

Linking dark triad traits to procrastination: A sequential mediation model involving time perspectives and passion

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ABSTRACT

This study investigates the cross-sectional associations between dark personality traits, time perspectives, passion, and procrastination. Drawing on Zimbardo's time perspective theory and Vallerand's dualistic model of passion, we examined how Machiavellianism, narcissism, and psychopathy relate to procrastination by means of temporal orientation and types of passion. A sample of 824 Spanish adults (ages 18–34), recruited via non-probabilistic quota sampling, completed validated measures of the target constructs. Structural equation modeling using a robust estimator revealed that subclinical psychopathy exhibits a significant indirect association with procrastination via a fatalistic present time perspective and obsessive passion. In contrast, narcissism and Machiavellianism showed no significant indirect associations. Harmonious passion was negatively associated with procrastination, while obsessive passion showed a positive link. Additionally, present hedonistic and future perspectives were linked to harmonious and obsessive passion, respectively. These findings highlight the role of temporal orientations and the two types of passion in understanding procrastination within specific personality profiles. The results suggest that these model-consistent conditional pathways may inform future intervention research targeting time perspective adjustments and passion regulation to alleviate procrastination tendencies.

1. Introduction

Time perspectives and procrastination are two manifestations of temporality that accompany individuals throughout their lives, to the point of becoming embedded in aspects of their personality. On the one hand, time perspectives describe attitudes toward time (present, past, future) that “exert a dynamic influence on many important judgments, decisions and actions” (Zimbardo & Boyd, 2015, p. 18). On the other hand, procrastination highlights the difficulties in self-regulation that can be observed in areas such as study, work, and leisure (Codina et al., 2018; Steel, 2010). Together, time perspectives and procrastination reveal that time can become both a general orientation and an obstacle. In this context, procrastination is increasingly understood as a failure of temporal self-regulation (Sirois, 2014). This volitional breakdown is particularly intriguing because, as Sirois and Hirsch (2026) note, it remains unclear why individuals fail to consider the negative future consequences of their delay, despite the necessity of the tasks at hand.

Previous evidence on the relationship between time perspectives and procrastination indicates that future time perspective is associated

negatively and moderately with procrastination (Díaz-Morales & Ferrari, 2015). Specifically, it has been found a significant and negative association between future time perspective and procrastination dimensions of decisional procrastination, implemental delay, and lateness. As a matter of fact, future time perspective has a potential protective role against procrastination, and past-negative may prompt it (Codina et al., 2024). In other words, time management in our lives must take into account the guiding meaning of time, minimizing the problems arising from putting off. Furthermore, the joint analysis of temporal perspectives and procrastination makes it possible to study temporality in its cognitive dimensions – how the present, past, and future are perceived – and factual dimensions, that is, whether problems affecting everyday life are observed as a result of time management.

Due to the implications that relationships such as those noted between temporal perspectives and procrastination can have in everyday life, it has been suggested that both characteristics of time management could have dispositional attributes and, by extension, be related to personality variables. In this regard, as frequent failures in temporal self-regulation can be viewed as a relatively stable behavioral tendency with

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trait-like qualities (Sirois & Hirsch, 2026), it becomes pertinent to explore their connection with established personality structures. Therefore, this study focuses on the 'Dark Triad' (Paulhus & Williams, 2002), a construct comprising Machiavellianism (interpersonal manipulation), narcissism (grandiosity), and subclinical psychopathy (impulsivity and lack of empathy).

