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The Paradox of Active Procrastination: A Cross-Sectional Study of Perceived Task Control Among Psychology Students

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Abstract

Procrastination is commonly conceptualized as a maladaptive self-regulatory failure associated with impaired performance and reduced control over task execution. However, recent research suggests that procrastination may also assume a functional form, referred to as active procrastination, characterized by intentional delay combined with preserved control and effectiveness. The present study aimed to examine the relationship between the level of procrastination and perceived control over academic tasks among psychology students, as well as to explore differences according to gender, study level, and mode of study. A quantitative cross-sectional pilot study was conducted using an online self-report survey administered to 300 psychology students aged 18–30 years from universities in southern Poland. An author-developed questionnaire with good internal consistency (Cronbach's $\alpha = 0.84$) was used to assess procrastination behaviors, perceived task control, and self-reported academic functioning. The results indicated a high prevalence of procrastination behaviors alongside high levels of declared task control, timely task completion, and satisfaction with task quality. Women reported significantly lower levels of procrastination than men, while no significant differences were observed with respect to study level or mode. The findings support the existence of a functional paradox of procrastination and provide evidence consistent with the concept of active procrastination, suggesting that perceived control may buffer the negative consequences of delaying academic tasks.

Keywords: procrastination; active procrastination; perceived task control; self-regulation; academic functioning; psychology students; cross-sectional study

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1. Introduction

Procrastination, defined as the voluntary and intentional delay of intended actions despite awareness of potential negative consequences, is one of the most frequently studied manifestations of self-regulatory failure in psychology [1,2]. Traditionally, procrastination has been conceptualized as a maladaptive behavioral pattern associated with deficits in cognitive control, difficulties in emotion regulation, and a tendency to prioritize immediate mood repair over long-term goals [1,3]. Population-based studies consistently indicate that procrastination is particularly prevalent among university students, with estimates

suggesting that 50–80% of students regularly delay academic tasks, and approximately half experience procrastination in a chronic and problematic form [4,5].

Over the past two decades, however, research on procrastination has increasingly moved beyond a purely pathological perspective. Contemporary approaches emphasize the heterogeneous and context-dependent nature of procrastination, suggesting that not all forms of delay necessarily result in impaired performance or diminished functioning [1,6]. Within this framework, the concept of *active procrastination*, introduced by Chu and Choi, has gained considerable attention [7]. According to this model, some individuals intentionally postpone task initiation while maintaining a sense of control over their actions, preferring to work under time pressure because it enhances concentration, motivation, and cognitive engagement. In contrast to passive procrastination, which is characterized by avoidance and loss of control, active procrastination is associated with deliberate decision-making, perceived competence, and satisfactory performance outcomes [7–9].

Empirical studies examining active procrastination indicate that individuals who adopt this strategy often do not differ significantly from non-procrastinators in terms of academic achievement and, in some cases, report even higher levels of satisfaction with their performance [7,8,10]. These findings suggest that the functional consequences of procrastination may depend less on the mere presence of delay and more on the psychological resources accompanying it. In particular, perceived control over tasks and beliefs about one's own effectiveness under time pressure appear to play a critical role in differentiating adaptive from maladaptive forms of procrastination [7,10,11].

Perceived task control is closely related to the construct of self-efficacy, defined as an individual's belief in their ability to successfully execute actions required to achieve desired outcomes [12,13]. From the perspective of Temporal Motivation Theory, procrastination emerges as a function of expectancy, task value, impulsivity, and temporal distance to reward [14]. Within this model, high perceived control and self-efficacy may act as protective factors, buffering the negative effects of delayed task engagement even when procrastination behaviors persist [14,15].

Despite growing interest in functional and active forms of procrastination, empirical findings remain mixed. Some studies report that higher perceived control is associated with lower levels of procrastination, whereas others document the coexistence of pronounced procrastination tendencies with high effectiveness, timely task completion, and positive self-evaluations of academic functioning [10,16]. Particularly intriguing are findings suggesting a functional paradox, in which procrastination does not undermine performance but instead becomes a relatively stable strategy for managing academic demands.

Further investigation of this paradox appears especially warranted in populations characterized by heightened awareness of self-regulatory processes. Psychology students constitute a unique group in this regard, as they possess advanced declarative knowledge about motivation, self-control, and emotion regulation, which does not necessarily translate into consistent behavioral self-regulation in everyday academic practice. Examining procrastination within this population may therefore provide valuable insights into the conditions under which delay becomes functional rather than detrimental [17,18].

