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ACADEMIC PROCRASTINATION AMONG INTERNATIONAL GRADUATE STUDENTS: THE ROLE OF PERSONALITY TRAITS, THE BIG-FIVE PERSONALITY TRAIT TAXONOMY

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ABSTRACT

Academic procrastination is a common behavioral problem among university students. The purpose of this study was primarily to investigate the capability of the Big Five factors of personality (Conscientiousness, Extraversion, Neuroticism, Openness, and Agreeableness) to act as predictors of academic procrastination. In addition, the role of factors such as gender, age, and the level of education were also assessed. Secondly, the purpose was to investigate if students from different ethnic backgrounds experience different levels of academic procrastination.
To achieve the objectives, two scales were used to collect the data: the Big Five Inventory (BFI) was used to obtain data regarding personality, and the General Behavioural Procrastination (GP) scale was used to assess academic procrastination. The population of the study consisted of 149 international graduate students at the University of Leicester.
Regression analysis results indicate that conscientiousness was the only factor that made a unique contribution to the prediction of academic procrastination. Extraversion, neuroticism, openness, agreeableness, gender, age, and level of education did not make significantly unique contributions to the prediction of academic procrastination. One-way ANOVA, which were conducted to investigate the differences between Kurdish, Turkish, Chinese, and Arab groups, revealed significant differences. However, calculating effect size indicated that the actual difference in mean scores between the groups was quite small.
Conscientiousness was made a unique contribution to the prediction of academic procrastination and actual difference between the students was quite small.

Keywords: academic procrastination, the Big-Five, conscientiousness, extraversion, neuroticism, openness, agreeableness

INTRODUCTION:

Procrastination is a serious problem in both business and academia, and is also one of the most widespread problems in the general population. Although, it might be considered as normal or positive behavior(Chun, Chu & Choi 2005), most studies refer to academic procrastination as a harmful phenomenon which adversely affects individual performance (Rothblum & Mann, 1988; Steel, 2007; Klassen et al., 2010; Brownlow, 2000) in addition to its negative impact on individual mental health (Stöber, & Joormann, 2001; Tamiru, 2008). Academic procrastination and the permanent postponing of tasks without logical justification is a universal problem among university students. Steel (2007) reports that almost 50% of college students procrastinate consistently and problematically. Özer, Demir and Ferrari (2009) have reported that academic procrastination is considered to be one of the most problematic issues among English speaking university students.

The seriousness of this problem is enhanced by the fact that it is not limited to a particular age, gender or culture, but is common in males and females, young and old, employed and unemployed, educated and uneducated. Several researchers have shown the relationship between academic procrastination and personality traits (McCown & Johnson, 1991; Di Fabio, 2006). Klassen et al. (2008) indicate that there are a few studies which have investigated procrastination from a cross-culture standpoint, indicating the importance of using participants from outside Western countries. Then this study aimed to investigate The role of personality traits in academic procrastination among international graduate students.

Results from several studies have shown a significant correlation between academic procrastination and several personality characteristics. Klassen, Krawchuk and Rajani (2008) conducted research to examine the relationship among academic procrastination, self-efficacy, self-esteem, self-regulation, and self-efficacy for self-regulation, reporting that although the result showed a significant positive relationship among academic procrastination and these four variables, the results indicate that self-efficacy for self-regulation was most predictive of procrastination tendency. In order to determine the relationship between procrastination and personality traits, as well as to organize attributes into groups of similar characteristics, the researcher sought to combine those characteristics under the factor name. To achieve that goal, previous researchers have benefited from the Big Five theory (Steel, 2007).

Based on the theory of the Big Five factors taxonomy and what has been referred to before, each of these factors consists of a set of traits which constitute the overall structure of each factor: Conscientiousness reflects self-regulation, organisation, and achievement motivation, Neuroticism includes irrational beliefs, anxiety, and depression, Extraversion reflects positive characteristics such as being energetic and seeking sensation, Agreeableness reflects trust and altruism (warmth), and Openness includes curiosity and imagination. Consequently, and based on previous research findings, procrastination could relate significantly to some factor's components but not relate to others.