In the case of time perspectives, some studies have shown that Machiavellianism, narcissism, and psychopathy are related to present-oriented time perspectives; and Machiavellianism and psychopathy are associated with the past-negative time perspective (Birkás & Csathó, 2015). Following Zimbardo and Boyd's (1999) framework, these perspectives reflect how individuals categorize experience through five distinct dimensions: the Past-Negative, involving a pessimistic or traumatic view of one's history; the Past-Positive, reflecting a warm and nostalgic attitude toward the past; the Present-Hedonistic, characterized by a focus on immediate pleasure and gratification with little concern for future consequences; the Present-Fatalist, which reflects a belief that the future is predestined and unchangeable by individual actions; and the Future perspective, indicating a capacity for planning, persistence, and the pursuit of long-term goals. Stolarski et al. (2020) suggested that individuals with a stronger psychopathic or Machiavellian trait tend to have a predominantly negative view of the past and a stronger focus on the present. In general, authors such as Moraga et al. (2017) and Jonason et al. (2018) found that time perspectives that are focused on the present, reflect negative views of the past, and show limited concern about the future are frequent in individuals with higher dark personality traits. Based on this evidence, it can be observed that constitutive characteristics such as the dark side of personality may be associated with our time perception.

The conceptualization of procrastination as more than a mere delay in tasks began with the recognition of its nature as a dispositional characteristic, rooted in self-regulatory failure and emotional distress (Lay, 1995). Evolution of this perspective led Flett et al. (2012) to introduce procrastinatory cognitions as a distinct personality construct, linking the tendency to postpone with broader traits such as neuroticism and low conscientiousness. In line with the idea of a volitional breakdown, (Sirois & Hirsch, 2026) the way an individual internalizes their engagement with a task may determine whether they successfully regulate their behavior or succumb to delay. Based on this, our research highlights the potential relationship between procrastination and passion, a personality factual component that includes obsessive passion and harmonious passion (Vallerand, 2008, 2010). Passion is defined as a strong inclination toward a self-defining activity that one loves and invests significant energy in. Harmonious passion (HP) arises from an autonomous internalization of the activity, leading to flexible persistence and positive affect. Conversely, obsessive passion (OP) stems from a controlled internalization, resulting in a rigid urge to engage in the activity, often at the expense of other life domains (Vallerand, 2015). Obsessive passion has been reported to lead to academic procrastination through negative emotions; to the contrary, harmonious passion has been reported to protect against academic procrastination through positive emotions. Moreover, it has been demonstrated that while personality traits can orient people toward the choice of the activities they select (Stephan et al., 2014), passion can moderate the dedication to said activities (Vallerand, 2012).

The joint consideration of dark personality traits, time perspectives, passion and procrastination, raises a question regarding the role that personality characteristics play in the relationship between time perspectives and procrastination. To address this, our sequential model is grounded in self-regulation frameworks (Kanfer & Ackerman, 1989), which suggest that stable personality traits are associated with behavioral outcomes through a chain of distal and proximal psychological processes. In this sequence, the Dark Triad acts as a dispositional foundation that may skew cognitive appraisals of time (Time Perspectives). These temporal biases, in turn, covary with the quality of an individual's motivational energy or Passion, ultimately connecting to the

volitional breakdown that characterizes procrastination (Carver & Scheier, 1998; Sirois & Hirsch, 2026; Steel, 2007).

Specifically, the aim of this study is to examine the sequential pathways through which subclinical psychopathic, narcissistic, and Machiavellian traits are associated with procrastination by investigating the indirect pathways involving maladaptive time perspectives and passion quality. By incorporating passion into this model, we seek to elucidate how this motivational construct, which relates to dedication to activities, interacts with temporal biases to map variations in procrastination. This approach allows for a deeper exploration of how specific personality profiles relate to self-regulatory difficulties in adult populations.

