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Meaningful Work and Reduced Procrastination: The Role of Work Engagement and Socioemotional Skills

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Master in Emotion Sciences

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CIÊNCIAS SOCIAIS
E HUMANAS

Department of Psychology

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*A ti, querida mãe,
com todo o meu amor,
dedico-te este trabalho
por tudo o que
significas para mim*

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Resumo

Nesta dissertação analisou-se a associação entre trabalho com significado e procrastinação no local de trabalho, mediada pelo envolvimento com o trabalho. Adicionalmente, investigou-se o papel moderador das competências socioemocionais (especificamente, autogestão e resiliência emocional) na relação entre trabalho com significado e envolvimento. Com base no Modelo Exigências - Recursos Laborais e na Teoria da Conservação de Recursos, o trabalho com significado foi concebido como recurso laboral motivacional para potenciar o envolvimento e reduzir comportamentos procrastinatórios. Foi realizado um estudo transversal online em Portugal, pré-registado, com uma amostra final de 267 adultos trabalhadores. Os participantes responderam a quatro instrumentos de autorrelato: *Work and Meaning Inventory (WAMI)*, *Utrecht Work Engagement Scale*, *Procrastination at Work Scale (PAWS)* e a *Behavioral, Emotional, and Social Skills Inventory*. A WAMI e a PAWS foram traduzidas e culturalmente adaptadas. O trabalho com significado associou-se fortemente a maior envolvimento e, em menor grau, a menor procrastinação. Adicionalmente, a procrastinação relacionou-se negativamente com competências socioemocionais, sobretudo com a autogestão e, de forma mais moderada, com a resiliência emocional. A análise de mediação mostrou que o trabalho com significado está associado a menor procrastinação através do aumento do envolvimento. Nenhum efeito de moderação significativo emergiu das análises exploratórias, indicando que a autogestão e a resiliência emocional podem funcionar como recursos pessoais adicionais, mas não como moderadoras. No geral, os resultados sugerem que o trabalho, quando percebido como tendo significado, tende a prever um maior envolvimento no trabalho e menor procrastinação, destacando assim o seu papel enquanto recurso motivacional no trabalho.

Palavras-chave: trabalho com significado, envolvimento com o trabalho, procrastinação no trabalho, competências socioemocionais, exigências-recursos laborais, conservação de recursos

Códigos de classificação da APA PsycInfo

2360 Motivação e Emoção

3600 Psicologia Organizacional & Recursos Humanos

Abstract

In this dissertation, we analyzed the association between meaningful work and workplace procrastination, as mediated by work engagement. Additionally, we investigated the moderating role of socioemotional skills (specifically, self-management and emotional resilience) on the relation between meaningful work and work engagement. Grounded in the Job Demands-Resources model and the Conservation of Resources theory, meaningful work was conceptualized as a motivational job resource expected to enhance engagement and reduce procrastinatory behaviors. A pre-registered cross-sectional online survey was conducted in Portugal, with a final sample of 267 working adults. Participants completed four self-report instruments: Work and Meaning Inventory (WAMI), Utrecht Work Engagement Scale, Procrastination at Work Scale (PAWS), and Behavioral, Emotional, and Social Skills Inventory. The WAMI and PAWS were translated and culturally adapted. Meaningful work correlated strongly with engagement and, to a lesser extent, with less procrastination. On the other hand, procrastination was negatively related to socioemotional skills, especially with self-management and, to a more moderate extent, emotional resilience. Mediation analysis showed that meaningful work is associated with lower procrastination through increased engagement. No significant moderation effect emerged from the exploratory analyses, indicating that self-management and emotional resilience may function as additional personal resources rather than moderators. Overall, the results indicate that when work is perceived as meaningful, it tends to predict greater work engagement and less procrastination, thus highlighting its role as a motivational resource in the workplace.

Keywords: meaningful work, work engagement, workplace procrastination, socioemotional skills, job demands-resources, conservation of resources

APA PsycInfo classification codes

- 2360 Motivation and Emotion
- 3600 Organizational Psychology & Human Resources

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Introduction

Procrastination seems to be deeply embedded in everyday life, as illustrated by the abundance of idiomatic expressions across cultures that capture the tendency to delay action. Examples include the English proverb “procrastination is the thief of time”, the Portuguese saying “*empurrar com a barriga*” (“to push with the belly”), the German “*auf die lange Bank schieben*” (“to push onto the long bench”), the Russian “*отложить в долгий ящик*” (“to put into a long drawer”), or the Chinese proverb “*明日复明日*” (*míng rì fù míng rì*; “tomorrow and tomorrow again”). Such expressions reveal that procrastination transcends cultural boundaries, suggesting it is a common aspect of the human condition. However, though everyone procrastinates, not everyone is a procrastinator (Ferrari, 2010).

Procrastination has been underestimated, especially in the workplace setting, where it is particularly chronic (Nguyen et al., 2013). On one hand, scholars have been mainly concerned with academic procrastination (DeArmond et al., 2013; Yan & Zhang, 2022). On the other hand, to our knowledge, no international (or national) reports on the impact of procrastination on the labour market are available, and yet the existing studies point out its potential substantial costs for organisations (D’Abate & Eddy, 2007; Steel, 2007) and for the individuals themselves (Behnagh & Ferrari, 2022).

When individuals perceive their work as meaningful and fulfilling, they are more likely to engage and invest effort in their tasks rather than postpone them (Allan et al., 2018). Thus, enhancing work engagement seems to be a path to shortening the intention-action gap, and, in the long run, it may contribute to sustainable work, as it lies at the core of the Sustainable Development Goal 8 (International Labour Organization, 2023). People desire and actively seek purpose in their lives and work (Pratt & Ashforth, 2003), so they may withdraw from work due to a sense of meaninglessness in their job rather than feelings of unhappiness, a desire to resign, or a lack of genuine commitment to the organisation (Steger et al., 2012). Yet, whether meaningful work exerts stronger motivational effects among those with greater or fewer socioemotional resources remains an open question, as individuals may differ in how they transform meaning into sustained engagement.

To the best of our knowledge, this is the first study to investigate how meaningful work relates to workplace procrastination through work engagement, and how it is conditioned by two socioemotional skill domains (i.e., self-management and emotional resilience). By examining these mechanisms, we hope to shed some light on how these interactions happen to reduce procrastination and sustain motivation in organisational contexts.

Literature Review

1.1. Workplace Procrastination

Procrastination is generally defined as an individual's irrational tendency to postpone decision-making, the initiation or completion of tasks, despite the negative consequences of this postponement and the associated discomfort (Ferrari & Tibbett, 2017; Klingsieck, 2013a; Lay, 1986; Steel, 2007).

Neuroscientific evidence supports the view that procrastination reflects a failure of self-regulation (Baumeister & Heatherton, 1996). Planned tasks tend to be abandoned in favour of short-term temptations, as long-term goals set by the prefrontal cortex can be overridden by the limbic system's impulses for immediate rewards. McClure et al. (2007) found that limbic reward-related areas become more active when an immediate reward is available, whereas the lateral prefrontal and parietal cortices (associated with deliberative control and future planning) are not sensitive to immediacy. This imbalance between impulsive, reward-driven systems and reflective, goal-directed processes helps to explain, from a temporal perspective, why individuals often prioritize short-term mood regulation (i.e., present self's needs) over long-term goals (i.e., future self's needs), a pattern that characterizes procrastinatory behavior (Sirois & Pychil, 2013; Steel, 2010; Yan & Zhang, 2022). Ultimately, procrastination leads to negative outcomes such as anxiety, shame, guilt, regret, or anger (Behnagh & Ferrari, 2022), and so, to deal with these negative emotional states, procrastinators often do other activities instead of the neglected task (Baumeister & Heatherton, 1996). This attentional distraction strategy, where a secondary task is used to limit attention to emotional stimuli, reduces the activity in cortical and subcortical pain-related regions and activates others associated with cognitive control (Ochsner & Gross, 2005). In this regard, socioemotional skills such as self-management and emotional resilience may play a central role in resisting the immediate emotional relief, enabling individuals to manage distress and sustain engagement with demanding tasks.

While procrastination is a common behaviour, not everybody who procrastinates is a chronic procrastinator (Ferrari, 2010; Yan & Zhang, 2022). Several types of procrastination can be found in the literature (Yan & Zhang, 2022), such as the following:

- Situational and dispositional or chronic. *Situational* when procrastination occurs in only one or a few life domains (e.g., academic procrastination, bedtime procrastination), and that is why it is perceived as a common behaviour. *Dispositional or chronic* when the propensity to delay and postpone is widespread across daily activities, places, contexts and time (e.g., paying bills after several late notices, postponing auto refuelling, delaying shopping until the refrigerator is empty). This is the “real” procrastinator (Behnagh & Ferrari, 2022);
- Decisional, avoidant and arousal. *Decisional procrastination* occurs when the delay is due to indecision, perhaps because of lack of personal resources or skills to make an informed decision (Ferrari, 2010). *Avoidant procrastination* occurs when activities are postponed to avoid unpleasant, boredom or demanding situations, as a means to protect low self-confidence and self-esteem from task failure (motivated by avoidance). *Arousal procrastination* occurs when a task completion is delayed to induce a pleasurable experience through the “rush” sensation at the last minute (motivated by sensation-seeking) (Ferrari, 1992a);
- Passive and active. *Passive procrastination* when individuals do not intend to postpone tasks but end up doing it frequently due to their inability to decide and act quickly, and so they are procrastinators in the traditional sense. *Active procrastination* when they are able to act in a timely manner because they strategically decide to suspend tasks so that attentional focus could be placed on more important ones (Chu & Choi, 2005). This dichotomy is controversial because some researchers do not consider active procrastination a true procrastination but merely a delay motivated by achieving a positive outcome, and so it is an adaptive behaviour and not a failure of self-regulation (Hensley, 2014). For this reason, we will not consider it in this study.