Although the concept of active procrastination has been examined in several studies, relatively little attention has been paid to how procrastination coexists with perceived task control in specific academic populations and across different organizational contexts of higher education. In particular, few studies have explored whether procrastination patterns differ across study levels or modes of study, factors that may influence time management, workload structure, and academic autonomy.

Research on procrastination has also examined potential gender differences in self-regulatory behaviors among students. Several studies indicate that women tend to report

lower levels of procrastination and higher levels of self-regulation compared with men [19]. These differences have been interpreted in light of higher conscientiousness, stronger academic engagement, and greater use of time-management strategies often reported among female students. Meta-analytic and empirical studies suggest that although the magnitude of these differences is typically small to moderate, women generally demonstrate more consistent task management and lower tendencies to delay academic responsibilities. Such findings provide a theoretical basis for examining gender as a potential factor associated with procrastination behaviors and perceived task control in academic contexts [20].

Examining these patterns among university students may therefore extend existing research by providing insight into how procrastination functions within real academic environments and how it relates to students' perceived ability to manage academic demands. Based on the theoretical framework of active procrastination and the role of perceived control in self-regulation, several research hypotheses were formulated a priori:

H1: *A higher level of procrastination will be associated with perceived control over academic tasks.*

H2: *Women will report lower levels of procrastination than men.*

H3: *No significant differences in procrastination will be observed across study levels or modes of study.*

These hypotheses were tested using comparative and correlational statistical analyses.

2. Materials and Methods

2.1. Participants

The research sample consisted of 300 students enrolled in psychology degree programs representing various stages of higher education, including bachelor's, master's, and long-cycle master's programs, as well as both full-time and part-time modes of study. Participants were recruited from several higher education institutions located in the Silesian Voivodeship. Recruitment took place through university communication channels and student online groups. The invitation included a short description of the study and a link to the online questionnaire. Participation was voluntary, anonymous, and not connected with course credit or academic evaluation.

The gender distribution was relatively balanced, with 55% women and 45% men, allowing for meaningful gender-based comparisons. All respondents were between 18 and 30 years of age, corresponding to the developmental period of late adolescence and emerging adulthood.

2.2. Measures

The survey consisted of 20 items designed to assess procrastination-related behaviors and perceived control over academic tasks. Completing the questionnaire required approximately 5–7 min. All items were rated using a five-point Likert-type scale ranging from "definitely no" to "definitely yes."

The instrument included a set of diagnostic statements referring to three main constructs:

(1) Procrastination behaviors, reflecting tendencies to delay academic tasks;

(2) Perceived task control and self-regulation, including motivation levels, time-management strategies, and subjective control over academic responsibilities;

(3) Perceived academic effectiveness, referring to self-reported timeliness of task completion, satisfaction with task quality, and perceived effectiveness in fulfilling academic obligations.

Internal consistency analysis indicated good reliability of the instrument (Cronbach's $\alpha = 0.84$). The constructs assessed by the questionnaire and the corresponding indicators are presented in Table 1.

Table 1. Constructs used for building the questionnaire.

Construct	Definition	Example Items
Procrastination	Tendency to delay task initiation or completion despite awareness of obligations	postponing tasks, delaying simple tasks, difficulty starting
Perceived task control	Subjective belief in the ability to manage academic tasks and complete them effectively	knowing how to start tasks, coping with many tasks
Academic effectiveness	Self-reported ability to meet deadlines and produce satisfactory work	task timeliness, satisfaction with quality

The questionnaire included a demographic section covering gender, degree level, and study mode, as well as a set of diagnostic statements assessing key dimensions of procrastination and self-regulation. Items addressed behaviors such as postponing tasks until the last moment, difficulties with task initiation, delaying even simple responsibilities, perceived motivation levels, time management strategies, subjective control over academic tasks, coping with multiple obligations, and perceived effectiveness and timeliness of task completion. The structure of the instrument allowed for the calculation of synthetic indicators of procrastination and perceived task control by aggregating responses to thematically related items.