2. Proposed hypotheses

Based on the theoretical framework described above, we formulated the following hypotheses to test the sequential mediation model:

- Hypothesis 1 (H1). Dark Triad traits will be significantly associated with maladaptive time perspectives. Specifically, psychopathy and Machiavellianism will show positive associations with Present-Fatalist and Past-Negative orientations, while being negatively links with Future orientation.
- Hypothesis 2 (H2). Time perspectives will act as a cognitive bridge to passion. Specifically, adaptive orientations (e.g., Future) will be positively associated with Harmonious Passion, whereas maladaptive orientations (e.g., Present-Fatalist) will be positively associated with Obsessive Passion.
- Hypothesis 3 (H3). The quality of passion will directly relate to the level of self-regulatory failure. Harmonious Passion will be negatively associated with procrastination, while Obsessive Passion (particularly when directed toward alternative activities) will be positively associated with it.
- Hypothesis 4 (H4). There will be a significant sequential mediation effect: Dark Triad traits (distal factors) will exhibit an indirect association with procrastination (behavioral outcome) through the successive pathways of Time Perspectives and Passion (proximal factors).

3. Method

3.1. Participants

Participants were 824 Spanish adults between the ages of 18 and 34 years old ($M = 25.75$; $SD = 5.02$), selected through a non-probabilistic quota sampling. Among these, 405 (49, 2%) identified as men, 418 (50,7%) as women, and 1 (0,1%) did not specify. Number of sampled participants was determined with the goal of having sufficient statistical power (0.80) to detect relevant relationships between study variables in the proposed model, expecting a small effect size ($f^2 = 0.05$), for a maximum number of 6 predictors, and a type I error probability of 0.05. As a result, a minimum sample size of 279 individuals was required (Faul et al., 2009).

3.2. Instruments

3.2.1. Time perspectives

A Spanish short version of the Zimbardo Time Perspectives Inventory (Codina et al., 2024) was used, based on the original 56-item version (Zimbardo & Boyd, 2015) that has been validated in Spanish (Díaz-Morales, 2006). The short version contains 17 items to measure future perspective with 3 items (i.e., *When I want to achieve something, I set goals and consider specific means for reaching those goals*), past negative perspective with 4 items (i.e., *Painful past experiences keep being replayed in my mind*), past positive perspective with 3 items (i.e., *Familiar childhood sights, sounds, and smells often bring back a flood of wonderful*

memories), present fatalist perspective with 3 items (i.e., *Since whatever will be will be, it doesn't really matter what I do*), and present hedonist perspective with 4 items (i.e., *It is important to put excitement in my life*). Each subscale was rated on a 5-point Likert-type scale ranging from 1 (*Not at all*) to 5 (*Totally*). For this study, CFA analysis showed marginal to weak fit indices: $\chi^2 = 611.441$; $df = 109$; $\chi^2 / df = 5.60$; $p < .001$; CFI = 0.85; TLI = 0.81; RMSEA = 0.07; [C.I. 0.069–0.081]; SRMR = 0.06.

3.2.2. Procrastination

The Spanish version (Guilera et al., 2023) of the Pure Procrastination Scale (PPS; Steel, 2010) which contain 12 items (i.e., *In preparation for some deadlines, I often waste time by doing other things*) rated on a 5-point Likert-type scale with response options ranging between 1 (very seldom or not true of me) and 5 (very often true or true of me). The mean of all 12 items' scores represented the total score in one global factor. For this study CFA analysis showed acceptable fit indices: $\chi^2 = 241.931$; $df = 51$; $\chi^2 / df = 4.74$; $p < .001$; CFI = 0.96; TLI = 0.94; RMSEA = 0.06; [C.I. 0.059–0.076]; SRMR = 0.05.

3.2.3. Passion

The Spanish version of the Passion scale with 12 items (Chamarro et al., 2015) to measure obsessive passion with 6 items (i.e., *This activity is the only thing that really turns me on*) and harmonious passion with 6 items (i.e., *My activity is in harmony with the other activities in my life*). Each subscale was rated on a 7-point Likert-type scale ranging from 1 (totally disagree) to 7 (totally agree). In this study CFA analysis showed borderline acceptable fit indices: $\chi^2 = 452.210$; $df = 53$; $\chi^2 / df = 8.53$; $p < .001$; CFI = 0.92; TLI = 0.90; RMSEA = 0.09; [C.I. 0.088–0.104]; SRMR = 0.07.

