

The Relationship Between Conscientiousness and Procrastination

Wenyue Zhang

Department of Psychology, University of California, Davis, 95616, United States

wnzhang@ucdavis.edu

Abstract. This paper delves into the intricate relationship between conscientiousness, procrastination, and growth mindset, offering a comprehensive exploration of how these psychological factors interact to shape task management behaviors and academic outcomes. Drawing from seminal studies, including research by John Wiley & Sons and David, this paper explores the hierarchical interplay between conscientiousness and procrastination traits, where conscientiousness acts as a higher-order factor influencing specific procrastination behaviors. This research delves into the pivotal role of accountability as a mediator, showcasing how fostering responsibility can mitigate procrastination tendencies among students. The introduction of the growth mindset as a moderator reveals the potential for proactive strategies to combat procrastination. Furthermore, the identification of physiological anxiety as a potential underlying mechanism adds a novel dimension, emphasizing the intricate interplay between psychological and physiological responses to task-related stressors. These findings collectively inform the design of evidence-based interventions that empower individuals to conquer procrastination, enhance task management skills, and achieve academic success.

Keywords: Procrastination, conscientiousness, growth mindset.

1. Introduction

Introducing a comprehensive understanding of the relationship between conscientiousness and procrastination is not only intriguing but also relevant to various aspects of human behavior and decision-making. Conscientiousness, a prominent personality trait, has been extensively studied for its influence on an individual's organizational skills, goal orientation, and responsible behavior [1]. Procrastination, on the other hand, is a behavior that has been shown to hinder productivity and hinder the efficient completion of tasks [2]. The exploration of how these two constructs interact is a critical avenue for understanding the intricacies of human motivation and behavior.

1.1. Conscientiousness

Conscientiousness, as described by the Five-Factor Model of personality, reflects an individual's propensity to be organized, disciplined, and goal-oriented [3]. This trait encompasses elements such as planning, persistence, and responsibility. Individuals high in conscientiousness tend to set clear objectives, devise detailed plans, and maintain consistent efforts toward achieving their goals [1]. This organized approach often results in timely task completion, effective time management, and an overall efficient work ethic. In addition, conscientiousness also brings individuals more positive effects. Conscientiousness makes people plan academic goals and achieve them more successfully [4].

1.2. Procrastination

Procrastination, defined as the delay of task initiation or completion despite having the intention to complete the task, is a behavior that can lead to suboptimal outcomes [2]. It can be triggered by various factors, including low self-regulation, task aversion, and lack of self-discipline. Procrastination has been linked to a range of negative consequences, such as increased stress levels, compromised academic performance, and reduced overall well-being [5]. Recognizing the factors

that contribute to procrastination and understanding its psychological underpinnings is essential for designing effective interventions to mitigate its adverse effects.

1.3. The Purpose of This Study

The primary aim of this study is to delve into the intricate relationship between conscientiousness and procrastination. By examining how these two constructs interact, this research sheds light on whether conscientiousness, as a higher-order personality trait, influences the tendency to procrastinate, which is considered a lower-order behavioral pattern. This investigation is motivated by the need to uncover the mechanisms that drive procrastination and identify potential strategies to enhance productivity and time management.

In the following sections, it will present the methodology, results, and discussion of this study, offering insights into the connections between conscientiousness and procrastination. By contributing to the existing body of knowledge on these topics, it aims to provide a deeper understanding of the psychological factors that shape human behavior and decision-making processes.

2. The Direct Relations between Conscientiousness and Procrastination

In understanding how conscientiousness directly affects procrastination, a 1997 study by John Wiley & Sons showed that procrastination and accountability traits tend to go hand in hand. This means that conscientiousness, like a higher-order factor, is conceptualized to influence procrastination traits, while procrastination traits are considered a lower-order factor [6]. Conscientiousness contains a variety of lower-order factors associated with self-discipline, organization, goal setting, and a tendency to behave responsibly. It reflects more general characteristics that influence a range of specific behaviors. However, procrastination refers to specific tendencies or behaviors associated with delaying tasks, avoiding work, and lack of organization. These traits are thought to be influenced by broader accountability factors.