2.3. Design and Procedure

The study employed a quantitative research design and was conducted using the diagnostic survey method. Data were collected through an anonymous online questionnaire, which participants completed independently and without supervision. This approach reduced the potential influence of social desirability and response bias, thereby increasing the reliability of self-reported data. Participants were recruited through university communication channels, including institutional mailing lists and student online communities (e.g., university-related social media groups). An invitation describing the purpose of the study and containing a link to the online questionnaire was distributed through these channels. Participation was voluntary and anonymous. Because the invitation was disseminated through multiple student networks and online groups, it was not possible to determine the exact number of individuals who received the invitation; therefore, an accurate response rate could not be calculated. Respondents were informed that they could withdraw from the study at any stage without any negative consequences.

The study was conducted in accordance with the ethical principles of psychological research and approved by Bioethics Committee of Medical University of Silesia in Katowice, Poland (approval number: PCN/CBN/0052/KB/127/22). All participants provided informed consent prior to participation and were informed about the anonymity and confidentiality of their data. The research design did not involve any form of intervention or manipulation and was not associated with any risk to participants.

2.4. Statistical Analysis

Statistical analyses were conducted using IBM SPSS Statistics for Windows, version 28.0 (IBM Corp., Armonk, NY, USA). In the first stage, descriptive statistics, including means, standard deviations, and percentage distributions, were calculated to characterize the sample and the intensity of the studied variables. Subsequently, comparative analyses were performed to examine differences in procrastination and perceived task control depending on selected sociodemographic variables. Gender differences were analyzed using the independent-samples *t*-test, while differences related to degree level and study mode

were examined using one-way analysis of variance (ANOVA). When assumptions of normality were violated, appropriate nonparametric alternatives, namely the Mann–Whitney U test and the Kruskal–Wallis test, were applied. A significance level of $\alpha = 0.05$ was adopted for all analyses. In addition to statistical significance, effect sizes were calculated using Cohen's d and η^2, enabling the assessment of the strength of observed relationships.

3. Results

The final sample consisted of 300 university students. Women constituted 55.0% of the participants (n = 165), while men represented 45.0% (n = 135). Detailed characteristics of the sample are presented in Table 2. This diversity allowed exploratory comparisons across key educational subgroups.

Table 2. Sample characteristics.

Characteristic	n	%
Gender		
Women	165	55.0
Men	135	45.0
Degree level		
Undergraduate students	158	52.3
Master's students	142	47.7
Mode of study		
Full-time studies	187	62.3
Part-time studies	113	37.7

The analysis revealed a high prevalence of procrastination behaviors in the studied sample. A substantial majority of participants reported postponing academic tasks until the last moment, with responses "rather yes" and "definitely yes" accounting for a combined 78.3% of the sample. Frequent postponement of even simple tasks that did not require substantial time investment was reported by 64.8% of respondents, whereas only 18.9% denied engaging in such behaviors.

More than half of the participants (52.6%) declared difficulties initiating important tasks despite being aware of their significance. Similarly, a lack of motivation to engage immediately in required activities was reported by 56.7% of students, while strongly negative responses ("definitely not") constituted fewer than 10% of all indications. Notably, as many as 83.7% of respondents admitted to frequently formulating the intention "I will do it tomorrow," suggesting a well-established cognitive–behavioral pattern characteristic of procrastination.

Despite the high intensity of procrastination-related behaviors, the collected data simultaneously indicated a high level of declared academic effectiveness. Most respondents (86.4%) reported that they usually managed to meet academic deadlines, and 73.0% expressed satisfaction with the quality of their completed tasks. A relatively high sense of cognitive control was also observed: 59.5% of participants declared that they generally knew how to initiate task execution, while 43.2% evaluated their ability to cope with a large number of academic obligations as good or very good. Additionally, more than 70% of respondents believed that their work was evaluated by others in a fair and adequate manner.

Table 3 presents the percentage distributions of responses for the key indicators of procrastination, including task postponement, difficulties with task initiation, and lack of motivation, as well as indicators of control and effectiveness, such as timeliness, satisfaction with task quality, and clarity regarding task initiation.

Table 3. Percentage distribution of responses for indicators of procrastination, control, and effectiveness (N = 300).

Indicator	Definitely No (%)	Rather No (%)	Neither Yes nor No (%)	Rather Yes (%)	Definitely Yes (%)
Postponing tasks until the last moment	4.1	6.8	10.8	37.6	40.7
Delaying even simple tasks	6.2	10.1	18.9	41.3	23.5
Difficulty initiating an important task	7.4	12.6	27.4	31.8	20.8
Lack of motivation for immediate action	8.7	12.1	22.5	34.6	22.1
Declared timeliness of task submission	2.8	4.3	6.5	40.5	45.9
Satisfaction with task quality	5.6	8.1	13.3	51.4	21.6
Knowing how to start task execution	3.4	6.8	30.3	42.5	17.0
Coping with a large number of tasks	5.1	11.9	19.8	43.2	20.0

Values are expressed as percentages; row totals may not equal 100% due to rounding.