3.2.4. Dark Triad Personality

The Spanish version (Pineda et al., 2020) of the 12-item self-report questionnaire (Dirty Dozen: Jonason & Webster, 2010), was used to measure subclinical narcissism (i.e., *People see me as a natural leader*), psychopathy (i.e. *I like to get revenge on authorities*), and Machiavellianism (i.e., *I like to use clever manipulation to get my way*) in. Each subscale contains 4 items rating on a 5-point Likert-type scale ranging from 1 (*totally disagree*) to 5 (*totally agree*). In this study, CFA analysis showed borderline acceptable fit indices: $\chi^2 = 413.495$; $df = 51$; $\chi^2 / df = 8.10$; $p < .001$; CFI = 0.94; TLI = 0.93; RMSEA = 0.09; [C.I. 0.085–0.101]; SRMR = 0.04.

3.3. Procedure

The fieldwork was preceded by two preparatory phases that used a panel of participants. In the first phase, the research team worked with specialist technical staff to enter items into the software with the format that the participants would see. To prevent data loss, the questionnaire was programmed so that all of the questions had to be answered in order to complete it. The answer categories for each question were visible on one screen to avoid the need to move round it.

After verifying the final programming of the questionnaire, the second phase started with a pilot test. Based on this test, the necessary changes in format were made. Following some final operational checks, the potential participants on the panel were sent an email inviting them to take part in the study with a direct link to the instrument. This was a unique link that could not be reused once the responses had been submitted. Access to the questions was enabled during April 2025. The invitation was only sent to people from the panel of potential participants who fulfilled the age requirement established.

Participation was voluntary and anonymous and required informed consent. The study followed the requirements of the bioethics committee of the University ***ANONIMIZED***, and no further approval was required as the data obtained did not involve animal experiments or clinical experiments. Recommendations of the General Council of Psychology in Spain (Consejo General de la Psicología de España), the

Spanish Organic Law on Data Protection (15/1999: Jefatura del Estado, 1999), and the Declaration of Helsinki (World Medical Association, 2025) were followed.

3.4. Statistical analysis

Multivariate normality and distribution analyses were performed. No missing values were detected. Descriptive normality and reliability analyses were obtained for all study variables using Cronbach's alpha coefficient (α) and McDonald's omega coefficient (ω). Values considered acceptable for these indicators should be greater than 0.70 (Cronbach, 1951; Zwick & McDonald, 2000). Subsequently Pearson's correlation analyses were performed to corroborate the relationships between the variables. These analyses were carried out using the SPSS statistical package version 30.

The measurement and structural equation models (SEM) were calculated considering Dark Triad personality traits, time perspectives, passion types, and procrastination as latent variables, utilizing their respective items as indicators. Given the significant multivariate non-normality of the data and the ordinal nature of the 5-point and 7-point Likert-type indicators, the Maximum Likelihood with Robust Standard Errors (MLR) estimation method was implemented in MPLUS (version 8.80). MLR provides robust parameter estimates and standard errors under non-normal continuous distributions when indicators have five or more response categories. All structural path coefficients, total effects, indirect associations, and bootstrapping confidence intervals (95% CI based on 5000 resamples) are reported as fully standardized estimates (β). Overall model fit was evaluated using a combination of indices: the χ^2 statistic, the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the comparative fit index (CFI), and the Tucker-Lewis index (TLI).

Finally, to guarantee the statistical stability of our final structural pathways and to diagnose potential suppression effects, a block-wise sensitivity analysis was conducted. We systematically compared the full structural model against reduced alternative specifications (Block A, excluding Dark Triad traits; and Block B, excluding time perspectives) to verify that our central mediation estimates remained robust and directionally stable across configurations.