The workplace context is particularly challenging for procrastinators since they must complete tasks on time in order to perform their team duties. Procrastination at work (including online off-task activities) was found to be positively associated with both decisional and dispositional procrastination (Musteață & Holman, 2025). Because procrastination is domain-specific (Klingsieck, 2013b), among idle behaviours at the workplace, one can find offline activities such as taking long coffee breaks, socialising, or daydreaming, as well as online activities such as reading blogs or newspapers for personal pleasure or playing computer games (Metin et al., 2016). These behaviours may be an attempt to regulate their negative emotions (e.g., anxiety, fear of failure) or a way to preserve personal resources perceived as being at risk of depletion (e.g., time, energy, well-being), a pattern observed in multitasking contexts (Musteață & Wolman, 2025) and consistent with the Conservation of Resources

Theory (COR; Hobfoll, 2001). They also occur when activities are perceived as being externally imposed or incongruent with individuals' own objectives, consistent with the Self-Determination Theory (Deci & Ryan, 2000), which highlights the role of intrinsic motivation and autonomy in task engagement. However, when job resources are abundant, even under high job demands, employees are more likely to experience work engagement, which in turn diminishes the tendency to procrastinate (Bakker & Demerouti, 2007; Musteață & Holman, 2025).

Studies show that high levels of procrastination are associated with lower salaries, shorter durations of employment, and a tendency to be unemployed or underemployed rather than having a full-time job (Nguyen et al., 2013). Procrastinators judge others severely despite their identical behavioural patterns (Ferrari, 1992b). Professional employees are more likely to report procrastination than unskilled workers (Hammer & Ferrari 2002), employees previously married reported higher rates of procrastination and those with a high school diploma or less reported higher rates of decisional delay than individuals with a college education (Harriot & Ferrari, 1996), and more autonomy for employees seems to be related with less procrastination in the workplace (Loneragan & Maher, 2000). More recently, Saling et al. (2025) explore the adaptive side of procrastination, proposing that procrastinators could employ distinctive and more exploratory learning strategies (while delaying task completion) than non-procrastinators. They introduced a new type of procrastinator, the exploratory procrastinator. Here, procrastination is positively associated with creativity, and so it enhances rather than hinders performance, especially in work environments where creative thinking and innovation are valued, such as those shaped by the increasing use of Artificial Intelligence in problem-solving and design. Cultural differences were also investigated. In a recent systematic review (Musteață & Holman, 2025), Portugal (where this dissertation took place) belongs to a group of countries where procrastination is widespread due to a culture of high uncertainty avoidance and of low achievement motivation due to: short-term focus, impulsiveness, fear of failure, tolerance of procrastination, inconsistent supervision, unclear directions and low performance pressure. This type of cultural environment may therefore weaken autonomous forms of motivation and hinder work engagement, indirectly contributing to more procrastinatory patterns.

1.2. Meaningful Work

The literature often uses the terms “meaning of work” and “meaningful work” interchangeably. Although related, they can be conceptually distinguished. A job can hold a particular meaning for an individual but is not necessarily experienced as meaningful. According to Pratt & Ashforth (2003), while “meaning of work” has been used by the scholars to refer to the type of meaning individuals attribute to their work (e.g., work as a paycheck, a higher calling, a way to pass time or even as oppression),

“meaningful work” has been associated with the amount of significance and positive meaning for individuals (Rosso et al., 2010).

Meaningful work has been studied across several academic domains (i.e., organisational behaviour, vocational and organisational psychology, humanities, communication studies, and ethics), which explains at least 36 different definitions (Bailey et al., 2018; Martela & Pessi, 2018). Although no consensus exists (Steger et al., 2012; Tan et al., 2023), a recent systematic review identified six common aspects (Tan et al., 2023): meaningful work is individualized, reflecting personal realisations of the value of one’s work and grounded in self-connectedness and authenticity; it is not self-serving, going beyond personal satisfaction to contribute to others or the community; it requires characteristic adaptation, emerging when personal motives and goals align with purposeful behaviours; it is a dynamic process of construction and reconstruction, shaped by the interplay of tasks, roles, relationships, and organisational contexts; it involves a singular psychological state in which individuals feel their motivations and goals are reflected in their work; and it is a double-edged sword, as it may enrich life but also lead to burnout or underemployment when perceived as a calling.

These dimensions can be better understood within two dominant theoretical frameworks (Tan et al., 2023): the Job Characteristics Model (JCM; Hackman & Oldham, 1976) and the Job Demands–Resources model (JD-R; Bakker & Demerouti, 2007). Both provide mechanisms through which meaningful work influences personal and organisational outcomes. The JCM explains how job design can create meaningfulness, whereas the JD-R model explains how meaningfulness functions as a resource that promotes well-being or, if poorly balanced, contributes to negative outcomes.

According to the Job Characteristics Model (JCM; Hackman & Oldham, 1976), a meaningful job is explained by three job characteristics: *skill variety*, referring to the diversity of activities, skills, and talents required to perform the job, allowing individuals to align their work with their identity; *task identity*, or the extent to which completing a task leads to a visible outcome that contributes to an ongoing construction of meaning over time; and *task significance*, the perception that one’s work has a positive impact on others, fostering greater good motivation. Together with autonomy and feedback, these characteristics promote positive personal and work outcomes such as higher internal motivation, better performance quality, greater job satisfaction, and lower absenteeism and turnover (Hackman & Oldham, 1976; Tan et al., 2023).

The Job Demands–Resources (JD-R) model, widely applied to explain organisational behaviour (Tan et al., 2020), explains how job demands and resources influence work stress (via burnout) and motivation (via work engagement) (Metin et al., 2016; Schaufeli, 2017). From this perspective, meaningful work can be considered a job resource, i.e., a source of intrinsic motivation that buffers negative workplace outcomes, such as stress, burnout, and disengagement (Bakker & Demerouti,

2007; Tan et al., 2020). When individuals perceive their work as significant and purposeful, they are more likely to invest themselves cognitively, emotionally, and physically in their tasks, leading to higher work engagement (Kahn, 1990; Schaufeli et al., 2002). Conversely, when demands are excessive, meaningful work can also be a job demand, potentially leading to burnout (*double-edge sword*), and thus not being able to sustain the vigour, absorption or dedication that work engagement requires (Schaufeli et al., 2002).

However, the translation of meaningfulness into engagement may not be automatic. According to the JD-R model (Bakker & Demerouti, 2007) and the COR Theory (Hobfoll, 2001; 2011), the extent to which meaningful work fosters engagement depends not only on job-related contextual resources but also on personal resources, that is, self-related capacities associated with resilience and perceived control over one's environment (Xanthopoulou et al., 2007). In this study, these personal resources are captured through two major socioemotional skill domains from the Social, Emotional, and Behavioral Skills framework (SEB; Soto et al., 2021): *Self-Management*, which reflects self-regulatory competence akin to self-efficacy, and *Emotional Resilience*, which represents the capacity to maintain emotional stability and optimism under stress. Although empirical research has not yet examined these specific socioemotional skills within the JD-R framework, theoretical parallels suggest that individuals with stronger self-regulatory and emotion regulation capacities may be better able to convert meaningful work into sustained engagement, as such skills facilitate adaptive coping and motivational persistence under demanding conditions (Hobfoll, 2001; Soto et al., 2021; Xanthopoulou et al., 2007).

In this study, meaningful work is therefore conceptualized as a motivational job resource that influences workplace procrastination indirectly through work engagement, with socioemotional skills moderating this process. To operationalise this construct, the Work and Meaning Inventory (WAMI; Steger et al., 2012) was selected, as it was specifically developed to measure the multidimensional experience of meaningful work, aligning with the Job Characteristics Model while integrating the broader, purpose-oriented aspects emphasized by the JD-R framework (Both-Nwabuwe et al., 2017). This multidimensional perspective is reflected in the three core dimensions proposed by Steger et al. (2012): *Positive Meaning*, *Meaning-Making through Work*, and *Greater Good Motivations*. *Positive Meaning* captures the extent to which individuals perceive their work as personally significant and aligned with their values and identity. *Meaning-Making through Work* reflects how work can provide deeper life meaning and help individuals make sense of their broader life experience. Finally, *Greater Good Motivations* represents how much individuals believe their work benefits others and contributes to something larger than the self.

1.3. Work Engagement

Work engagement is often used interchangeably with *employee engagement*, although the two are conceptually distinct. Most studies do not make this distinction explicit, yet it is important for theoretical and methodological clarity (Kosaka & Sato, 2020). *Work engagement* reflects individuals' feelings about their work itself, whereas *employee engagement* also incorporates feelings about the organisation. Furthermore, employee engagement is defined with an inherently positive orientation towards the organisation, while work engagement may encompass both positive and negative experiences associated with one's work.

In the present study, we adopted the concept of work engagement, as defined by Schaufeli et al. (2002), given its focus on workers' personal investment in their work activity (Kossyva et al., 2023) rather than on the organisation as a whole. Thus, work engagement is a positive and fulfilling psychological state, encompassing three dimensions: vigour (reflected in high levels of energy and resilience), dedication (expressed through a sense of significance, pride, and challenge) and absorption (characterized by full concentration and deep immersion in work tasks) (Schaufeli et al., 2002).

