



#40 PAPER 54 - PROCRASTINATION, STRESS AND COPING IN STUDENTS AND EMPLOYEES

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Abstract

Throughout history, procrastination is seen as an unwanted behavior that can bring about negative consequences. Researches show that procrastinators have higher levels of stress than people who do not procrastinate and thus, lower levels of well-being. The findings of this research show that the participants who tend to procrastinate frequently are more likely to feel higher levels of stress, are less prone to use proactive coping and engage more frequently in avoidance coping. Students tend to procrastinate more than employees and have higher levels of stress.

Keywords: procrastination; stress; coping styles; proactive coping

1. INTRODUCTION

Trait procrastination represents the tendency to delay what ought to be done in order to reach a goal (Lay, 1986, apud Lee, Kelly & Edwards, 2006). Procrastination is different from planned delays because it is unplanned and it actually means postponing what has been planned (van Eerde, 2003). Steel's (2007) meta-analysis reveals that procrastination is widespread, estimations pointing to the fact that approximately 80 to 95% of the students procrastinate. Adults also tend to procrastinate, but the percent is lower. It seems that procrastination is influenced by the type of task, researches showing that boring and difficult tasks are usually delayed. Studies have shown that people who procrastinate feel more stress compared to people who do not procrastinate and their performances are lower. Positive significant relations were observed between behavioral procrastination, anxiety and depression. Similar relations were identified between decisional procrastination and anxiety, depression and worry (Spada, Hiou, & Nikcevic, 2006).

Stress is a condition or it refers to the emotions felt by a person when he or she assesses that the demands of a situation exceed his or her personal and social resources (Lazarus, 1966). Stress represents a natural reaction in case of a real or imagined danger and its purpose is to defend the individual. Up to a certain point, stress can be useful because it motivates people to overcome obstacles and to develop. On the other hand, beyond a certain point, stress becomes harmful for our health, performance, relationships, and quality of life (Matthews, Deary & Whiteman, 2005).

Coping refers to what a person can do to prevent the onset of stress or to better manage the existing stress (Greenglass & Fiksenbaum, 2009). Traditional or reactive coping is used after the onset of stress, while proactive coping, as its name suggests, is employed before the occurrence of stress, in order to prevent it, or to diminish the potential stressors. Proactive coping implies perceiving difficult situations as being challenges rather than threats (Schwarzer & Taubert, 2002). The proactive person anticipates risks, accumulates resources and identifies or creates opportunities for personal development, in order to overcome obstacles and fulfil his or her potential (Greenglass, 2002). Researches regarding proactive coping have uncovered that this type of coping is more efficient against stress than reactive coping, because it can prevent stress and can reduce its negative consequences (Aspinwall & Taylor, 1997; Carver & Connor-Smith, 2010).

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2. OBJECTIVES AND HYPOTHESES

2.1. Objectives

There are two objectives for this study, namely: to analyze the relations between procrastination, coping styles and stress, in a sample of employees and high school students, and to identify differences between high school students and employees regarding procrastination, coping styles and stress.

2.2. Hypotheses

It is expected that:

H1: Procrastination is positively linked to stress and avoidance coping.

H2: Procrastination is negatively associated with proactive coping, proactive coping competences and strategic planning.

H3: There are differences between students and employees concerning procrastination levels and stress levels.

H4: Age, gender, stress, avoidance coping, proactive coping, proactive coping competences, and strategic planning explain procrastination.

3. METHOD

3.1. Participants

The sample of participants consisted of 134 people, 64.2% employees and 35.8% high school students. All of the students were in their last year of high school in an urban area. By taking gender into account, 28 participants were male (20.9%), 103 participants were female (76.9%), and three participants did not declare their gender (2.2%). The age of the participants ranged from 17 to 59 years, with a mean of 31.24 years and a standard deviation of 13.07 years. Most of the participants lived in an urban area (78.4 %), 18.7% lived in a rural area, and 3% did not declare where they reside.