4. Results

Descriptive statistics are shown in Table 1. Shapiro-Wilk analysis shows a non-normal distribution. Assessment of internal consistency through Cronbach's alpha (α) and McDonald's omega (ω) showed strong coefficients for the majority of the scales (see Table 1). However, certain brief subscales of the short Zimbardo Time Perspective Inventory displayed values below the conventional .70 threshold, specifically Past Positive ($\alpha = .69$, $\omega = .69$), Present Fatalist ($\alpha = .65$, $\omega = .65$), and

Table 1
Descriptive statistics, univariate normality and internal consistency coefficients of study variables.

Variable	Range	Mean	S.D.	S-W	α	ω
Machiavellianism	1–5	2.09	0.99	0.91**	.88	.89
Narcissism	1–5	2.46	1.01	0.96**	.88	.88
Psychopathy	1–5	2.02	0.99	0.88**	.88	.89
Past. Negative	1–5	3.16	0.68	0.99**	.72	.72
Past. Positive	1–5	3.40	0.52	0.99**	.69	.69
Pres. Hedonist	1–5	3.17	0.52	0.98**	.71	.71
Pres. Fatalist	1–5	2.98	0.59	0.99**	.65	.65
Future	1–5	3.43	0.45	0.99**	.64	.64
Obs. Passion	1–7	3.32	1.31	0.98**	.88	.88
Har. Passion	1–7	4.93	0.97	0.98**	.88	.88
Procrastination	1–5	2.77	0.74	0.99**	.90	.90

Note. S.D. = Standard deviation; S-W = Shapiro-Wilk analysis; α = Cronbach's alpha de; ω = McDonald's Omega.
** $p < .01$.

Future ($\alpha = .64$, $\omega = .64$). These lower coefficients are qualified as marginal and are addressed as a measurement constraint within the limitations section. Regarding multivariate normality, Mardia's test confirmed a non-normal distribution based on Mardia's Skewness ($\chi^2 = 1213.857$; $p < .001$) and Mardia's Kurtosis ($z = 23.647$; $p < .001$), justifying the use of the MLR estimator.

Correlation analyses shown in Table 2 are in line with the literature described in this study. MANOVA analyses showed no significant differences according to the interaction between gender and age (Λ Wilks = 0.99; $F = 0.509$, $df = 11,000$; $p = .89$, $\eta^2 = 0.01$), and so the following analyses were performed for the overall sample. The measurement model showed borderline acceptable fit indices: $\chi^2 = 3174.824$; $df = 1269$; $\chi^2 / df = 2.5$; $p < .001$; CFI = 0.89; TLI = 0.88; RMSEA = 0.04; [C.I. 0.041–0.045] SRMR = 0.06.

The hypothesized structural model (see Fig. 1) yielded fit indices that represent a marginal to weak fit to the data: $\chi^2 = 3252.521$; $df = 1282$; $\chi^2 / df = 2.53$; $p < .001$; CFI = 0.89; TLI = 0.88; RMSEA = 0.04 [95% C.I. 0.041, 0.045]; SRMR = 0.06. While the RMSEA and SRMR reflect excellent values well within standard criteria, the CFI and TLI fall slightly below the conventional 0.90 threshold, a borderline outcome that warrants caution when evaluating latent construct estimates under conditions of mixed model fit. Total and indirect effects were evaluated using fully standardized path estimates. Subclinical psychopathy exhibited a significant standardized total effect on procrastination ($\beta = 0.30$, $p < .001$). On the other hand, the standardized total indirect associations for Machiavellianism ($\beta = 0.18$, $p = .067$) and narcissism ($\beta = 0.08$, $p = .117$) on procrastination were not statistically significant. Specifically, the only significant standardized sequential indirect association linked psychopathy to procrastination via a fatalistic present perspective and obsessive passion ($\beta = 0.18$, $p = .022$; 95% C.I. [0.050, 0.310]).