Kahn (1990) provides a theoretical bridge between engagement and meaningfulness, which is particularly relevant for this study. On one hand, engagement is a dynamic calibration process in which individuals regulate their selves by alternating between engagement and disengagement in the performance of their work roles. When personally engaged, individuals employ and express themselves physically, cognitively, and emotionally during role performances, maintaining coherence between their personal and professional selves rather than compromising one for the other. Conversely, when disengaged, they withdraw and defend themselves physically, cognitively, and emotionally during role performance, concealing their true identity, thoughts, and emotions. This adaptive mechanism is closely linked to socioemotional skills, as it enables individuals to cope with both internal and external pressures. On the other, meaningfulness is a psychological condition (i.e., the sense that investing physical, cognitive and emotional energy in role performance is worthwhile) that, along with safety (i.e., the sense of being able to express without fear of negative consequences) and availability (i.e., the sense of having the physical, emotional or psychological resources to engage in the role), can influence the degree of engagement in work settings. This framework offers an understanding why meaningful work is expected to foster engagement.

Also relevant for this study is the positive association found between work engagement and personal resources (such as self-efficacy, optimism, and resilience), as individuals with greater personal resources tend to experience higher levels of engagement (Xanthopoulou et al., 2009a). This perspective underscores the role of personal resources in sustaining motivation at work and sets the stage for examining how specific socioemotional skills may shape this process. Equally important for

this research, is the negative relation found between work engagement and procrastination. Individuals exhibiting high levels of energy, mental resilience, enthusiasm, inspiration and concentration tend to spend minimal time on non-work-related activities during the workday (Metin et al., 2018).

The mediating role of work engagement has been widely acknowledged, as it is shaped by various antecedents and influences numerous individual- and organisational-level outcomes (Kossyva et al., 2023). This framework clarifies why meaningful work is expected to foster engagement, which in turn may have implications for behavioural outcomes such as procrastination. The JD-R model (Bakker & Demerouti, 2007) provides a suitable framework for this hypothesis because meaningful work can be understood as a job resource that triggers a motivational process, thereby enhancing work engagement, which in turn protects against maladaptive behaviours such as workplace procrastination (Schaufeli, 2017; Shantz et al., 2013). In this sense, engagement represents the mechanism through which meaningful work translates into sustained motivation and goal-directed action, counteracting avoidance and delay. In light of this theoretical approach, we operationalise work engagement using the short version of the *Utrecht Work Engagement Scale* (UWES-9; Schaufeli et al., 2006). This instrument was selected because it has already been translated, adapted and psychometrically validated in the portuguese context (Sinval et al., 2018).

1.4. Socioemotional Skills

In the literature, the terms “skill” and “competence” are sometimes used interchangeably, though *competence* is broader in scope, comprising a set of skills (Duckworth & Yeager, 2015; Schoon, 2021). Socioemotional skills is an umbrella concept that includes several psychological constructs such as personality traits, motivation, and values. These skills - often referred to as “soft”, “non-cognitive”, “character”, “21st century skills”, or “durable” - are more closely related to the ability to self-regulate than to a raw ability to process information and cannot be easily replaced by technology (Allen et al., 2020); they are involved in achieving goals, working with others, and managing emotions, which is why they manifest themselves in daily life circumstances (Duckworth & Yeager, 2015; OECD, 2015) and have a predictive power for engagement and success at work (Danner et al., 2021). Thus, socioemotional skills are commonly understood as functional abilities that enable individuals to perform tasks efficiently and consistently, establish and maintain trusting relationships, cope with stress and setbacks, lead and motivate others, and engage in creative thinking and idea exploration (Danner et al., 2021).

Although the Big Five personality traits (i.e., openness to experience, conscientiousness, extraversion, agreeableness and neuroticism) are one of the most widely used frameworks to assess socioemotional skills (Danner et al., 2021; OECD, 2018), the notion of “skill” differs from “trait” in that it emphasises adaptability when the situation calls for it (Duckworth & Yeager, 2015; Chen et al., 2024) because socioemotional skills can be developed over time through specific intervention programmes. For instance, an individual may have a general tendency to delay tasks (low conscientiousness trait) but, when holding responsibility for team outcomes, is able to mobilise strategies to stay focused and complete the work on time (high self-regulation skill). In this sense, socioemotional skills can be understood as personal resources, that is, self-related characteristics that enhance individuals’ capacity to manage their environment and remain resilient under strain (Hobfoll et al., 2003). In contrast to personality traits, which tend to be stable and enduring, these personal resources are dynamic, developable, and amenable to change, making them particularly suitable for the present study, as they seem to play a significant role in the JD-R model (along with the job demands and job resources) in explaining variance in work engagement (Xanthopoulou et al., 2007). Thus, to capture socioemotional skills more comprehensively in the workplace procrastination context, we employed a broader instrument - the Behavioral, Emotional, and Social Skills Inventory (BESSI; Soto et al., 2021).

Social, emotional and behavioural (SEB) skills refer to functional capacities (and so they can be taught and learnt) that people use to maintain social relationships, regulate emotions, manage goals, and learn from experience. They are organized into the five dimensions (Soto et al., 2024): *social engagement skills*, which group the capacities employed to actively interact with others (e.g., leadership, persuasion); *cooperation skills*, which include the capacities used to maintain positive social interactions (e.g., teamwork, perspective-taking); *self-management skills*, which reunite the capacities applied to effectively pursue goals and finish tasks (e.g., time management, goal regulation); *emotional resilience skills*, which bring together the capacities adopted to regulate emotions and moods (e.g., stress regulation, optimism); *innovation skills*, which gather the capacities employed to interact with new concepts and experiences (e.g., abstract thinking, creativity).

Given their relevance for regulating motivation and emotion in the workplace, the present study focused on self-management and emotional resilience. Nowadays, workers are often confronted with tight deadlines, complex decision-making, and the need to manage their emotional expressions, and that’s why time pressure and emotional dissonance have been defined by Prem et al. (2016) as regulatory job stressors, since they could lead to depletion of self-regulatory resources needed to deal with procrastination (Baumeister & Heatherton, 1996).

Although both the JD-R model (Bakker & Demerouti, 2007) and the COR theory (Hobfoll, 2002; 2011) acknowledge the importance of personal resources, they differ in how these resources interact

with motivational job resources such as meaningful work. Individuals vary in how they use and preserve their resources to remain motivated and engaged. Workers with high levels of socioemotional skills, such as *self-management* and *emotional resilience*, possess stronger personal resources that enable them to regulate effort, recover from strain, and maintain focus when facing challenges. In line with COR theory (Hobfoll, 2002; 2011), these individuals are better equipped to translate meaningful work into higher work engagement, as resources tend to accumulate and reinforce one another (thus, the concept of “resources caravans”, meaning that resources are cumulative and interconnected). This scenario seems to be aligned with the moderating influence of personal resources, in which empirical evidence indicates that workers with higher levels of personal resources possess a stronger sense of mastery, enabling them to cope more effectively with demanding conditions and to avoid negative outcomes (Xanthopoulou et al., 2007). Conversely, workers with lower socioemotional skills have fewer internal resources to rely on. From the JD-R perspective (Bakker & Demerouti, 2007), meaningful work becomes particularly salient for them as an external motivational job resource that compensates for their limited self-regulatory capacities, helping them stay engaged despite personal constraints. Accordingly, self-management and emotional resilience may shape how employees experience the motivational benefits of meaningful work, strengthening or compensating its effects depending on the individual’s resource profile. Given the mixed empirical evidence for both mechanisms, the moderating effects of self-management and emotional resilience are examined here exploratorily, without assuming whether they will amplify or buffer the relationship between meaningful work and work engagement.

1.5. Aim of the Present Study

Considering that people actively desire and seek purpose in their lives and work (Pratt & Ashforth, 2003), it is not surprising that people may withdraw from work due to a sense of meaninglessness in their job, rather than feelings of unhappiness, a desire to resign, or a lack of genuine commitment to the organisation (Steger et al., 2012). In this sense, meaningful work can act as a protective factor against behaviours associated with disengagement, by fostering motivation and reducing task delay. Although meaningful work is expected to reduce procrastination directly, the literature also suggests that this effect may operate through increased levels of work engagement (Schaufeli, 2017; Shantz et al., 2013). Thus, we pre-registered the following mediation hypotheses on AsPredicted (ref. #235138, see Appendix B):

H1: Meaningful work is negatively associated with workplace procrastination.

H2: Work engagement mediates the relationship between meaningful work and workplace procrastination, such that higher levels of meaningful work are associated with greater engagement, which in turn is associated with lower levels of procrastination.

In addition, it was also pre-registered that, given the lack of consistent empirical evidence on the role of socioemotional competencies, we conducted an exploratory analysis to examine whether and how these skills interact with meaningful work and work engagement in predicting workplace procrastination. This analysis did not involve a directional hypothesis and was performed in a second phase of the data analysis, in which the moderating role of socioemotional skills was explored.

The exploratory moderation analysis was limited to two major socioemotional skill domains of the BESSI: self-management and emotional resilience. These domains were chosen to represent the two main theoretical perspectives on procrastination: as a failure of behavioural self-regulation, involving difficulties in managing time and effort (Baumeister & Heatherton, 1996; Steel, 2010), and as an affective regulation strategy aimed at reducing negative emotions in the short term (Ochsner & Gross, 2005; Sirois & Pychyl, 2016; Yan & Zhang, 2022). Thus, examining self-management and emotional resilience provides complementary insights into the behavioural and emotional mechanisms that may shape the link between meaningful work, work engagement, and workplace procrastination.

Method

2.1. Study Design

We adopted a cross-sectional correlational design. The analytic plan, hypotheses, and target sample size were preregistered on *AsPredicted.org* prior to data collection to ensure transparency and methodological rigor (ref. #235138, see Appendix B). The primary analytic model tested whether work engagement mediated the relationship between meaningful work (X) and workplace procrastination (Y). In an exploratory step, two socioemotional skill domains - Self-Management and Emotional Resilience - were examined as potential moderators of the first stage of the mediation ($X \rightarrow M$). This allowed testing whether individual differences in these personal resources influence how strongly meaningful work translates into engagement, and, indirectly, into lower procrastination levels. This approach enabled a focused assessment of conditional (first-stage moderated) mediation effects (see Figure 2.1).

