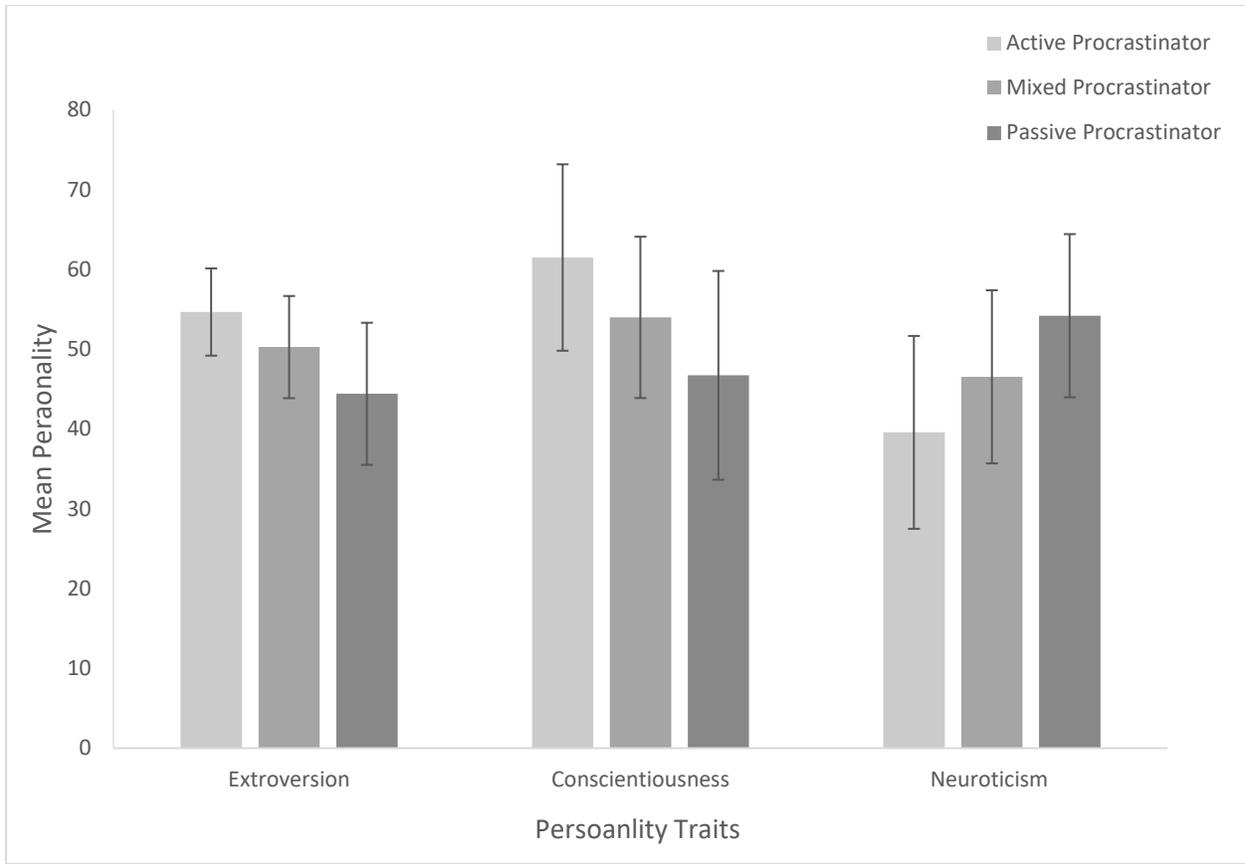


Figure 3. Bar graph depicting mean personality scores for groups of participants who were active (n = 12), mixed (n = 11), and passive (n = 19) procrastinators in extroversion, conscientiousness, and neuroticism. The error bars represent standard deviation. Groups differed in extroversion, conscientiousness, and neuroticism respectively ( $p$ 's < .05).

On the other hand, passive procrastination was significantly associated with active coping, perceived stress, and four personality traits. As expected, students who reported greater passive procrastination were less likely to adopt active coping strategies,  $r = -.441, p < .05$ , and perceived greater stress,  $r = .619, p < .05$ . Passive procrastination was negatively associated with extroversion,  $r = -.526, p < .05$ , agreeableness,  $r = -.328, p < .05$ , conscientiousness  $r = -.661, p < .05$ , and positively related to neuroticism  $r = .508, p < .05$ .

### Discussion

The purpose of current study was to examine the relationships between coping styles, perceived stress, personality traits, academic outcomes and procrastination styles. The findings of this study supported most hypotheses: (a) procrastination style is associated with active coping; (b) the different form of procrastination is related to the different level of perceived stress; (c) procrastination style relates to different personality traits. However, the association between procrastination styles and academic outcomes is not supported in the current study. Most findings are in agreement with those of studies which focused on the correlation between procrastination styles and coping styles (Siroris & Kitner, 2015), perceived stress (Sirois & Tosti, 2012; Ferrari & Diaz-Morales, 2014; Beutel et al., 2016), and personality traits. The findings suggest that different form of procrastination is associated with coping style, perceived stress, and personality traits separately.