5. Discussion

The primary aim of this study was to test a sequential model integrating the Dark Triad, time perspectives, and passion to procrastination. Our findings provide partial and nuanced empirical support for the proposed theoretical model. While correlations confirmed most of the expected associations between personality traits, temporal orientations, and passion types (partially supporting H1–H3), the hypothesized sequential mediation pathway (H4) was only confirmed for subclinical psychopathy via a fatalistic present perspective and obsessive passion. This differential pattern suggests that the cognitive-motivational mechanisms underlying procrastination are not homogeneous across the three dark traits, and that passion quality acts as a crucial filter channeling the influence of temporal perceptions into behavioral outcomes, in our case, procrastination. By integrating time perspectives (Zimbardo & Boyd, 2015) with the dualistic model of passion (Vallerand, 2010), the findings reveal that time orientation is not merely

a contextual factor but a psychological pathway that underlies the relationship between personality traits and behavioral outcomes.

Subclinical psychopathy emerged as the only Dark Triad trait showing a significant indirect association with procrastination. This pathway—from psychopathy to a fatalistic present time perspective, obsessive passion, and finally to procrastination—can be understood through the self-regulatory limitations of this subclinical profile. Individuals high in psychopathy may perceive low control over their present circumstances, which is associated with compulsive engagement in non-priority activities and higher levels of procrastination. This is highly related with Sirois' (2014) short-term mood repair framework of procrastination. According to Sirois and Hirsch (2026), procrastination is primarily an emotional regulation failure where immediate mood management takes precedence over long-term goals. In individuals with high psychopathic traits, the combination of present fatalism (perceived helplessness) and impulsivity leads to an urgent need for immediate gratification. This emotional urgency channels their energy into an obsessive passion for alternative, appealing activities, causing them to systematically avoid priority tasks.

Related to the above, the absence of significant sequential indirect effects for Machiavellianism and narcissism is conceptually informative. Narcissism was positively related to future and present hedonistic perspectives, suggesting a more adaptive temporal orientation used strategically to maintain their grandiose self-image (Stolarski et al., 2020). Because narcissists focus on self-enhancement, they may align their tasks with harmonious passion or future goals to protect their ego, preventing the emotional breakdown that leads to obsessive-driven delay. Conversely, Machiavellianism was negatively associated with future and past-positive perspectives, indicating a more cynical, short-sighted temporal outlook. However, this configuration did not translate into procrastination via the passion pathway. This suggests that while Machiavellians display low future orientation, their task delays are likely strategic, calculated, and deliberate choices to maximize personal utility rather than emotional or volitional self-regulatory failures driven by rigid passion attachments.

Our results further clarify the differential roles of passion, demonstrating that the positive coefficient between future orientation and obsessive passion does not represent a substantive psychological paradox, but rather a conditional structural pathway arising from statistical suppression. While harmonious passion was negatively related to procrastination, obsessive passion was positively linked to it and associated with both fatalistic present and future perspectives. In our structural model, the simultaneous inclusion of multiple intercorrelated predictors (such as time-perspective dimensions and Dark Triad traits) leads to a suppression effect. Under these conditions, when controlling for the shared variance of present orientations, a future orientation shows a positive conditional pathway to obsessive passion. This suggests that when future-focused planning is rigidly driven by intra-personal or social pressures (the core of obsessive passion), the internalization of the

Table 2
Pearson correlations for study variables.

Variables	1	2	3	4	5	6	7	8	9	10
1. Machiavellianism										
2. Narcissism	0.67**									
3. Psychopathy	0.78**	0.60**								
4. Past negative	0.31**	0.33**	0.26**							
5. Past positive	−0.12**	0.01	−0.16**	0.01						
6. Pres. hedonist	0.27**	0.34**	0.26**	0.41**	0.28**					
7. Pres. fatalist	0.40**	0.35**	0.40**	0.52**	0.15**	0.59**				
8. Future	−0.17**	−0.05	−0.21**	0.09*	0.40**	0.08*	−0.02			
9. Obsessive passion	0.43**	0.35**	0.48**	0.27**	−0.01	0.38**	0.43**	−0.11**		
10. Harmonious passion	0.01	0.06	0.02	0.09*	0.29**	0.31**	0.16**	0.32**	0.34**	
11. Procrastination	0.47**	0.45**	0.43**	0.52**	−0.06	0.30**	0.44**	−0.23**	0.33**	−0.05

Note.