3.2. Instruments

General Procrastination Scale (Lay, 1986) measures procrastination as a trait. This instrument has 20 items that are appraised on a 5 point Likert scale. High scores represent a high level of procrastination. The internal consistency for this scale is .82.

Perceived Stress Scale (Cohen, Kamarck & Mermelstein, 1983) measures stress perception during the last month. The scale consists of 10 items that are evaluated on a 5 point Likert scale. High scores mean that the person is experiencing high levels of stress lately. Cronbach's Alpha for this scale is .78.

The Proactive Coping Inventory (Greenglass, Schwarzer, Jakubiec, Fiskensbaum & Taubert, 1999) is a multidimensional instrument that measures coping. The PCI has 55 items and seven subscales (Proactive Coping, Reflective Coping, Strategic Planning, Preventive Coping, Instrumental Support Seeking, Emotional Support Seeking and Avoidance Coping). Its items are assessed on a 4 point Likert scale and Cronbach's Alpha is higher than .70 for all subscales.

Utrecht Proactive Coping Competence Scale (de Ridder, Thoolen & Bode, 2008) measures the proactive coping competences. This instrument has 21 items, evaluated on a 5 point Likert scale, and an internal consistency that ranges from .83 to .95.

3.3. Procedure

The participants gave their verbal consent prior to their inclusion in this study. They were assured of the confidentiality of the data and were instructed on how to fill-in the instruments before they were asked to do so. We tested the participants using the paper-and-pencil version of the instruments. The testing was done in groups. The participants volunteered to take part in this research study and did not receive any financial compensations.

4. RESULTS

All the variables are normally distributed which makes them fit for statistical analysis. The first two hypotheses can be tested by the means of Pearson correlation. All the correlation coefficients are presented in Table 1 below. The first hypothesis states that procrastination is positively linked to stress and avoidance coping. After performing the Pearson correlation, we found out that there is a medium correlation between procrastination and stress that reaches statistical significance $r(132) = .50$; $p < .001$. The coefficient of determination is $r^2(132) = .25$. This means that people who tend to procrastinate frequently are more likely to feel higher levels of stress. Moreover, we have found that there is a small positive and statistically significant correlation between procrastination and avoidance coping. The correlation coefficient is $r(132) = .27$; $p = .001$ and the coefficient of determination is $r^2(132) = .07$. This signifies that individuals who procrastinate engage more frequently in avoidance coping.

Table 1. Correlation coefficients

Variables	1	2	3	4	5	6
1 Procrastination	1					
2 Stress	.50***	1				
3 Avoidance coping	.27***	.10	1			
4 Proactive coping	-.39***	-.33***	-.05	1		
5 Proactive coping competences	-.42***	-.38***	-.10	.67***	1	
6 Strategic planning	-.43***	-.11	.01	.54***	.46***	1
7. Age	-.57***	-.41***	.03	.10	.25**	.21*

Note; * $p < .05$; ** $p < .01$; *** $p < .001$

We computed the correlation between procrastination and proactive coping to see if the two variables are related. The result shows that procrastination correlates negatively with proactive coping $r(132) = -.39$; $p < .001$. The coefficient of determination is $r^2(132) = .15$. Consequently, people who procrastinate frequently are less prone to use proactive coping. Secondly, procrastination negatively correlates with proactive coping competences $r(132) = -.42$; $p < .001$. Individuals who procrastinate are less likely to acquire proactive coping competences. The coefficient of determination in this case is $r^2(132) = .18$. Thirdly, procrastination negatively correlates with strategic planning $r(132) = -.43$; $p < .001$. The coefficient of determination is $r^2(132) = .18$. It seems that people who procrastinate tend to plan less than those who do not procrastinate.