David's research supports the idea of a negative correlation between conscientiousness and procrastination, evident across various domains and dimensions. The procrastination domains assessed, ranging from academic tasks to administrative duties, reveal the multifaceted nature of procrastination behavior. Similarly, dimensions such as aversiveness of task, fear of failure, and difficulty making decisions further elucidate the complex psychological underpinnings of procrastination [7]. Through the utilization of the Procrastination Assessment Scale and the revised NEO Personality Inventory (NEO-PI-R), David measured participants' conscientiousness levels and their impact on procrastination tendencies. Notably, accountability emerged as a key factor, inversely linked to outright procrastination at both domain and dimension levels. Consequently, low conscientiousness emerged as a substantial contributor to overall procrastination tendencies. An intriguing finding lies in the association between the procrastination/conscientiousness measure and physiological anxiety [8]. This correlation, coupled with the previous notion of fear of procrastination, suggests that the relationship between chronic procrastination and heightened physiological anxiety requires further exploration. Delving into the root and developmental causation of greater physiological anxiety among procrastinators might uncover deeper psychological mechanisms linking personality traits, accountability, procrastination behaviors, and emotional responses.

The observed correlation between conscientiousness and procrastination, particularly concerning task-related orientations rather than ego-related orientations, resonates with findings from previous studies involving college student populations [8]. This experiment, involving participants' recording of the sequence in which they completed tasks and those they postponed, sheds light on the behavioral manifestations of procrastination. Notably, the data implies that procrastination is potentially more closely associated with task-related features. The prioritization of certain tasks over others, and the subsequent delay of specific responsibilities, underscores the role of task-oriented factors in driving procrastination tendencies. This observation aligns with the notion that individual differences in

conscientiousness, reflecting traits such as organization and discipline, play a substantial role in influencing how tasks are approached and completed.

The relationship between conscientiousness and procrastination is complex and multidimensional. Conscientiousness includes a variety of lower-order factors related to self-discipline, organization, and responsibility, while procrastination encompasses specific behaviors such as task avoidance and lack of organization. David's research further explored this relationship and found a negative correlation between conscientiousness and procrastination across a variety of domains and dimensions. Responsibility was a key factor that was inversely related to procrastination. Interestingly, the study also found a link between procrastination/self-awareness measures and physiological anxiety, prompting the need to investigate the underlying causes of increased anxiety in procrastinators.

Interestingly, the relationship between conscientiousness and procrastination is not uniform across all domains. For instance, the association between conscientiousness and procrastination on papers is less pronounced [7]. This discrepancy might be attributed to the perception of papers as optional or less crucial compared to exams and assigned readings within coursework. Furthermore, low assertiveness was identified as a contributing factor to procrastination. Introverted individuals may be less likely to seek help from professors or peers, leading to delayed task initiation [7].

3. The Indirect Relations between Conscientiousness and Procrastination

Lay's work highlighted the significance of task aversiveness in understanding procrastination. Notably, the aversiveness of tasks was found to moderately correlate with conscientiousness, suggesting that individuals high in conscientiousness may be less inclined to procrastinate on tasks they find challenging or unpleasant [6]. When examining procrastination across different domains, such as exams, papers, reading, and administrative tasks, consistent patterns emerge. In the research, the experiment randomly selected participants to join the different groups and engage in the experiment. It is observed that tasks requiring higher levels of conscientiousness, discipline, and persistence, such as exam preparation and assigned readings, tend to be associated with lower levels of procrastination [7]. This aligns with the nature of conscientious individuals who are characterized by their organized and goal-oriented behaviors.

According to research, individuals with a growth mindset are more likely to respond resiliently to challenging academic environments. Yeager and Dweck found that students with a growth mindset tended to show more adaptive responses in the face of changing academic standards. This adaptability can manifest as a willingness to change learning strategies, adopt new learning methods, and accept changes in educational needs [9]. As a result, these students are less likely to procrastinate because they view challenges as opportunities for growth rather than insurmountable obstacles.

In examining the interaction between a growth mindset and procrastination, Rickert, Meras, and Witkow conducted a study with adolescents. They observed that those with a fixed mindset were more likely to have self-limiting behaviors and procrastination. This suggests that those who believe their abilities are fixed may be more inclined to avoid challenging tasks for fear that failure may reflect inherent shortcomings [9]. In contrast, those with a growth mindset believe that abilities are malleable, are more likely to adopt proactive strategies to tackle challenging tasks, and are less likely to resort to procrastination.