Relationships between the Big Five factors and academic procrastination have been investigated by several researchers (Schouwenburg & Lay, 1995; Lay, Kovacs & Danto, 1998; Poropat, 2009). . Watson (2001) found that "total procrastination was related to both the low conscientiousness facets (competence, order, dutifulness, achievement striving, self-discipline, deliberation) and the neuroticism facets (anxiety, depression, self-consciousness, impulsiveness, vulnerability)". The findings of many previous studies showed a large variation in the results that have been found by the researchers. Although the result of many previous researches showed an agreeableness among them regarding the relation between academic procrastination and the Big Five factor labelled conscientiousness (Lay, 1997; Ross, Canada & Rausch, 2002; Lee, Kelly, & Edwards, 2006), there were several differences regarding the other four factors (McCown, Petzel & Rupert, 1987; Johnson & Bloom, 1995; Watson, 2001).

Numerous studies have confirmed that culture plays a significant role in the formation and development of personality traits (Allik & McCrae, 2004; Scherer & Brosch, 2009). Therefore, when the cultural factor is taken into account in studies of individual differences and their relationship to some phenomenon (such as academic procrastination), it will have a significant role in increasing the credibility of the results reached.

The purpose of this study is primarily to investigate the role of the Big Five factors of personality in order to predict students' ratings of academic procrastination as well as to examine the role of factors such as gender, age, and the level of education (labelled degree) in this prediction. Secondly, the purpose is to find out if students from different ethnic backgrounds experience different levels of academic procrastination because of their different cultures and traditions. The participants in this study were from a variety of different countries, particularly international students from eastern countries. Consequently, this study could contribute to filling the gap in this field by investigating academic procrastination from a cross-culture perspective.

METHODOLOGY:

A total of 149 international graduate students at the University of Leicester were recruited for this study. Of these students, 97 were Masters Students (65.1%) and 52 were PhD students (34.9%) in the academic year 2013/2014. Furthermore, the study consisted of 89 males (59.7%) and 60 females (40.3%), all of whom participated voluntarily in this research. The distribution of participants' ethnic backgrounds was as follows: 37 Kurdish (24.8%), 50 Arab (33.6%), 30 Turkish (20.1%), and 32 Chinese (21.5%). Participants' ages ranged from 22 to 47 years (M =30.07, SD = 5.315).

An online questionnaire, organised by using the SurveyGizmo software program, was distributed via Facebook and email in order to facilitate participation in the research's questionnaire.

In order to obtain socio-demographic information such as gender, age, academic level, and nationality, a Demographic Questionnaire was been created. For the purpose of measuring students' academic procrastination, this researcher has used the General Behavioural Procrastination (GP) Scale developed by Lay (1986), a self-reported scale consisting of 20 inventory items on a five-point Likert scale (extremely uncharacteristic = 1, moderately uncharacteristic = 2, Neutral =3, moderately characteristic = 4, and extremely characteristic = 5). After recoding the terms formulated positively and after finding the total scores obtained by students on the scale, the overall score ranges between 20 and 100. Getting a high score shows a stronger tendency to experience procrastination. Conversely, getting a low score on the scale indicates a low tendency for procrastination. Lay (1986) reports that the Cronbach's alpha coefficient of the scale for his study sample was .82, which referred to an acceptable degree of internal consistency for the scale.

The Big Five inventory (BFI) developed by John and Srivastava (1999) is used to measure an individual on the Big Five Factors (dimensions) of personality. The Big Five factors are grouped in a chart of 44 items (8 items measure extraversion, 9 items measure agreeableness, 9 items measure conscientiousness, 8 items measure neuroticism, and 10 items measure openness) constructed by John, Donahue, and Kentle (1991) (John & Srivastava, 1999). The Big Five factors scale consists of 44-items on a five-point Likert scale (Disagree strongly = 1, Disagree a little = 2, neither agree nor disagree = 3, Agree a little = 4, Agree strongly = 5). John and Srivastava (1999) found that the coefficient alpha reliability of the scale was .83.