** $p < .01$.

* $p < .05$.

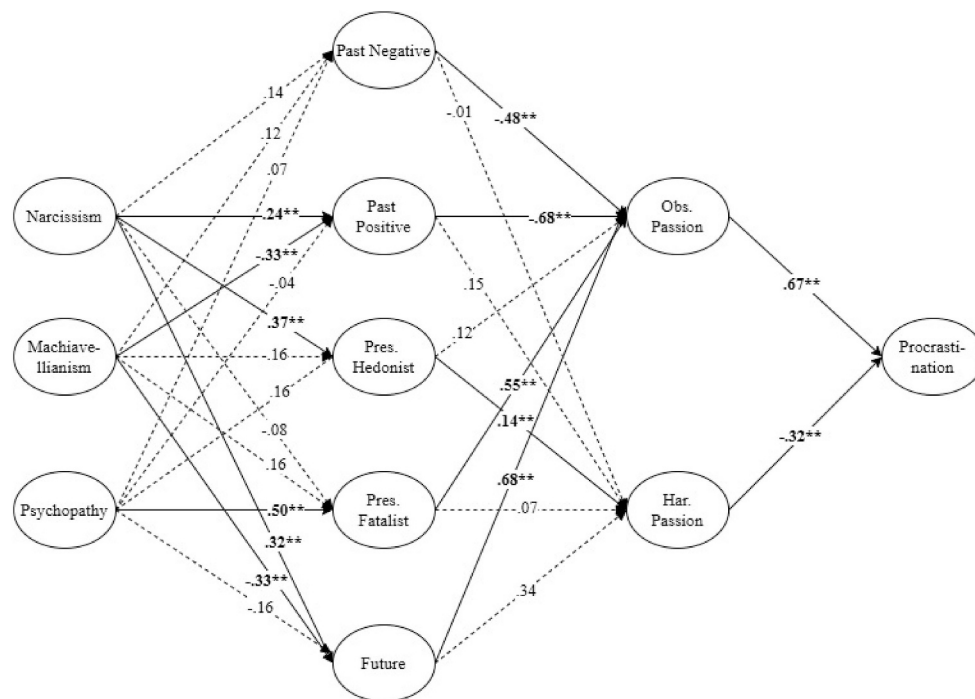


Fig. 1. Note. The structural model was estimated using Maximum Likelihood with Robust Standard Errors (MLR) to account for multivariate non-normality. All structural path coefficients, total effects, indirect associations, and bootstrapping confidence intervals are fully standardized estimates (β). Solid lines represent statistically significant pathways ($p < .01$), and dashed lines represent non-significant pathways. Overall model fit indices represent a marginal to borderline acceptable fit ($\chi^2 = 3252.521$; $df = 1282$; CFI = .89; TLI = .88; RMSEA = .04; SRMR = .06).

activity remains controlled rather than autonomous, causing individuals to experience internal conflict and anxiety that ultimately precipitate the volitional breakdown characterizing procrastination. Related with this Vallerand's (2015) notes that when a future orientation is fueled by an obsessive passion, the activity has been internalized rigidly due to intra-personal or social pressures (e.g., ego-validation, status, or fear of failure). Consequently, even when an individual plans for the future, their rigid and controlled engagement creates intense internal conflict, high anxiety, and emotional distress when facing task demands. This psychological pressure ultimately precipitates the volitional breakdown that triggers procrastination, as the individual avoids the activity to escape the rigid pressure attached to it.