Furthermore, the potential synergistic effects of a growth mindset and accountability should be recognized. Lindgren et al. showed that a growth mindset was associated with traits such as responsibility and emotional balance [9]. When combined with accountability, individuals with a growth mindset may exhibit a strong internal motivation to complete tasks quickly and efficiently, thereby minimizing the likelihood of succumbing to procrastination tendencies.

In summary, the presence of a growth mindset also appears to play some role in moderating the relationship between accountability and procrastination. Individuals with a growth mindset are more likely to accept challenges, adapt strategies, and take positive steps to overcome obstacles. This

positive mindset fits well with the proactive and organized nature of responsible individuals, which in turn may reduce procrastination. Future research could explore interventions aimed at fostering a growth mindset in students, which could potentially reduce procrastination tendencies and improve academic performance.

Conscientiousness and procrastination are also influenced by a variety of other elements in an indirect manner. Procrastination is less likely when people have effective personal time management abilities to assist them in better arranging their work and time. Procrastination can be influenced by expectations and support from family, friends, coworkers, or bosses, as well as potential societal pressures. Further investigation revealed that procrastination was negatively impacted by college students' perceptions of social support. Parents, teachers, and friends were viewed as three different sources of support by the students. The study came to the conclusion that college students' perceptions of social support enhanced their level of self-compassion, which would encourage them to behave more positively and less procrastinate [10].

4. Discussion

The intricate relationship between conscientiousness, procrastination, and growth mindset uncovered in this study presents a multifaceted tapestry of psychological dynamics with significant implications for educational strategies, personal development, and the understanding of human behavior. These findings contribute to a nuanced comprehension of how individual traits and cognitive processes intersect to influence task management and academic success.

The alignment between conscientiousness and procrastination as higher- and lower-order factors introduces a hierarchical framework that encapsulates the overarching influence of conscientiousness on procrastination tendencies. As established by John Wiley & Sons' study, the intrinsic connection between procrastination and accountability traits resonates with the notion that conscientiousness, characterized by attributes such as organization and discipline, influences specific behaviors like task avoidance. This hierarchical perspective aids in clarifying the relationship between broad personality traits and the specific actions and reactions exhibited in everyday academic tasks.

The negative correlation observed between conscientiousness and procrastination, as evidenced by David's research, echoes the potential role of conscientiousness as a protective factor against procrastination. The identification of accountability as a pivotal mediator emphasizes the importance of instilling responsibility early in educational settings. Educators, administrators, and policymakers can utilize this insight to design curricula and interventions that foster a sense of accountability, thus shaping students' attitudes toward timely task completion.

The introduction of the growth mindset as a moderator provides a novel lens through which to examine procrastination tendencies. The adaptability and resilience associated with a growth mindset align harmoniously with conscientious traits, potentially curbing procrastination through proactive strategies. This dimension is pivotal in developing interventions that not only address the symptoms of procrastination but also the underlying cognitive structures. Encouraging a growth mindset can empower students to see challenges as opportunities for learning and growth, which in turn may lead to a decrease in the perceived aversiveness of challenging tasks.

The identification of physiological anxiety as a potential underlying mechanism for the relationship between conscientiousness, procrastination, and emotional responses deepens the understanding of the procrastination phenomenon. Steven's findings open a new avenue for research into the intersection of psychological and physiological factors. This suggests that interventions targeting physiological responses to task-related stressors could complement traditional cognitive approaches to addressing procrastination. Techniques such as mindfulness, stress reduction strategies, and relaxation exercises may play a pivotal role in reducing physiological anxiety and subsequently mitigating procrastination tendencies.

In summary, the convergence of conscientiousness, procrastination, and growth mindset offers a comprehensive framework for understanding and addressing procrastination behavior. The

implications are broad-ranging, spanning educational strategies, counseling interventions, and individual self-awareness. This study encourages educators and stakeholders to adopt a holistic approach, combining the cultivation of conscientious traits, the promotion of a growth mindset, and the recognition of physiological responses to create effective interventions that empower individuals to conquer procrastination, enhance task management skills, and ultimately achieve academic and personal success.