In order to collect data, the researcher was required to obtain the approval of a Committee at the University of Leicester. After the application form was completed and sent to the relevant committee, the researcher obtained permission to gather information from postgraduate students at the University of Leicester. An online questionnaire was sent to participants via Facebook and email. The first part of the questionnaire was the consent form, which each student was required to read carefully and then decide whether to continue in their participation or withdraw from the research. The second part of the questionnaire was a demographic form which was constructed to gather demographic data (age, gender, degree, and nationality) from these participants. Finally, participants were required to complete the GP Scale and the BFI scale. Both questionnaires were in the English language.

Data were analysis by SPSS-20.0. A multiple regression analysis was conducted in order to evaluate the capability of the Big Five factors and other independent factors (gender, age, and degree) which entered in the analysis as one model to predict academic procrastination among graduate international students as well as to investigate the contribution of each factor in this prediction. One-way between groups ANOVA analyses were conducted in order to explore whether significant differences existed among Kurdish, Turkish, Chinese, and Arab groups regarding their tendency to procrastinate in their academic life.

RESULTS:

Descriptive statistics,of the variables are presented in table 1.

Table 1: means, standard deviation of variables

	Mean(*M*)	Std. Deviation (*SD*)
procrastination	57.48	7.99
Extraversion	24.62	4.32
Agreeableness	34.29	4.39
Conscientiousness	31.36	4.78
Neuroticism	23.10	5.27
Openness	34.19	4.29
Gender	1.40	.492
Age	30.07	5.32
Degree	1.35	.478

The results of the multiple regression analysis indicate that the prediction of the model was statistically significant, F (8, 140) = 6.445, p < .001, and accounted for approximately 27% of the variance of the dependent variable academic procrastination (R^2 = .269). Assessment of scatter plots revealed a linear relationship between the independent variable labeled conscientiousness and the dependent variable labeled academic procrastination (Figure 1).

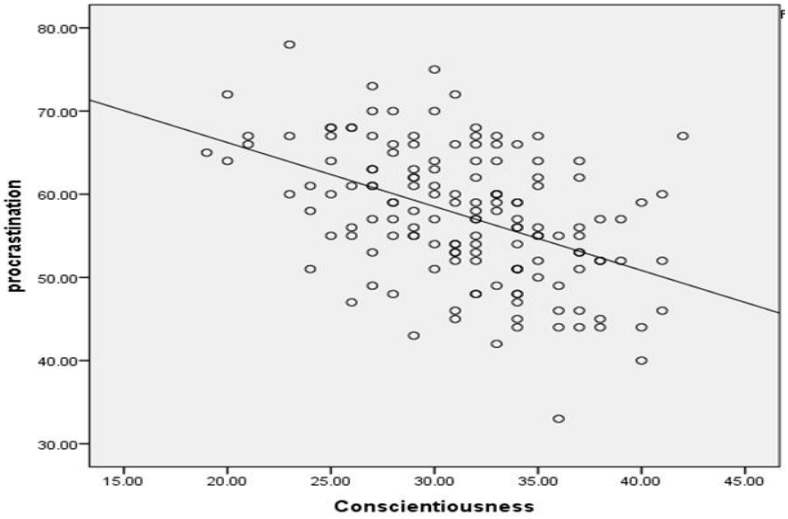

Figure1: linear relationship between academic procrastination and Conscientiousness factor

Figure 1 showed that there was a negative linear relationship between academic procrastination and Conscientiousness factor.