To address the main objective of the study, the relationship between procrastination and perceived task control was examined using Pearson's correlation analysis. The results indicated that procrastination intensity showed a weak association with perceived task control ($r = 0.11$, $p = 0.06$). This finding suggests that higher levels of procrastination may coexist with a relatively high sense of control over academic tasks in the studied group.

Figure 1 illustrates the co-occurrence of high levels of procrastination with high declared timeliness and task completion effectiveness, highlighting the paradoxical nature of the observed pattern within the study sample.

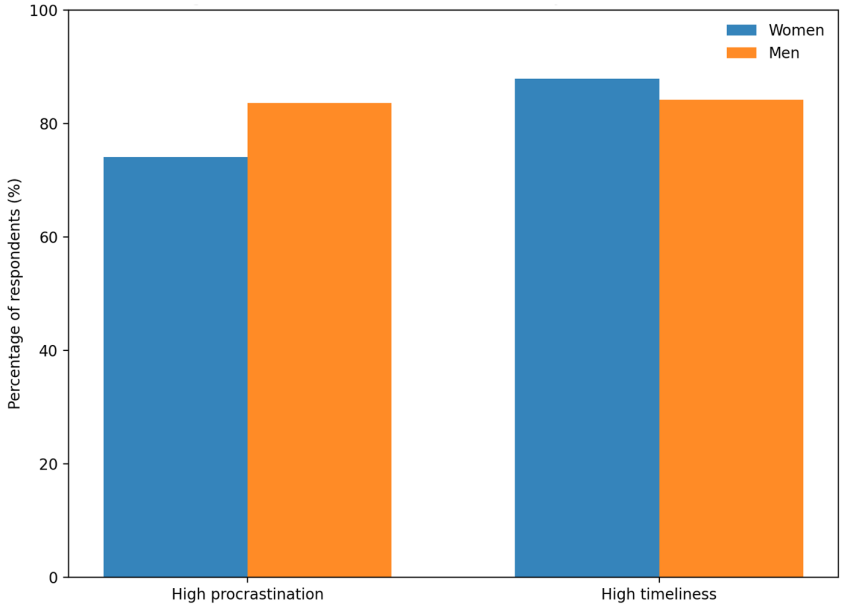

Figure 1. Procrastination and timeliness by gender (N = 300).

To further explore group differences, comparative statistical analyses were conducted. An independent-samples t-test revealed a statistically significant gender difference in the overall level of procrastination. Women reported a lower level of procrastination (M = 3.12, SD = 0.64) compared to men (M = 3.38, SD = 0.71), $t(298) = 3.21$, $p = 0.001$, with a moderate effect size ($d = 0.37$). No statistically significant gender differences were found in declared timeliness or satisfaction with task quality ($p > 0.05$).

One-way analysis of variance (ANOVA) showed no statistically significant differences in procrastination levels between students enrolled in different degree programs, $F(2297) = 1.08$, $p = 0.34$, $\eta^2 = 0.01$, nor between full-time and part-time students, $F(1298) = 0.94$, $p = 0.33$, $\eta^2 = 0.01$. Similarly, no significant differences were observed with respect to perceived task control or academic effectiveness across study modes or degree levels (all $p > 0.05$).

Overall, the obtained pattern of results indicates that procrastination in the studied population is largely independent of organizational aspects of academic studies, while showing partial differentiation by gender. The simultaneous presence of high procrastination intensity and high declared academic effectiveness indicates the coexistence of high procrastination intensity with maintained academic effectiveness in the studied group.

4. Discussion

The present study confirms that procrastination is a highly prevalent phenomenon among psychology students, which is consistent with previous findings indicating particularly high rates of procrastinatory behavior in academic populations [21,22]. Importantly, the results demonstrate that a high level of procrastination does not necessarily translate into reduced academic effectiveness. Most respondents reported timely submission of academic assignments and expressed satisfaction with the quality of their work, which challenges purely pathologizing conceptualizations of procrastination.