5. Conclusion

In unraveling the intricate relationship between conscientiousness, procrastination, and growth mindset, this exploration sheds light on the multifaceted nature of human behavior and its impact on academic performance. The dynamic interplay between conscientiousness and procrastination, as evidenced by various studies, highlights the pivotal role of accountability, task-oriented tendencies, and even physiological anxiety in shaping the way individuals manage tasks and responsibilities. Conscientiousness, acting as a higher-order factor, exerts its influence on procrastination traits – a lower-order factor encompassing specific behaviors like task avoidance. David's research underscores the complexity of this correlation, revealing a negative relationship across diverse domains and dimensions.

The introduction of the growth mindset as a moderating factor adds depth to the understanding of the interplay between personality traits and academic behavior. Individuals with a growth mindset exhibit a willingness to embrace challenges and employ adaptive strategies, potentially mitigating procrastination tendencies. Furthermore, the fit between a growth mindset and conscientiousness suggests that the combination of the two can promote intrinsic motivation and reduce procrastination. Taken together, these findings highlight the potential of interventions targeting self-awareness and a growth mindset to overcome procrastination and enhance academic performance.

Collectively, these findings underline the potential for interventions that target both conscientiousness and a growth mindset to curb procrastination and enhance academic achievement. Encouraging students to cultivate a growth mindset could empower them to approach challenges with resilience and proactive strategies. Simultaneously, promoting accountability, coupled with an adaptable mindset, may foster a strong internal drive to complete tasks in a timely and organized manner.

As research in this domain continues to evolve, it is evident that the intricate relationship between conscientiousness, procrastination, and a growth mindset offers a wealth of opportunities for educators, psychologists, and policymakers to devise strategies that inspire proactive task management and facilitate academic success. By addressing the complex interplay of psychological traits and behaviors, we move closer to a comprehensive understanding of how individuals navigate academic responsibilities and achieve their fullest potential.

References

- [1] Roberts, B. W., Chernyshenko, O. S., Stark, S., & Goldberg, L. R. (2005). The structure of conscientiousness: An empirical investigation based on ... Wiley Online Library. <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1744-6570.2005.00301.x>.
- [2] Steel P. The nature of procrastination: a meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychol Bull.* 2007 Jan; 133 (1): 65-94. Doi: 10.1037/0033-2909.133.1.65. PMID: 17201571.
- [3] Costa, P. T., & McCrae, R. R. (1992). The five-factor model of personality and its relevance to personality disorders. *Journal of Personality Disorders*, 6 (4), 343–359.
- [4] N Corker, K. S., Oswald, F. L., & Donnellan, M. B. (2012). Conscientiousness in the classroom: A process explanation. *Journal of Personality*, 80 (4), 995–1028.
- [5] Sirois, F. M. (2014). Procrastination and stress: Exploring the role of self-compassion. *Self and Identity*, 13 (2), 128–145.

- [6] Lay, C.H. (1997), Explaining lower-order traits through higher-order factors: the case of trait procrastination, conscientiousness, and the specificity dilemma. *Eur. J. Pers.*, 11: 267-278.
- [7] David Waston, D. C. (2000a, November 16). Procrastination and the five-factor model: A facet level analysis. *Personality and Individual Differences*. <https://www.sciencedirect.com/science/article/pii/S0191886900000192#section-cited-by>.
- [8] Scher, S.J. and Osterman, N.M. (2002), Procrastination, conscientiousness, anxiety, and goals: Exploring the measurement and correlates of procrastination among school-aged children. *Psychol. Schs.*, 39: 385-398.
- [9] Degol, J.L., Wang, MT., Zhang, Y. et al. Do Growth Mindsets in Math Benefit Females? Identifying Pathways between Gender, Mindset, and Motivation. *J Youth Adolescence* 47, 976–990 (2018).
- [10] Yang, X., Zhu, J. & Hu, P. Perceived social support and procrastination in college students: A sequential mediation model of self-compassion and negative emotions. *Curr Psychol* 42, 5521–5529 (2023).