As shown in Table 2, conscientiousness contributed significantly and explained 16% of the variance in the model. It was found that conscientiousness significantly predicted academic procrastination (β = -.456, P<.001) and has a part correlation coefficient of -.40. On the other hand, although there was a statistically significant correlation between academic procrastination and extraversion, the result in the coefficients table showed that extraversion did not make a statistically significant unique contribution to predict academic procrastination (β = -.130, P = .114). A similar result has been obtained regarding the neuroticism factor. In spite of the fact that the result of the correlation table showed a statistically significant relationship between neuroticism and academic procrastination, neuroticism did not made a statistically significant unique contribution to predict academic procrastination (β = .057, P = .462). There was no significant relationship between openness and academic procrastination and this independent variable did not contribute significantly to predict academic procrastination (β = .069, p = .406). Similarly the relationship between agreeableness and academic procrastination was not significant and this independent variable did not make a statistically significant unique contribution to predict academic procrastination (β = .056, p = .482).

With regard to degree factor, the result showed that the relationship between this independent variable and academic procrastination was significant, however degree factor did not contribute significantly to predict academic procrastination (β = -.160, p = .057).

Regarding gender, the relationship between this independent factor and academic procrastination was not significant, nor was its contribution to predict academic procrastination (β = .102, p = .191). Finally, the relationship between age factor and academic procrastination was not significant, with age not making a significant contribution to academic procrastination (β = .061, p = .500).

Table 2: correlation between personality traits and academic procrastination

Personality traits	Correlation with academic procrastination	Sig	β	Sig	Part correlations
Extraversion	-.240	.002	-.130	.11	-.115
Agreeableness	-.116	.080	.056	.48	.051
Conscientiousness	-.460	.000	-.456	.000	-.400
Neuroticism	.175	.017	.057	.46	.053
Openness	-.122	.069	.069	.41	.060
Gender	.130	.058	.102	.19	.095
Age	-.131	.056	.061	.50	.049
Degree	-.175	.017	-.160	.057	-.138

A one-way analysis of variance between groups (ANOVA) was conducted to investigate the differences between participants according to their different ethnic background. Participants were divided into four groups according to their ethnic background (Group 1: Kurdish students; Group 2: Turkish students; Group 3: Chinese students; Group 4: Arab students)(see table 3)

Table 3: Results of one way analysis of variance for ethnic groups

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1053.192	3	351.064	6.064	.001
Within Groups	8393.976	145	57.889		
Total	**9447.168**	**148**			

The analysis of variance presented a statistically significant difference between groups, F (3, 145) = 6.064, p = .001. Post-hoc comparisons using Tukey test revealed that the mean score for the Kurdish group (M = 54.75, SD = 6.46) was significantly different from that of the Chinese group (M = 61.40, SD = 6.29). The Kurdish group did not differ significantly from either the Turkish group or the Arab group, although the mean score for the Chinese group (M = 61.40, SD = 6.29) also was significantly different from that of the Arab group (M = 55.72, SD = 8.09). The difference in mean scores between the Turkish group and the Chinese group was not statistically significant.

DISCUSSION:

This study aimed to investigate the ability of a set of factors to predict academic procrastination among international graduate students at the University of Leicester. First of all, we investigated the capability of the Big Five factors of personality to predict academic procrastination. The results of this study confirmed the findings of previous studies regarding the important role played by the conscientiousness factor in the predictability of academic procrastination. It was found that conscientiousness was the essential factor among the Big Five factors of personality regarding the ability to predict academic procrastination. Conscientiousness was the only factor which made a significantly unique contribution to predict academic procrastination. This result is in substantial agreement with the findings of Schouwenburg and Lay (1995), who report that "in essence trait procrastination is the lack of conscientiousness". This result is not very surprising, because there exists what might be called a theoretical agreement among researchers regarding the strong negative relationship between both procrastination and conscientiousness. Steel (2007) proposes that "procrastination is conceptually representative of low conscientiousness and self-regulatory failure. Consequently, it should show