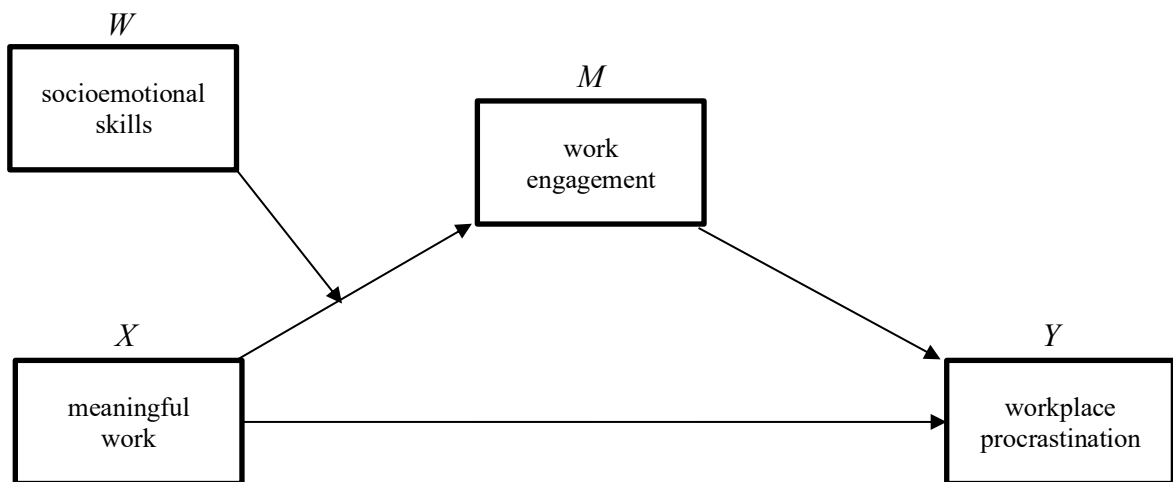


Figure 2.1. Conceptual diagram of the moderated mediation model of the study

2.2. Participants

Participants were recruited using a combination of convenience and snowball sampling methods, both in person and online, through social media (e.g., LinkedIn, Facebook, WhatsApp), email invitations, and an institutional mailing list.

Eligibility criteria required participants to be at least 18 years old, fluent in Portuguese, and currently engaged in work activities - whether paid or unpaid - that involve some degree of task responsibility or goal-directed work. This inclusive criterion ensured the participation of individuals who are actively involved in work-related contexts - including, for instance, volunteers or others engaged in non-remunerated productive roles - where workplace procrastination behaviors may occur. The psychological experience of being involved in work was considered more relevant than the formal employment relationship, allowing for a broader understanding of procrastination across real-life work settings. Exclusion criteria included the failure in the attention check, missing data $\geq 20\%$, or not being engaged in any work activity (i.e., full-time students, homemakers, and retirees without other occupations).

A total of 439 individuals initially accessed the survey. Two did not provide informed consent, 146 failed the control question, 14 had 20% or more missing data, and 10 were classified as not being engaged in work activities. After applying these criteria, the final sample comprised 267 participants. This sample size was considered adequate to ensure satisfactory statistical power for the planned analyses, and therefore all valid responses were retained (see Figure 2.2).

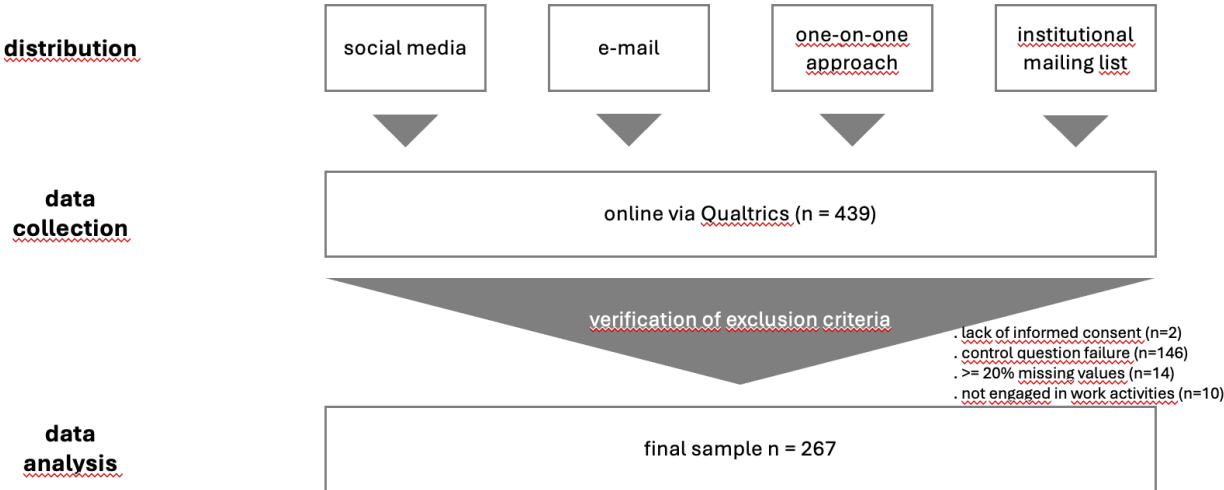


Figure 2.2. Flowchart of the participants' recruitment process

The final sample consisted of 267 participants aged between 23 and 67 years ($M = 47.90$, $SD = 9.56$), the majority of whom were self-reported women (68.5%) and Portuguese nationals (95.9%) (see Table 2.1).

Table 2.1

Participants' sociodemographic and professional characteristics (N = 267)

Variable	n	n (%)	Variable	n	n (%)	Variable	n	n (%)
Age	267	100.0%	Gender	267	100.0%	Sector of activity	263	(*)
<= 30	16	6.0%	Female	183	68.5%	Public Administration	104	39.5%
31-40	42	15.7%	Male	83	31.1%	Education	29	11.0%
41-50	102	38.2%	Prefer not to say	1	0.4%	Health & Social Work	27	10.3%
51-60	88	33.0%			Other	24	9.1%	
> 60	19	7.1%			ICT and related services	18	6.8%	
M = 47.90, SD = 9.56,					Wholesale & Retail Trade	12	4.6%	
Min = 23, Max = 67					Profess., Scient. & Technical	12	4.6%	
					Administ. & Support Service	11	4.2%	
Nationality	267	(*)	Native language	267	(*)	Arts, Sports & Recreation	9	3.4%
Portuguese	256	95.9%	Portuguese	260	97.4%	Other Service Activities	9	3.4%
Brazilian	8	3.0%	Spanish	2	0.7%	Agricult, Forestry & Fishing	7	2.7%
British	1	0.4%	Brazilian Portugues	1	0.4%	Publish., Broadcast., & Prod.	7	2.7%
Cape Verdean	1	0.4%	English	1	0.4%	Manufacturing	5	1.9%
French	1	0.4%	French	1	0.4%	Transportation & Storage	5	1.9%
Italian	1	0.4%	Italian	1	0.4%	Financial & Insurance	5	1.9%
Ukrainian	1	0.4%	Russian	1	0.4%	Construction	4	1.5%
			Ukrainian	1	0.4%	Acommodation & Food Serv.	4	1.5%
					Real Estate Activities	3	1.1%	
Country of residence	266	100.0%	Country of Work	262	100.0%	Electricity, Gas, Steam & Air C.	1	0.4%
Portugal	253	95.1%	Portugal	250	95.4%	International Organizations	1	0.4%
Brazil	4	1.5%	Brazil	5	1.9%			
Great Britain	3	1.1%	Angola	2	0.8%	Functional area	260	(*)
Angola	2	0.8%	Spain	1	0.4%	Other	50	19.2%
Germany	1	0.4%	Netherlands	1	0.4%	Manage. & Adm.	41	15.8%
Italy	1	0.4%	Italy	1	0.4%	Human Resources	33	12.7%
Spain	1	0.4%	Great Britain	1	0.4%	Legal & Compliance	23	8.8%
					Info. Systems, ICT & Cibersec.	22	8.5%	
Education attainment	266	100.0%	Occupational status	266	(*)	Technical, Prod. & Busin. Op:	22	8.5%
Lower secondary	6	2.2%	Full-time employee	223	83.8%	Sales & Customer Support	19	7.3%
Upper secondary	42	15.8%	Part-time employee	34	12.8%	Research, Develop. & Innov.	18	6.9%
Higher education	218	82.0%	Self-employed	39	14.7%	Communication & Pub. Rel.	17	6.5%
			Worker-students	8	3.0%	Marketing and Advertising	13	5.0%
			Volunteer	2	0.8%	Finance and Accounting	12	4.6%
					Partnerships and Cooperation	10	3.8%	
Organization type	264	(*)			Operations and Logistics	10	3.8%	
Public sector	151	57.2%			Community Development	7	2.7%	
Private sector	97	36.7%			Change Management	3	1.2%	
Third sector	7	2.7%			Soc. Respons. & Sustainab.	2	0.8%	
Other	16	6.1%			Security	2	0.8%	

Note. Variables marked with an asterisk (*) allowed multiple responses; therefore, percentages do not total 100%.

Most participants lived (95.1%) and worked in Portugal (95.4%) and reported Portuguese as their native language (97.4%). The sample was highly educated, with 82% holding higher education degrees. In terms of work activity, 83.8% were full-time employees, 12.8% part-time, and 14.7% self-employed, with a small number of worker-students (3%) and volunteers (0.8%). Over half worked in the public sector (57.2%), followed by the private (36.7%) and nonprofit (2.7%) sectors. The most represented activity areas were public administration (39.5%), education (11%), and health and social work (10.3%), reflecting a predominantly Portuguese, well-educated, and professionally active workforce engaged mainly in service and administrative roles.