The third hypothesis states that there are differences between students and employees concerning procrastination levels and stress levels. In order to verify the truth of this assumption, we have computed the Independent samples t test which revealed that students tend to procrastinate more frequently than employees. The difference is statistically significant ($F(132) = .57$; $t(132) = -9.76$; $p < .001$) and the effect size is quite large (d Cohen = 1.72). Furthermore, we have uncovered that students seem to feel more stress than employees. The result is statistically significant ($F(132) = .01$; $t(132) = -5.31$; $p < .001$), and the effect size we have obtained is large (d Cohen = 0.95).

We computed a multiple regression to test whether the socio-demographic factors (age and gender) and the personality factors (stress, avoidance coping, proactive coping, proactive coping competences, and strategic planning) explain procrastination. All the conditions for performing a multiple regression are satisfied (the variables are normally distributed and there is no collinearity between the independent variables). The results are presented in Table 2 below.

Table 2. Hierarchical regression models with procrastination as a dependent variable

Model	Adjusted R ²	F sig.	Beta	t	Sig.
1) age			-.54	-7.15	.001
gender	.32	.001	-.08	-1.08	.28
2) age			-.33	-4.61	.001
gender			-.21	-3.20	.002
stress			.30	4.08	.001
avoidance coping	.58	.001	.23	3.95	.001
proactive coping			-.12	-1.45	.15
proactive coping competences			-.01	-.18	.86
strategic planning			-.26	-3.67	.001

The first model is statistically significant, although only age explains 32% of the variance of procrastination. The second model is also statistically significant. Not all the independent variables explain procrastination. The significant predictors are age, gender, stress, avoidance coping and strategic planning. Even though gender was not statistically significant in the first model, it becomes significant in the second model. The

second model is preferred to the first because it explains 58% of the variance of procrastination, while the first only explained 32%. The regression equation for the second model is: $procrastination = 81.75 - .35 * age - 7.01 * gender + .58 * stress + 1.47 * avoidance\ coping - .28 * proactive\ coping - .39 * proactive\ coping\ competences - 1.41 * strategic\ planning$.

5. DISCUSSIONS

The main objectives of this study were to analyze the associations between procrastination, coping styles and stress in a sample of employees and high school students, and to identify differences between high school students and employees regarding procrastination, coping styles and stress. Most of the hypotheses were entirely confirmed. The results we have obtained are in accordance with the reports found in literature. Procrastination positively correlates with stress and avoidance coping.

People have the tendency to procrastinate because they only take into account the short term benefits of procrastination, while ignoring the long term costs (van Eerde, 2003). Consequently, Tice & Baumeister (1997) have noticed that students who procrastinated were more anxious during the semester, they experienced less stress at the beginning of the semester, but more stress later on, and more stress overall. Tasks that are boring or stressful are more likely to be put off, so they end up adding more stress, which in turn, increases procrastination (Steel, 2007).

Procrastination is negatively linked to proactive coping, proactive coping competences, and strategic planning, because all of them imply that certain preparations ought to be made beforehand in order to use them. Proactive coping involves perceiving difficult situations as being challenges rather than threats, and acting before stress occurs (Schwarzer & Taubert, 2002). Strategic planning refers to the ability to create goal oriented schedules of action by splitting and organizing extensive tasks in order to make them more manageable (Greenglass, Schwarzer, Jakubiec, Fiskensbaum & Taubert, 1999), while procrastination actually means postponing the actions that are required to accomplish the goal.

Another researcher (Verešová, 2013) who studied the relations between procrastination, stress and coping among primary school teachers, found similar results, namely, that there is a significant correlation between procrastination and stress, between procrastination and avoidance coping, and a negative significant correlation between procrastination and proactive coping. It seems that procrastination decreases with age (Diaz-Morales, Cohen & Ferrari, 2008) probably because of lifelong learning of effective self-regulation strategies (Steel, 2007). In our study we have found that the variance of procrastination can be explained by gender, fact also confirmed by other researches (Lai, Badayai, Chandrasekaran, Lee, & Kulasingam, 2015).