Moving on to the cross-sectional nature of the current design, alternative directional orderings among the target constructs must be considered, as our data cannot establish definitive temporal precedence or directionality. Theoretically plausible alternative model specifications could be hypothesized, such as types of passion preceding cognitive time perspectives, procrastination functioning as a behavioral anchor that shapes subsequent passion configurations, or Dark Triad traits exhibiting direct linkages to procrastination with passion acting merely as a downstream correlate. Although our current sequential mediation model remains theoretically justified by distal-proximal self-regulation frameworks—which position stable personality structures as distal foundations that influence proximal cognitive and motivational states—longitudinal or experimental replication is strictly required to validate the exact directional flow of these pathways.

5.1. Limitations of the study

Without detracting from the findings obtained, several core limitations of the present research must be acknowledged. First, the cross-sectional nature of the data precludes drawing definitive causal inferences or establishing true mediation directionality. Second, the sample was gathered using a non-probabilistic quota sampling method within a specific Spanish adult demographic (ages 18–34), which limits

the generalization of the findings to broader or culturally distinct populations. Third, as shown in Table 1, several brief subscales of the short Zimbardo Time Perspective Inventory exhibited internal consistency reliability coefficients (α and ω) below the preferred .70 standard (specifically Past Positive, Present Fatalist, and Future). This lower psychometric reliability, coupled with the marginal-to-weak fit indices of our measurement and structural models, acts as a statistical constraint that increases measurement error and may attenuate or destabilize the magnitude of the observed estimates. Consequently, these structural pathways must be interpreted strictly as conditional estimates rather than absolute simple associations. Fourth, the observed standardized effects, while theoretically consistent, are relatively small to moderate, and the model omitted key self-regulatory control variables—such as trait impulsivity, self-control, and negative affect—which are tightly linked to procrastination dynamics (Sirois, 2014; Sirois & Hirsch, 2026). Future research should control for these variables and account for social desirability to isolate the unique contributions of these specific cognitive-motivational processes.

6. Conclusion

In conclusion, this study demonstrates that the relationship between dark personality traits and procrastination is not uniform. While sub-clinical psychopathy relates to procrastination through a specific sequential path involving present fatalism and obsessive passion, narcissism and Machiavellianism follow separate structural dynamics. This differentiation is essential for future theoretical models seeking to integrate personality architecture with temporal and motivational processes. Time perspectives and passion quality act like a psychological compass; depending on the configuration, they can either precipitate or mitigate self-regulatory failures across daily life.

From a practical point of view, given that Dark Triad traits and time perspectives function as relatively stable, dispositional anchors, interventions should fruitfully target malleable, proximal behavioral factors—specifically, passion regulation and task-avoidance habits.

Managing the behavioral expressions of high psychopathic profiles should involve facilitating the transition from obsessive to harmonious passion by helping individuals integrate multiple life roles and reducing the internal conflict between competing activities. Conversely, for Machiavellian and narcissistic profiles, time management and procrastination strategies must be tailored to align with their stable baselines, framing task completion as a strategic advantage for personal goals rather than relying on emotion-focused regulation.

Future research should move beyond cross-sectional designs, embracing ecological momentary assessments or longitudinal measures to capture the dynamic, processual interplay among time perspectives, passion, and procrastination in the natural world. Ultimately, our findings reinforce the view that temporality is not merely a background context but a central psychological mechanism that channels personality dispositions into everyday behavioral outcomes.

CRediT authorship contribution statement

Nuria Codina: Writing – review & editing, Writing – original draft, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Conceptualization. **María Marentes-Castillo:** Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Formal analysis, Data curation, Conceptualization. **José V. Pestana:** Writing – review & editing, Writing – original draft, Validation, Supervision, Project administration, Investigation, Funding acquisition, Conceptualization. **Rafael Valenzuela:** Writing – review & editing, Writing – original draft, Visualization, Project administration, Methodology, Investigation, Conceptualization.

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Declaration of competing interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Data availability

Data will be made available on request.

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