2.3. Measures

A self-report online survey was used to collect information on sociodemographic characteristics, professional background, and participants' responses to four psychological scales assessing meaningful work, work engagement, socioemotional skills, and workplace procrastination. All scales were administered in Portuguese. When no validated portuguese version was available, the instrument was translated and culturally adapted following the procedures described below and subsequently approved by the Ethics Committee (Ref. 106/B 2025; see Appendix A).

2.3.1. Sociodemographic variables

Sociodemographic variables included age, gender, native language, nationality, country of residence, and education level. Age was measured in years. Gender was coded as female, male, non-binary, other, and *prefer not to say*. Native language was gathered as an open-ended question. Nationality and country of residence were obtained through closed-ended questions. Education level was recorded as a categorical variable with 13 response options and subsequently consolidated into three groups for analysis: lower secondary or below, upper secondary or vocational, and higher education.

2.3.2. Professional variables

Professional variables included country of employment, occupational status, organizational type, sector of activity, and functional work area. Country of employment was recorded as a categorical variable. Occupational status was assessed through a multiple-response question initially presenting eight categories. For the purpose of participants' description, these responses were consolidated into five final categories: full-time employee, part-time employee, self-employed, worker-student, and volunteer. The volunteer category was derived from responses originally grouped under "other." Organizational type was coded as public sector, private sector, third sector (nonprofit/social/cooperative), and other. Sector of activity was measured through a categorical

question based on *NACE Rev.2: Statistical Classification of Economic Activities in the European Community* (Eurostat, 2008), encompassing 21 predefined sectors as well as an open-ended “other” option to accommodate responses that did not clearly fit within the predefined categories. The functional work area was assessed through a multiple-response question, with response options inspired by functional typologies commonly used in portuguese public administration and adapted to ensure relevance across public, private, and nonprofit sectors. This structure reflects broad organizational functions (such as human resources, finance, marketing, operations, information systems, and legal affairs) that are typically observed in portuguese organizational contexts.

2.3.3. Translation and cultural adaptation of psychometric scales

Psychometric measures comprise four validated scales assessing the main study variables: meaningful work, work engagement, workplace procrastination, and socioemotional skills. All items were rated on Likert-type scales, and higher scores reflecting higher levels of the respective constructs. Two of these instruments - the *Work and Meaning Inventory* (WAMI; Steger et al., 2012) and the *Procrastination at Work Scale* (PAWS; Metin et al., 2016) - were translated and adapted for the portuguese context before data collection. The process was guided by the international guidelines for cross-cultural adaptation of self-report measures (Beaton et al., 2000), which served as a conceptual framework to ensure linguistic and conceptual equivalence between the original and translated versions.

The adaptation involved six collaborators and followed four main phases:

1. Translation, in which two bilingual translators independently translated the original English items into Portuguese;
2. Consensus building, where the translators and two additional reviewers compared and reconciled discrepancies to achieve semantic and conceptual alignment;
3. Back-translation, in which two different bilingual translators, blind to the original version, translated the Portuguese items back into English to verify conceptual correspondence; and
4. Pre-testing, during which the pre-final Portuguese version was administered to a small group of native Portuguese speakers (i.e., the reviewers and one of the original translators) to assess clarity and linguistic accuracy of the items.

Minor linguistic revisions were made after pre-testing to enhance readability and ensure cultural appropriateness, without altering the conceptual meaning of the items. The resulting Portuguese versions of the WAMI and PAWS were used in the present study and demonstrated satisfactory reliability coefficients. Additionally, permission to use the Portuguese version of the Utrecht Work Engagement Scale (UWES-9; Schaufeli et al., 2006) for scientific and non-commercial research

purposes was formally obtained from the original author, Wilmar Schaufeli (personal communication, March 2025).

The following sections describe the psychometric instruments used in the study, including their structure, example items, response formats, scoring procedures, and internal consistency indices.

2.3.4. Meaningful Work (WAMI)

Meaningful work was assessed using the 10-item *Work and Meaning Inventory* (WAMI; Steger et al., 2012), which measures the extent to which individuals experience their work as significant and purposeful. The scale comprises three subscales: *Positive Meaning* (4 items); e.g., “I have found a meaningful career”), *Meaning-Making through Work* (3 items; e.g., “I view my work as contributing to my personal growth”), and *Greater Good Motivations* (3 items; e.g., “I know my work makes a positive difference in the world”). The *Positive Meaning* dimension reflects how much people believe their work has personal relevance, meaning or purpose; *Meaning-Making through Work* illustrates how work provides deeper life meaning and helps individuals make sense of their experiences; and *Greater Good Motivations* reflects how much people believe their work benefits others and society (Steger et al., 2012). Responses were given on a 5-point Likert scale ranging from 1 (*absolutely untrue*) to 5 (*absolutely true*). Item 3 is negatively worded and was reverse-coded prior to computing the total score to ensure consistency in response direction.

The Portuguese version of the WAMI was translated and culturally adapted as part of the present research, following the cross-cultural adaptation procedures described above. The global score, computed as the mean of all 10 items, was used in the analyses, with higher scores indicating stronger perceptions of meaningful work. This approach is consistent with previous research supporting the use of an overall WAMI score to capture the global experience of meaningful work (e.g., Dodd et al., 2019; Magnano et al., 2019). In the original validation study, the WAMI demonstrated excellent internal consistency (Cronbach’s $\alpha = .93$; Steger et al., 2012). The total scale also showed good reliability in the Hungarian (Cronbach’s $\alpha = .84$; Csordás et al., 2022) and Turkish (Cronbach’s $\alpha = .86$; Akin et al., 2013) validations. In the present sample, the translated version showed high internal consistency (Cronbach’s $\alpha = .92$), indicating that items are highly intercorrelated and measured a coherent construct.

2.3.5. Work Engagement (UWES-9)

Work engagement was assessed using the 9-item *Utrecht Work Engagement Scale - short version* (UWES-9; Schaufeli et al., 2006), which measures a positive, fulfilling work-related state of mind characterized by vigor, dedication, and absorption. The scale comprises three subscales: *Vigor* (3 items;

e.g., “At my work, I feel bursting with energy”), *Dedication* (3 items; e.g., “I am enthusiastic about my job”), and *Absorption* (3 items; e.g., “I get carried away when I’m working”). The *Vigor* dimension reflects high levels of energy and mental resilience while working, as well as a readiness to exert effort and persist when encountering obstacles; *Dedication* entails a profound sense of purpose, enthusiasm, accompanied by feelings of pride and inspiration when facing demanding tasks; and *Absorption* is characterized by full concentration and deep immersion in work tasks in which time seems to pass effortlessly (Schaufeli et al., 2002). Responses were given on a 7-point Likert scale ranging from 0 (*never*) to 6 (*always / everyday*).

The UWES-9 has demonstrated strong psychometric properties across different cultural contexts, including Portuguese-speaking samples (e.g., Sinval et al., 2018), with consistent evidence supporting its three-factor structure and overall reliability. The official Portuguese version, made available by the author on his website (Schaufeli & Bakker, 2003), was used in the present study. The global score was computed as the mean of all nine items, with higher scores indicating greater levels of work engagement. This scoring procedure is consistent with prior research treating work engagement as a unified construct (e.g., Shimazu et al., 2010; Xanthopoulou et al., 2009b). In the original validation study (Schaufeli et al., 2006), the Cronbach’s alpha for the UWES-9 varied between .85 and .92 (median = .92) across 10 countries (Australia, Belgium, Canada, Finland, France, Germany, The Netherlands, Norway, South Africa and Spain). In the present sample, the Portuguese version demonstrated similarly high internal consistency (Cronbach’s $\alpha = .94$), indicating that the items were highly intercorrelated and measured a coherent construct.

2.3.6. Socioemotional Skills (BESSI-192)

Self-Management and Emotional Resilience were assessed using the respective domain scales of the *Behavioral, Emotional, and Social Skills Inventory* (BESSI-192; Soto et al., 2022), an instrument designed to measure the capacities people use to maintain their social relationships, regulate their emotions, manage their goals, and learn from experience across life contexts.

The BESSI comprises 192 items organized into 32 skill facets grouped into five broad domains: *Self-Management* (13 facets, 78 items; e.g., “Show up for things on time”), *Social Engagement* (5 facets, 30 items; e.g., “Lead a group of people”), *Cooperation* (5 facets, 30 items; e.g., “Sympathize with other people’s feelings”), *Emotional Resilience* (5 facets, 30 items; “Stay calm in stressful situations”), and *Innovation Skills* (5 facets, 30 items; “Understand abstract ideas”), plus three compound skills: *Adaptability* (6 items; “Try new things”), *Capacity for Independence* (6 items; “Do things independently”), and *Self-Reflection skill* (6 items; “Look inside themselves”). Responses were given on a 5-point Likert scale ranging from 1 (*not at all well*) to 5 (*extremely well*).

The *Self-Management* domain skill supports task persistence and goal-directed behavior, whereas the *Emotional Resilience* domain skill captures affective regulation capacities relevant to managing stress and maintaining focus at work. Each domain score was computed as the mean of its corresponding items. For items representing *bridge skills* (i.e., skills conceptually shared by two domains) a weighting of 0.5 was applied to avoid double counting. Higher scores indicate greater levels of the respective socioemotional skill.