A particularly noteworthy finding is the co-occurrence of elevated procrastination with a high sense of task control and perceived effectiveness. This pattern aligns closely with the concept of active procrastination, which assumes that task delay may be intentional, strategic, and functionally adaptive, with time pressure serving as a motivating factor that mobilizes cognitive and motivational resources [7,23]. Although participants frequently reported difficulties initiating tasks, their high levels of declared final effectiveness suggest that procrastination in this group may function as a self-regulatory strategy rather than a purely avoidance-based behavior.

The absence of significant differences in procrastination levels across different degree programs and study modes further supports the notion that procrastination may represent a relatively stable self-regulatory pattern, largely independent of formal organizational characteristics of the educational process [24,25]. This finding is consistent with the Temporal Motivation Theory, which emphasizes the role of individual differences in impulsivity, expectancy, and task value rather than contextual institutional factors in shaping procrastinatory behavior [14,26,27].

Gender was the only variable that significantly differentiated procrastination intensity. Women reported lower levels of procrastination than men, while showing comparable levels of timeliness and satisfaction with task quality. This result is in line with earlier research suggesting higher conscientiousness and more effective time-management strategies among women, often attributed to differences in academic socialization processes [28].

The findings further indicate that perceived task control and self-efficacy may buffer the potentially negative consequences of procrastination, reducing its detrimental impact on academic performance without necessarily eliminating the behavior itself. According to Bandura's theory of self-efficacy, confidence in one's ability to meet task demands

promotes engagement even under conditions of high time pressure. From this perspective, procrastination may serve as an adaptive mechanism for emotional and motivational regulation, a view supported by research on short-term mood regulation and affective coping [11,28].

Overall, the results suggest that the students in the present study predominantly exhibit a pattern consistent with active procrastination, characterized by intentional task delay accompanied by maintained control, timeliness, and satisfactory outcomes. Consequently, procrastination in this population appears to be more functional than maladaptive, challenging deficit-oriented interpretations of the construct [8].

Strengths and Limitations

The main strengths of this study include the large sample size, the diversity of participants with respect to degree level and study mode, and the use of a validated measurement instrument demonstrating good internal consistency. These features enhance the reliability and generalizability of the findings within the studied population.

Nevertheless, several limitations should be acknowledged. First, the cross-sectional design precludes causal inferences regarding the relationship between procrastination and academic effectiveness. Second, the reliance on self-report measures introduces the possibility of response biases, including social desirability effects. Moreover, because the survey link was distributed through open student communication channels, it was not possible to determine the exact number of students who received the invitation, which limits the ability to calculate a precise response rate. Finally, the absence of objective indicators of academic performance limits the ability to fully verify the functional nature of procrastination. Future research would benefit from longitudinal and experimental designs, the inclusion of behavioral or performance-based measures, and methodological triangulation to more precisely capture the dynamics and consequences of procrastination over time.

5. Conclusions

The findings of the present study confirm that procrastination is a widespread phenomenon among psychology students, commonly expressed through task postponement, difficulties with task initiation, and delayed engagement in academic activities. Importantly, a high level of procrastination does not necessarily lead to reduced academic effectiveness. The observed co-occurrence of elevated procrastination with high declared timeliness, satisfaction with task quality, and perceived task control suggests that delaying behavior may function as a stable and effective self-regulatory strategy rather than an exclusively maladaptive pattern.

The lack of significant differences across degree programs and study modes indicates that procrastination is largely independent of organizational features of the educational process. In contrast, gender-related differences point to the relevance of individual and psychosocial factors in shaping procrastinatory behavior. Overall, the results support the conceptualization of procrastination as a potentially functional form of active delay, emphasizing the need to distinguish between adaptive and maladaptive forms of procrastination in academic contexts.

Practical Implications

The findings of the present study suggest several practical applications for academic environments. Universities may support students by implementing short training programs focused on self-regulation, time management, and task planning, which can strengthen perceived control over academic responsibilities. Educators may also introduce structured

yet flexible deadlines or milestone checkpoints for larger assignments, allowing students to maintain autonomy while preventing excessive task delay. Additionally, academic support services could incorporate brief screening procedures to identify students whose procrastination is associated with reduced control or increased stress, enabling targeted counseling or coaching interventions. Such approaches may help students manage procrastination more effectively while preserving the potentially adaptive aspects of intentional delay observed in active procrastination.

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