Some of the limitations of this study come from the fact that the participants were not selected at random and our sample was uneven. As such, we had more females than males and more employees than students. Furthermore, the results could be influenced by the interposition of other variables. For example, it might be possible that students had higher levels of stress than the employees because they were in the last high school year and were approaching their final exams. Other studies are required, so as to better understand the nature of the associations between the variables.

6. ACKNOWLEDGEMENTS

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7. REFERENCES

- Aspinwall, L. G., Taylor, S. E. (1997). A Stitch in Time: Self-Regulation and Proactive Coping. *Psychological Bulletin*, 121(3), 417-436.
- Bode, C., Thoolen, B.J. & De Ridder D.T.D. (2008). Measuring proactive coping skills. Psychometric properties of the Utrecht Proactive Coping Competence list (UPCC). *Psychology & Health*, 36, 81-91.
- Carver, C. S., Connor-Smith, J. (2010). Personality and Coping. *Annual Review of Psychology*, 61, 679–704.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of Perceived Stress, *Journal of Health and Social Behavior*, 24, 385-396.
- Diaz-Morales, J. F., Cohen, J. R. & Ferrari, J. R. (2008). An integrated view of personality styles related to avoidant procrastination. *Personality and Individual Differences*, 45, 554–558.
- Greenglass, E. (2002). Chapter 3. Proactive coping. In E. Frydenberg (coord.), *Beyond coping: Meeting goals, vision, and challenges*. London: Oxford University Press.
- Greenglass, E. R., & Fiksenbaum, L. (2009). Proactive Coping, Positive Affect, and Well-Being: Testing for Mediation Using Path Analysis considerations. *European Psychologist*, 14, 29-39.
- Greenglass, E. R., Schwarzer, R., Jakubiec, D., Fiksenbaum, L. & Taubert, S. (1999). *The Proactive Coping Inventory (PCI): A multidimensional research instrument*. Paper presented at the 20th edition of the International Conference of the Stress and Anxiety Research Society (STAR), Krakow, Poland.
- Lai, C. S., Badayai, A. R., Chandrasekaran, K., Lee, S. Y., & Kulasingam, R. (2015). An Exploratory Study on Personality Traits and Procrastination among University Students, *American Journal of Applied Psychology*, 4(3-1), 21-26.
- Lay, C. (1986). At last, my research article on procrastination. *Journal of Research in Personality*, 20, 474-495.
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York: McGraw-Hill.
- Lee, D. G., Kelly, K. R. & Edwards, J. K. (2006). A closer look at the relationships among trait procrastination, neuroticism, and conscientiousness. *Personality and Individual Differences*, 40, 27–37.
- Matthews, G., Deary, I. J., Whiteman, M. C. (2005). *Psihologia Personalității*. Iași: Polirom.
- Schwarzer, R., Taubert, S. (2002). Tenacious goal pursuits and striving toward personal growth: Proactive coping. In E. Frydenberg (coord.), *Beyond coping: Meeting goals, visions and challenges*. London: Oxford University Press.
- Spada, M. M., Hiou, K., & Nikcevic, A.V. (2006). Metacognitions, Emotions, and Procrastination. *Journal of Cognitive Psychotherapy*, 20, 3, 319-326.
- Steel, P. (2007). The Nature of Procrastination: A Meta-Analytic and Theoretical Review of Quintessential Self-Regulatory Failure. *Psychological Bulletin*, 133(1), 65-94.
- Tice, D. M., & Baumeister, R. F. (1997). Longitudinal study of procrastination, performance, stress, and health: The costs and benefits of dawdling. *Psychological Science*, 8, 454–458.
- van Eerde, W. (2003). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences*, 35, 1401-1418.
- Verešová, M. (2013). Procrastination, stress and coping among primary school teachers. *Procedia – Social and Behavioral Sciences*, 106, 2131-2138.

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