Across the validation samples reported by Soto et al. (2022), internal consistency values averaged about .95 for the BESSI's five broad skill domains and .85 for its 32 specific skill facets, indicating excellent reliability. Although the original validation study reported internal consistency estimates primarily for each of the 32 specific skill facets, Cronbach's alpha values for the broader domain scales (e.g., *Self-Management* and *Emotional Resilience*) were not presented in the published article or its supplementary materials. Nevertheless, the authors conceptualized these domains as higher-order constructs representing clusters of interrelated socioemotional skills (e.g., Napolitano et al., 2021; Soto, 2022). Accordingly, the present study computed mean domain scores to represent unified constructs of *Self-Management* and *Emotional Resilience*.

In the present sample, the Portuguese version demonstrated high internal consistency for both *Self-Management* (Cronbach's $\alpha = .93$) and *Emotional Resilience* (Cronbach's $\alpha = .88$), indicating that the items within each domain were highly intercorrelated and measured a coherent construct.

2.3.7. Workplace Procrastination (PAWS)

Workplace procrastination was assessed using the *Procrastination at Work Scale* (PAWS; Metin et al., 2016), which measures the extent to which employees engage in non-work activities during working hours. The scale comprises 12 items within two subscales: *Soldiering* (8 items; e.g., "When I have excessive amount of work to do, I avoid planning my tasks, and find myself doing something totally irrelevant") and *Cyberslacking* (4 items; e.g., "I do online shopping during working hours"). *Soldiering* is a form of passive procrastination in which people avoid work responsibilities without intending to damage others or dump work onto co-workers (e.g., daydreaming, engaging in more pleasurable activities, and taking long coffee breaks); *Cyberslacking* is a form of active procrastination, associated to widespread internet use in which workers pretend to be working on their computers while actually shopping online, visiting social network sites, gaming, or instant messaging (Metin et al., 2016). Responses were given on a 7-point Likert scale ranging from 0 (*never*) to 6 (*always / daily*).

The Portuguese version used in this study was translated and culturally adapted as part of the present research, following the cross-cultural adaptation procedure described above. A global procrastination score, computed as the mean of all 12 items, was used in the analyses, with higher

scores indicating greater levels of procrastination at work. This approach is consistent with previous research that has employed an overall PAWS score to capture general tendencies toward workplace procrastination. In the original validation study, the PAWS demonstrated good internal consistency for both Dutch ($\alpha = .83$) and Turkish ($\alpha = .85$) samples (Metin et al., 2016). This scale was validated for a Chinese sample (Wang et al., 2021) and cross-culturally validated in samples of office employees from seven countries - Croatia, Czech Republic, Finland, Slovenia, Turkey, Ukraine, and the United Kingdom (Metin et al., 2019). In the present sample, the translated version also showed high internal consistency (Cronbach's $\alpha = .87$), indicating that the items were internally coherent and reliably measured workplace procrastination.

2.4. Procedure

The full research protocol - including the informed consent form, online questionnaire, and debriefing materials (see Appendix C) - was reviewed and approved by the Specialised Ethics Committee in Psychology of ISCTE (Ref. 106/B 2025; see Appendix A), prior to data collection. Later, an amendment was submitted to introduce a non-monetary incentive, consisting of automated feedback on socioemotional skills, and to update minor procedural aspects (e.g., debriefing content, contact information). This amendment also received a favorable opinion from the same committee (Ref. 106/B 2025; see Appendix A). All procedures complied with the ethical standards established by ISCTE and the guidelines of the Specialised Ethics Committee in Psychology.

Data were collected through an online survey hosted on Qualtrics (licensed by ISCTE-IUL), conducted in Portuguese during a single session between July 6 and 31, 2025. The survey link was disseminated through professional, academic, and personal networks (including LinkedIn, Facebook, WhatsApp, institutional mailing list, personalized e-mail invitations, and in-person sharing). Participation was voluntary and anonymous. Before accessing the questionnaire, all participants read an informed consent form describing the purpose of the study, the approximate duration of participation, the confidentiality of data, and their right to withdraw at any time without penalty. No identifying information (e.g., names, email addresses, or IP data) was collected, and all responses were stored securely and used exclusively for academic research purposes. The survey took approximately 20-25 minutes to complete. Upon completion, participants had the option to receive automated feedback on their socioemotional skills, which was purely informative and non-diagnostic, as specified in the approved ethical protocol.

Additionally, in line with the *European Commission's Living Guidelines on the Responsible Use of Generative AI in Research* (European Commission, 2025), generative AI tools (specifically *ChatGPT*,

OpenAI, GPT-5) and language-refinement software (*QuillBot*, QuillBot Inc., 2025) were employed solely as auxiliary resources for linguistic refinement, translation consistency, and formatting in accordance with APA 7th edition standards. These tools were used exclusively for stylistic and grammatical enhancement. The author maintained full intellectual control over the research design, data analysis, and interpretation of results. No generative AI was used for data generation, manipulation, or analysis.

2.5. Data Analysis

All statistical analyses were conducted using IBM SPSS Statistics, version 29.0.2.0 (20) and Jamovi, version 2.7.6 (MedMod module). Data preparation, descriptive and correlational analyses, and preliminary assumption checks were performed in SPSS. The main mediation and moderated mediation models were tested in Jamovi, using ordinary least squares (OLS) regression-based estimation with bootstrapped confidence intervals (1,000 samples, bias-corrected 95% CIs). Statistical significance was set at $p < .05$ (two-tailed). The analytical procedure followed four sequential steps: data preparation and screening (including checks for missing values, normality, and multicollinearity), descriptive and correlational analyses (to examine bivariate associations among study variables), mediation analysis (testing whether work engagement mediates the relationship between meaningful work and workplace procrastination), and exploratory moderation analyses (examining whether two domains of socioemotional skills - Self-Management and Emotional Resilience - moderate the first-stage of the mediation ($X \rightarrow M$), that is, how strongly meaningful work translates into engagement). The strength of the Pearson correlations was interpreted according to the empirical effect size guidelines proposed by Gignac and Szodorai (2016).

2.5.1. Data preparation and screening

Data were screened for accuracy and missing values before conducting the analyses. This process involved verifying the correct coding of response scales, detecting possible duplicate cases, and reviewing open-ended responses (e.g., employment descriptions) to ensure data consistency. Cases with excessive missing data ($\geq 20\%$) were excluded. For the computation of scale scores, missing items were replaced using the mean of available items, provided that at least two-thirds of the items within each scale were completed. Descriptive distributions were examined for all variables, including minimum and maximum values, means, standard deviations, skewness, and kurtosis (see Table 3.1). Given the moderate sample size and the use of bootstrapping procedures in the main analyses, the statistical estimates were expected to be robust to minor departures from normality. Multicollinearity was assessed using Variance Inflation Factor (VIF) and Tolerance statistics. In accordance with the pre-registered analysis plan (*AsPredicted* #235138; see Appendix B), $VIF > 5$ or

Tolerance < .20 were considered indicative of problematic collinearity. In addition, a more conservative threshold of VIF ≥ 2.5 was also inspected, following the recommendations of Johnston et al. (2017), who argue that even moderate inter-correlations among predictors may distort regression estimates. The VIFs were computed for the global (composite) scores of each scale, as these were the variables entered in the regression and mediation models.

2.5.2. Descriptive and correlational analyses

Descriptive statistics were computed to examine the central tendency, variability, and distribution of the main study variables. These included minimum and maximum values, means, standard deviations, skewness, and kurtosis. Bivariate correlations (Pearson's r) were also computed to assess the direction and strength of the associations among the study variables prior to testing the hypothesized models.

2.5.3. Mediation and exploratory moderated mediation analyses

The models were tested using OLS regression-based procedures implemented through the MedMod module in Jamovi (version 2.7.6). The primary analysis examined whether work engagement mediated the relationship between meaningful work (X) and workplace procrastination (Y), while two exploratory first-stage moderated mediation models assessed whether *Self-Management* and *Emotional Resilience* moderated the $X \rightarrow M$ path. All effects were estimated with standardized coefficients (β), p-values, and bias-corrected bootstrapped confidence intervals (95% CIs; 1,000 resamples). Indirect effects were considered statistically significant when the corresponding confidence intervals (CIs) did not include zero. Analyses were conducted using the mean of available items, provided that at least two-thirds of the items within each scale were completed. Following the preregistered analytic plan (*AsPredicted* #235138; see Appendix B), the models were estimated using the specified variables and analytic approach, which involved mediation and exploratory first-stage moderated mediation analyses with bootstrapped estimation. All variables corresponded to the composite (mean) scores of the validated scales. Multicollinearity was evaluated using Variance Inflation Factor (VIF) and Tolerance statistics (see Table 3.1). Statistical significance was set at $p < .05$ (two-tailed), and results are reported with standardized coefficients and corresponding 95% confidence intervals.

Results

3.1. Descriptive and Correlational Analysis

As shown in Table 3.1, participants reported moderately high levels of meaningful work ($M = 3.81$, $SD = 0.69$), work engagement ($M = 4.02$, $SD = 1.24$), and self-management ($M = 3.81$, $SD = 0.47$). Emotional resilience was slightly lower but still moderate ($M = 3.33$, $SD = 0.61$). In contrast, workplace procrastination showed a relatively low mean ($M = 1.59$, $SD = 0.92$), suggesting that this behaviour was not frequent among respondents. Skewness and kurtosis values ranged within ± 1 for all variables, indicating that the data approximated a normal distribution and were suitable for subsequent parametric analyses. The inspection of these descriptive indices indicated that the variables were approximately normally distributed and therefore suitable for the correlational (i.e., Pearson correlations to assess bivariate relationships) and OLS regression-based analyses (to test the mediation and moderation effects) conducted in this study.