strong associations with these variables". Johnson and Bloom (1995) report that the findings of their research showed that the majority of unique variance in procrastination scores was predicted by the conscientiousness factor. It was found that self-discipline, which is one of the most essential facets of conscientiousness, was the strongest facet level predictor of procrastination (Schouwenburg & Lay, 1995; Johnson & Bloom, 1995; Watson, 2001). However, Klassen et al. (2008) report that self-efficacy for self-regulation is more significant than self-regulation itself as a predictor of the tendency to procrastinate. Watson (2001) found that procrastination was significantly correlated with low conscientiousness facets of competence, order, dutifulness, achievement striving, self-discipline, and deliberation. Consequently, we can argue that conscientiousness is the most essential factor in the prediction of academic procrastination.

Regarding the extraversion factor, although the table of correlation shows a significant relationship between procrastination and extraversion, the coefficient table indicates that extraversion does not make a significantly unique contribution to predict academic procrastination. The present results were consistent with earlier research (Johnson & Bloom, 1995; Tenne, 2000) but in contrast with other studies that found a significant relationship between procrastination and extraversion (McCown et al., 1987; McCown & Johnson, 1991; Schouwenburg & Lay, 1995; Watson, 2001). Extraversion could thus be considered one of the most interesting factors regarding its relationship with procrastination, although simultaneously be perceived as the most problematic factor (Steel, 2007). Steel indicates that extraversion could have an indirect relationship with procrastination through some aspects of extraversion such as pessimism and low energy levels, which are considered to be important aspect of depression and also central parts of extraversion. People with these kinds of characteristics tend to suffer from lethargy and thus have more of a proclivity towards procrastination.

Regarding neuroticism, although the result of the multiple regression analysis showed a significant relationship between academic procrastination and neuroticism, the contribution of this factor to predict academic procrastination was not statistically significant. This result showed that neuroticism does not play a significant role in the prediction of academic procrastination. Neuroticism is potentially the most contested factor regarding its relationship with academic procrastination, since although some researchers found a significant relationship between academic procrastination and this factor (McCown & Johnson, 1991; Johnson & Bloom, 1995; Watson, 2001), other researchers reported no significant relationship between academic procrastination and neuroticism (Schouwenberg & Lay, 1995; Steel, 2007). Steel (2007) conducted a meta-analytic study to investigate the nature of procrastination, reporting a weak positive correlation between procrastination and neuroticism. He suggests that this finding should be expected because "those who are more anxious or have more negative affect tend to be harsher judges of their own behaviour, but are not necessarily poorer performers". However, he indicated that the neuroticism factor and its facets of irrational beliefs and perfectionism are considered major causes of procrastination in several studies. Watson (2001) reports a significant correlation between procrastination and neuroticism facets such as anxiety, depression, self-consciousness, impulsiveness, and vulnerability. The relationship between extraversion and neuroticism in a recent study could be due to an overlap with other factors in the model (Pallant, 2010).

Openness and agreeableness were not significantly correlated with academic procrastination, indicating that these two factors did not make a significant contribution to predict academic procrastination. The present results were consistent with several previous research findings (Johnson & Bloom, 1995; Tenne, 2000; Steel, 2007). However, with regard to openness, Schouwenburg and Lay (1995) report that although there is no significant relationship between trait procrastination and openness, procrastination are related to fantasy, which is one of the major components of the openness factors. In addition, rebelliousness, hostility, and disagreeableness, which are the major components of the agreeableness factor, have been expected to be major motivations for procrastination (Burka & Yuen, 1983; Knaus, 1979 as cited in Schouwenburg & Lay, 1995).