The first hypothesis was that there was a relationship between procrastination styles and coping styles. This hypothesis was partially supported: coping styles and procrastination styles are found related only to active procrastinators. The results indicated that active procrastinators are more likely to adopt active coping compared with passive procrastinators. It is consistent with the study that found active procrastinators tend to employ task-coping strategy than passive

procrastinators (Chu & Choi, 2005). Unexpectedly, procrastination style is not correlated with coping style in passive procrastinators. Individuals who procrastinate passively did not show the preference for passive coping. However, the results suggested that there was a negative association between passive procrastination and active coping, indicating passive procrastinators are inclined to use active coping. This finding is parallel with other studies that found passive procrastination is inversely associated with active coping (Corkin et al., 2011; Sirois & Kitner, 2015; Ferrari & Diaz-Morales, 2014). The reason passive procrastinators did not prefer passive coping may be explained by the preference for passive procrastination. According to the scores of standardized procrastination tests, most participants reported as passive procrastinators. In order to balance the groups, the difference between active and passive procrastination scale was used as a criterion to classify participants. Concerning this reason, it is reasonable to assume that most participants adopt a similar level of passive coping, only different in active coping. Therefore, active procrastinators tend to use active coping, and passive procrastinators are less likely to adopt active coping.

The second hypothesis was that there was an association between procrastination styles and perceived stress. It was supported by the findings of current study. The results indicated that passive procrastinators perceive more stress than active procrastinators or those who showed no procrastination preference (the mixed procrastinators). The link between procrastination styles and perceived stress is similar to previous research on procrastination and perceived stress (Sirois & Tosti, 2012; Beutel et al., 2016; Tice & Baumeister, 1997). It appears that students who procrastinate passively experience greater stress and this may arise from the limited use of active coping. This is consistent with previous research that suggested that chronic procrastinators who experience greater stress are less likely to engage in positive, constructive behaviour that

regulates their coping styles (Ferrari & Diaz-Morales, 2014). This finding is also supported by the procrastination-health model which emphasizes the importance of coping in procrastinators to experience stress.

The third hypothesis was that there was a link between procrastination styles and personality traits. The results of current study supported this hypothesis in which procrastination styles relate to specific personality traits. Procrastination was associated with extroversion, conscientiousness, and neuroticism. Individuals with active procrastination were high in extroversion and conscientiousness. Previous research indicated one potential explanation for this behavioural pattern. It suggested that although extroverts may not procrastinate since they are active and assertive individuals, they would engage in procrastination deliberately if they have the aim to be more efficient (Kim et al., 2017). In contrast, the results suggested that individuals with passive procrastination were low in extroversion. This finding is corresponding to the pattern of procrastination in extroverts found in previous research.

A similar explanation can be applied to the association of active procrastination with a high level of conscientiousness. Conscientious individuals are less likely to procrastinate because they are vigilant individuals who tend to be efficient and organized. They may postpone their tasks intentionally in order to achieve a specific goal. Therefore, active procrastinators tend to be high in conscientiousness, and passive procrastinators low in conscientiousness. Individuals who procrastinate passively may not have a desire to deal a task well. In general, conscientiousness can be a predictor of an individual's procrastination style.

The study also suggested that neuroticism is related to two types of procrastination. This supports the results of past research, which demonstrated a moderate relationship between procrastination and neuroticism (Steel et al., 2001; Kim et al., 2017), the study found that

emotionally unstable individuals tend to procrastinate passively. An explanation might be that an individual's emotionality interacts with the procrastination style. An individual with high level of neuroticism is more likely to be passive procrastinator to avoid unwanted outcomes. However, the passive procrastination can also increase one's emotionality due to the high perceived stress level. Overall, active procrastination and passive procrastination relate differently to the big five personality traits.

The last hypothesis was that there was an association between procrastination styles and academic outcomes. This hypothesis was rejected because the association between procrastination styles and academic outcomes is not supported by the results. This finding is inconsistent with past studies, which found active procrastination predicts higher grade (Kim et al., 2017), and passive procrastination negatively relates to academic performance (Rotenstein et al., 2009; Kim & Seo, 2015; Lakshminarayan et al., 2013). A possible explanation for this finding is that large proportion of participants are considered as passive procrastinators. Only a few of them reported as active procrastinators. Due to this situation, the difference in grades is not evident in the study.

This study was subject to some limitations. First, all the measures used in the study are self-reports. In particular, the report of procrastination style can be considered as self-assessed procrastination. It is not necessarily based on the observable procrastinating behavior. The future research can conduct observational experiment to assess the individual's procrastinating behavior. Second, most participants showed a preference for passive procrastination; even those who were classified as active procrastinators based on difference scores still showed passive procrastination. Future research should focus on recruiting participants who show high levels of active procrastination and low levels of passive procrastination. Lastly, most participants in this

study share a similar cultural background. Considering that procrastination is affected by culture value, the further research investigates different cultures and societies which might contribute to understanding better the relations between procrastination and other variables.

In the current study, the relationships between procrastination styles and coping styles, perceived stress, personality trait, and academic performance were investigated. The following conclusions can be drawn from the current study: (a) active procrastination is associated with active coping; (b) procrastination styles are associated with perceived stress level; passive procrastination relates to greater perceived stress; (c) procrastination styles associate with personality traits differently. This study contributes to the literature by suggesting that an individual's procrastination style interacts with coping styles, personality traits, and has impacts on perceived stress level. The present study also demonstrated that passive procrastination has a negative impact on an individual's stress level. Moreover, coping style contributes to the greater stress in passive procrastinators. Overall, procrastination with different form can have a diverse impact on many aspects including coping strategy, stress level, and personality traits.

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