Regarding the intercorrelations among the study variables, all correlations were statistically significant at $p < .001$. As expected, meaningful work (WAMI) showed a strong positive correlation with work engagement ($r(267) = .72$, $p < .001$) and a moderate negative correlation with workplace procrastination ($r(267) = -.28$, $p < .001$), indicating that employees who perceived their work as more meaningful tended to experience higher engagement and lesser procrastinatory behaviours. Both self-management and emotional resilience were strongly and positively related to meaningful work ($r(267) = .31$ and $r(267) = .30$, respectively; $p < .001$) and work engagement ($r(267) = .36$ and $r(267) = .36$; $p < .001$), suggesting that individuals with stronger socioemotional skills were more likely to perceive work as meaningful and to engage. Workplace procrastination (PAWS) was strongly and negatively correlated with all other variables, particularly with self-management ($r(267) = -.46$, $p < .001$), indicating that greater self-management skills were associated with lower levels of procrastinatory behavior (see Table 3.1).

These analyses provided preliminary evidence regarding the relationships between meaningful work, work engagement, socioemotional skills (*Self-Management* and *Emotional Resilience*), and workplace procrastination.

Table 3.1*Descriptive statistics, intercorrelations and collinearity statistics among study variables (N = 267)*

	1	2	3	4	5
1. Meaningful Work (WAMI)	--				
2. Work Engagement (UWES-9)	.717**	--			
3. Self-Management (BESSI-192)	.310**	.356**	--		
4. Emotional Resilience (BESSI-192)	.301**	.355**	.585**	--	
5. PAWS	-.281**	-.296**	-.455**	-.249**	--
Minimum	1.40	0.33	2.31	1.74	0
Maximum	5.00	6.00	5.00	4.93	4.83
Mean	3.81	4.02	3.81	3.33	1.59
Standard Deviation	0.69	1.24	0.47	0.61	0.92
Skewness	-0.54	-0.55	-0.22	0.08	0.65
Kurtosis	0.29	-0.38	0.40	-0.24	0.08
Tolerance	.482	.459	.631	.633	(a)
Variance Inflation Factor	2.076	2.178	1.584	1.581	(a)

Note: ** $p < .001$; (a) outcome variable; WAMI = Work And Meaning Inventory; UWES-9 = Utrecht Work Engagement Scale (short version); BESSI-192 = Behavioral, Emotional, and Social Skills Inventory (complete version); PAWS = Procrastination At Work Scale.

Before conducting the regression and mediation analyses, multicollinearity diagnostics were examined to ensure the independence of the predictors. Tolerance values ranged from .459 to .633 and Variance Inflation Factor (VIF) values from 1.58 to 2.18. All VIF values were within acceptable limits (below 2.5), indicating that multicollinearity was not a serious concern (Johnston et al., 2017). Given

these interrelations, a mediation model was tested to examine whether work engagement explains the relationship between meaningful work and workplace procrastination.

3.2. Mediation analysis of the relationship between meaningful work and procrastination through work engagement

The total effect of meaningful work on workplace procrastination was negative and significant ($b = -0.376, p < .001, 95\% \text{ BC CI } [-0.559, -0.188]$), providing initial support for H1. This result indicates that workers who perceive their work as more meaningful are less likely to procrastinate at work.

When work engagement was included as a mediator, the indirect effect of meaningful work on workplace procrastination through engagement was also significant ($b = -0.186, p = .021, 95\% \text{ BC CI } [-0.373, -0.010]$), supporting H2.

However, the direct effect of meaningful work on procrastination was no longer significant once engagement was added to the model ($b = -0.190, p = .088, 95\% \text{ BC CI } [-0.435, 0.095]$). This pattern suggests that the association between meaningful work and workplace procrastination operates primarily indirectly through work engagement, rather than directly.

Consistent with the recommendations of Hayes (2018), these results are described in terms of the significance of the indirect effect rather than using the traditional labels of “full” or “partial” mediation (see Table 3.2).

Table 3.2

Effects of meaningful work on workplace procrastination through work engagement (mediation)

Type	Effect (Path)	Estimate	SE	95% BC CI Lower	95% BC CI Upper	β	z	p
Indirect	X → M → Y	-0.186	0.081	-0.373	-0.010	-0.139	-2.30	.021
Direct	X → Y	-0.190	0.112	-0.435	0.095	-0.142	-1.71	.088
Total	X → Y	-0.376	0.079	-0.559	-0.188	-0.281	-4.78	< .001

Note. $N = 267$; X = meaningful work; M = work engagement; Y = workplace procrastination

3.3. Exploratory moderated mediation analyses

Two exploratory models were estimated to examine whether the indirect effect of meaningful work on workplace procrastination through work engagement varied as a function of two socioemotional skill domains: *Self-Management* and *Emotional Resilience*. Both variables were tested as potential moderators of the first stage of the mediation model ($X \rightarrow M$), given their conceptualization as personal resources that may influence how workers translate meaningful work into engagement.

The interaction terms between meaningful work and each socioemotional skill were not statistically significant ($p = .148$ for Self-Management; $p = .169$ for Emotional Resilience). These results indicate that neither skill domain moderated the first stage of the mediation model (see Table 3.3).

Table 3.3.

Moderation effects of self-management and emotional resilience in the first-stage of mediation

Moderator	Interaction	Estimate	SE	95% CI Lower	95% CI Upper	β	z	p
Self-Management	X: W \rightarrow M	-0.192	0.133	-0.493	0.138	-0.0607	-1.45	0.148
Emotional Resilience	X: W \rightarrow M	-0.160	0.116	-0.368	0.100	-0.0572	-1.37	0.169

Note. $N = 267$.

Therefore, no evidence of moderated mediation was found, and conditional effects at different levels of the moderators were not interpreted further. This suggests that the indirect effect of meaningful work on workplace procrastination through work engagement operates similarly across levels of Self-Management and Emotional Resilience.

Discussion

4.1. Overview and interpretation of main findings

The present study examined how meaningful work relates to workplace procrastination through work engagement, and whether socioemotional skills (specifically self-management and emotional resilience) moderate this process. Guided by the Job Demands–Resources model (JD-R; Bakker & Demerouti, 2007) and the Conservation of Resources theory (COR; Hobfoll, 2001), meaningful work was conceptualized as a motivational job resource expected to enhance work engagement and reduce procrastinatory behaviors at work.

As expected, meaningful work was strongly and positively associated with work engagement, supporting its conceptualization as a motivational job resource within the JD-R framework. This finding is consistent with a recent meta-analysis (Allan et al., 2018), which suggests that work engagement is a proximal outcome of experiencing work as meaningful. According to Allan et al. (2018), this directionality is more aligned with theory and empirical evidence than the argument of work engagement being an antecedent of meaningful work, even though the causal pathway itself has not yet been directly tested. Thus, the present study adds empirical support to the notion that meaningful work may serve as a motivational job resource fostering engagement. As a key motivational resource, meaningful work fuels workers goal-oriented behaviour and sustains the positive emotional states associated with work engagement (Hackman & Oldham, 1976). Previous studies have similarly demonstrated that perceiving one's work as purposeful enhances intrinsic motivation (Fairlie, 2011; Steger et al., 2012), thus fostering work engagement - a construct characterised by energy, dedication, and absorption in one's tasks (Schaufeli et al., 2006).

Consistent with H1, meaningful work was found to be negatively associated with workplace procrastination. This aligns with previous research showing that workers who experience greater meaningfulness in their work are less likely to engage in procrastinatory behaviours (Metin et al., 2016; Schaufeli et al., 2009). People actively seek purpose in their lives and work (Pratt & Ashforth, 2003), and so workers are not passive recipients of job design; they play an active role in shaping and redefining their work roles (Oldham & Hackman, 2010). This participative change process of job crafting may increase the fit between the needs and skills of the jobs, resulting in more meaningful work, particularly in contemporary and flexible workplaces (Oldham & Hackman, 2010).

However, this direct effect was no longer significant once work engagement was included in the model, indicating its mediating role and support for H2. This finding suggests that meaningful work predicts lower procrastination primarily through work engagement (see Table 3.2), which is consistent with the literature (Schaufeli, 2017; Shantz et al., 2013) - a motivational pathway consistent with the JD-R model's proposition that job resources foster engagement and, consequently, adaptive behavioural outcomes (Bakker & Demerouti, 2007).

However, since engagement is a dynamic calibration process, in which individuals oscillate between engaging and disengaging their selves in work settings (Kahn, 1990), its mediating role may not be considered stable over time. Meaningful work itself is also not considered a continuous psychological state, as employees experience both meaningful and meaningless episodes depending on the extent to which their work aligns with their beliefs and values (Allan et al., 2018). The meaningfulness experienced at work may generate a positive spillover effect, enriching one's broader sense of life purpose (Allan et al., 2018), but the reverse might also occur: a diminished sense of life of meaning may reduce one's capacity to find significance in daily work experiences.

Taken together, these considerations suggest that the mediating process identified in H2 should be interpreted as dynamic rather than static, reflecting ongoing fluctuations in workers' experiences of meaningfulness, engagement, and self-regulation. When meaningful work heightens engagement, individuals tend to be more likely to sustain focus and effort, thereby reducing their tendency to postpone tasks. Yet, from the resource-based perspective, under conditions of high stress or emotional strain, the capacity to translate meaningfulness and engagement into sustained goal-directed action may be temporarily undermined, making the short-term emotional relief of procrastination more appealing.

From this temporal perspective, the mediating process identified in H2 also resonates with the core mechanisms underlying procrastination itself. Procrastination reflects a temporal gap between intention and action - a self-regulation failure where individuals tend to prioritize short-term mood repair over long-term goal attainment (Sirois & Pychil, 2013; Steel, 2010; Yan & Zhang, 2022). The dynamic and fluctuating nature of both meaningful work and engagement may therefore interact with this temporal disconnect, which may affect how workers regulate effort and persistence over time.