The results of the current study show no statistically significant difference between males and females with regards to academic procrastination. The difference between men and women's tendency to procrastinate is another controversial issue among researchers, since although the findings of several studies reported no significant differences between male and females in the incidence of procrastination (; Johnson & Bloom, 1995; Watson, 2001; Ferrari et al., 2007), others reported significant differences (Erdinç, 2009; Klassen et al., 2009). Steel and Ferrari (2013) found a significant correlation between procrastination and gender based on the assumption that men potentially have higher levels of impulsiveness (Strüber, Lück & Roth, 2008, as cited in Steel & Ferrari, 2013) and lower levels of self-control (Higgins & Tewksbury, 2006, as cited in Steel & Ferrari, 2013). As such, Steel and Ferrari conclude that males tend to procrastinate more than females. The findings of the Meta-Analytic study conducted by Else-Quest, Hyde, Goldsmith, and Van Hulle (2006) show that females reported higher scores of effortful control than males, and as has been mentioned, self-control is one of the

most important components of conscientiousness, which is highly related to procrastination. On this basis, it can be concluded that males are less likely to procrastinate in the performance of their tasks. However, Steel (2007) suggests that males and females could report different scores depending on the measure regarding their tendency to procrastinate.

With regard to the effect of age on academic procrastination, the findings of our study reveal that age does not predict academic procrastination. This result may indicate that age does not play a significant role in academic procrastination. The current finding is consistent with earlier research conducted by Ferrari et al. (2009) but in contrast with the findings of several other studies. Steel (2007) found a negative relationship between procrastination and age, hypothesising that people should expect to have fewer tendencies to procrastinate as they age and learn. Steel built this conclusion based on two studies conducted by O'Donoghue and Rabin (1999) emphasise that people learn throughout their lives some practical techniques that help them to reduce the tendency to procrastinate, whether in the business world or in academia. The difference in the results of the current study with previous studies may be due to the nature of the sample used in the current study, which consisted exclusively of graduate students. Theoretically, we can expect that the students learn a range of strategies during their academic lives that may make them more effective in dealing with the problems of procrastination. Consequently, the more progression they make within academia, the more effective they will be at dealing with problems such as academic procrastination.

Degree or level of education was another factor we explored to find its impact on predicting the tendency to procrastinate among graduate students. Although the table of correlation revealed a significant relationship between academic procrastination and the degree factor, the results in the coefficient table showed that this factor did not make a significantly unique contribution to the prediction of academic procrastination. Thus, we can assume that this relationship could be a result of overlapping with other factors in the model. Consequently, we conclude that there is no significant difference between masters' students and PhD students with regards to academic procrastination. This finding is in contrast with that of Rosário et al. (2009), who found that there is a significant positive relationship between procrastination and school grade level. Steel (2007) hypothesised that people procrastinate less the older and more learned they become. Based on this assumption, we expected that PhD students would procrastinate less than masters' students, but our research finding contrasts with that of Steel.

The second aim of the current study was to investigate the differences among participants according to their ethnic background. Although the results of one-way between groups analysis have indicated significant differences between groups, calculating effect size by using eta squared revealed a very small effect size. This result indicates that the actual differences in the mean scores of the groups are very small. Consequently it could be argued that nationality does not play a significant role in increasing or decreasing students' tendencies to procrastinate in their academic tasks. The present results were consistent with earlier research findings conducted by Ferrari et al. (2007), who found no significant nationality differences between nations on avoidant procrastination. On the other hand, our results are in contrast with the findings of Steel and Ferrari (2013), who found a significant relationship between procrastination and nationality.

The present study could have several limitations. For example, we used only self-reports of academic procrastination, despite the fact that several researchers have confirmed the validity and reliability of the scales which have been used in this study. The results of this kind of measure can sometimes be misleading. One alternative way to avoid this would be to measure direct behavioural indices, as suggested by Ferrari et al. (2007). Another limitation could be the scale's language, since we used scales that were written in English with participants who are non-native English speakers. This could also lead to different interpretation of the scale items by the participants, and consequently could affect the accuracy of our data. For future research, it is crucial to explore academic procrastination from a cross-culture perspective, to use non-western nation participants, and to consider participants' L1 language.

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