4.2. Role of socioemotional skills

In this sense, socioemotional skills such as adaptability and self-management become particularly relevant, as they may help individuals bridge the intention-action gap by maintaining focus and flexibility in the face of changing demands. These skills can thus function as buffers against

procrastinatory behaviour, supporting more consistent engagement even under fluctuating motivational or affective conditions.

Given the variability found in a meta-analysis (Allan et al., 2018), the researchers highlighted that future investigations should examine the moderator role of individual-level factors between meaningful work and work engagement. Building on this recommendation, the present study conducted exploratory moderation analyses focusing on the first stage of the mediation model, testing whether self-management and emotional resilience moderated the association between meaningful work and work engagement. This decision reflected the theoretical interest in understanding whether these socioemotional skills strengthen or weaken the motivational link between experiencing work as meaningful and feeling engaged, consistent with the JD-R framework's emphasis on personal resources as facilitators of motivation (Bakker & Demerouti, 2007; Xanthopoulou et al., 2009a).

When tested separately, neither self-management nor emotional resilience significantly moderated this relation. There were no interaction effects between meaningful work and self-management or emotional resilience, indicating that neither of them changed the strength of the association between meaningful work and engagement (see Table 3.3). This absence of moderation contrasts with prior evidence showing that personal resources (such as optimism and self-efficacy) can leverage the motivational impact of job resources (Xanthopoulou et al., 2009a).

Nevertheless, both socioemotional skills were strongly and positively correlated with meaningful work and work engagement, and negatively with workplace procrastination. These associations are consistent with prior evidence showing that procrastination reflects failures in self-regulation (Steel, 2007), that lower engagement accompanies higher workplace procrastination (Metin et al., 2016), and that motivational resources such as autonomy and meaningfulness can protect against such counterproductive behaviors (Prem et al., 2016). The negative association was particularly strong for self-management, consistent with the findings from the Italian validation of the BESSI (Feraco et al., 2024), which showed that individuals with higher self-management skills tend to procrastinate less. However, within the same skill domain-level, differences in the underlying motivation for procrastination may still emerge. For instance, individuals with lower decision-making skills - often described as decisional procrastinators (Ferrari, 1992a) - may struggle to act even when they perceive work as meaningful. Such distinctions suggest that not all forms of procrastination stem from low self-regulation (Klingsieck, 2013a). When considering the Hobfoll's Conservation of Resources Theory (COR; Hobfoll, 2002; 2011), these findings suggest that individuals with lower self-management or emotional resilience may compensate by drawing on external motivational resources. Enhancing job resources, such as autonomy, may decrease workers' likelihood of engaging in procrastinatory behaviours in the workplace (Loneragan & Maher, 2000).

Overall, the findings indicate that personal resources (such as self-management and emotional resilience) and job resources (as meaningful work) may not always interact synergistically to mutually reinforce one in promoting engagement, as proposed by the JD-R model. Instead, meaningful work may compensate for a lack of personal resources, operating as a protective mechanism that sustains engagement when self-regulation or emotional resilience are low. This compensatory pattern echoes previous research showing that job resources may offset the negative effects of depleted personal resources (ten Brummelhuis & Bakker, 2012; van den Heuvel et al., 2010).

In practical terms, workers who struggle to regulate their emotions may rely more on finding meaningfulness in their work to maintain engagement and counteract avoidance or delaying tendencies. By contrast, highly resilient individuals might sustain engagement more independently of external sources of meaningfulness, given their stronger internal capacity to manage stress and maintain motivation.

4.3. Limitations and future research

Although the present study offers valuable insights into understanding how meaningful work relates to workplace procrastination, by evaluating the important mechanism of work engagement, several limitations should be acknowledged.

First, the cross-sectional design prevents causal inferences. Although the theoretical model indicates that meaningful work predicts engagement, which in turn predicts lower procrastinatory behaviors, reverse or reciprocal effects cannot be ruled out. Longitudinal or experimental designs would be required to clarify the temporal direction of these relationships and the dynamic interplay between meaningful work, engagement, and procrastination over time.

Second, as all variables were measured through self-report, there is a risk that the observed correlations partly reflect the measurement method rather than the actual relationships between constructs. In addition, participants may have responded in a socially desirable manner, underreporting behaviors such as procrastination. Future research should therefore include additional objective measures such as behavioral indicators (e.g., records of delays, productivity levels, deadline compliance, or internet usage) to strengthen the validity of the findings. Additionally, the random order of the scale items may have introduced an unintended source of bias. One participant reported noticing the control question but assumed it was a trick because of its proximity to the *rule-following skill* item. This case was consequently excluded from the analyses.

Finally, the sample consisted predominantly of Portuguese-speaking participants working in the public administration sector, which suggests an interesting avenue for future research. To the best of our knowledge, no previous studies in Portugal have examined meaningful work, work engagement,

and workplace procrastination within this sector. Given the unique characteristics of public service contexts (such as bureaucratic structures, job stability, and value-driven missions), further research focusing on public administration workers could provide valuable insights into how these motivational and behavioral processes unfold in this occupational setting. Moreover, examining the role of socioemotional skills in this context could be particularly relevant, as these competencies are increasingly recognized as key drivers for innovation, adaptability, and modernization within public administration (Levitats & Vigoda-Gadot, 2019; OECD / Eurostat, 2018; OECD, 2019). Workers should be supported in constructing meaningfulness during organizational transitions. Because managing public administration change is an ongoing and complex process, its success relies on individuals' capacity for adaptation and personal resourcefulness (van den Heuvel et al., 2010).

Taken together, these limitations point to fruitful directions for future research aimed at unpacking the motivational mechanisms and boundary conditions through which meaningful work fosters engagement and reduces procrastination.

CHAPTER 5

Conclusion

The present study contributes to a better understanding of how meaningful work relates to workplace procrastination through work engagement, and how socioemotional skills may influence this process. Grounded in the Job Demands–Resources model and the Conservation of Resources theory, the findings highlight the motivational role of meaningful work and the mediating function of engagement predicting lower procrastination. Although the moderating effects of self-management and emotional resilience were not significant, their positive associations with engagement and negative associations with procrastination underscore their value as personal resources that support motivation and self-regulation at work.

Beyond its empirical contributions, this study emphasizes the importance of examining meaningful work and engagement as dynamic and interrelated processes that can be shaped by both job characteristics and individual resources. Understanding these mechanisms is crucial for organizations seeking to cultivate work environments that foster sustained engagement and minimize counterproductive behaviors such as procrastination.

In addition, the growing prevalence of remote and hybrid work since the COVID-19 pandemic raises important questions about how workplace procrastination is defined and experienced when flexibility and autonomy are largely determined by the worker. In such contexts, the boundaries between home and professional life become increasingly blurred, potentially reshaping the way employees perceive time use, self-discipline, and delay. Future research could explore how meaningful work and socioemotional skills operate under these flexible arrangements, as they may play a central role in helping individuals regulate effort and sustain engagement in less structured environments. Relatedly, as work-life balance has been found to correlate negatively with procrastination, organizations could foster policies and implement subtle nudges that promote a healthy balance between work and family responsibilities to diminish, rather than exacerbate, workers' procrastination tendencies (Sharma & Sharma, 2021; Thaler & Sunstein, 2021).

These findings also acquire particular relevance in light of the ongoing digital transformation of work. As artificial intelligence (AI) becomes increasingly integrated into organizational processes, the very nature of job demands and resources is likely to evolve. By automating and accelerating administrative tasks, AI allows employees to dedicate more time to strategic and creative activities, yet it may also reshape attention patterns and introduce new forms of cognitive load. In this changing landscape, sustaining work engagement may depend not only on job design. Beyond self-management

and emotional resilience, other domains of the social, emotional, and behavioral skills (such as innovation skills, or compound skills like adaptability) may prove especially valuable for helping individuals navigate the heightened uncertainty and complexity associated with AI-driven work environments. Strengthening these socioemotional competencies could be the key to maintaining motivation, emotional balance, and focus - ultimately reducing the tendency to procrastinate in an era where technological change continually redefines how (work processes), when (temporal rhythms), and why (meaningfulness) we work.

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COMISSÃO ESPECIALIZADA DE ÉTICA DE PSICOLOGIA

PARECER [Final] 106/B 2025

I – Identificação

Projeto n.º: 106/2025

Identificação do(a) proponente: Elisabete Yee Fei Camões

Curso: Mestrado em Ciências das Emoções

Título do Projeto: The role of social and emotional skills in the relationship between
meaningful work and procrastination

Data de submissão do pedido: 20/05/2025

Data do parecer: 20/06/2025

II – Contextualização de novo parecer

Após a emissão de parecer favorável à realização este projeto em 07/04/2025, foi solicitado pela estudante, através de email, em 20 de maio de 2025, que fossem consideradas alterações ao seu plano de trabalhos, a saber:

- no consentimento informado, em que, para além de detalhes vários (aumento do tempo previsto para o preenchimento do questionário, menção de um novo domínio científico, atualização de email de orientadora) se salienta a introdução de incentivo não financeiro sob a forma de feedback automático relativo ao questionário das competências socioemocionais;
- no questionário sociodemográfico: opção acrescentada na questão relativa à situação atual de emprego;
- no *debriefing*, salienta-se a introdução da definição de competências socioemocionais, para melhor compreensão dos resultados contidos no feedback automático.

A despeito da adequação ética das alterações indicadas, a CEEP lembra que nos casos de feedback automático, existe sempre algum risco de os participantes interpretar inadequadamente os resultados. Para além disso, é possível que algumas pessoas possam sentir desconforto ou ter dúvidas face aos resultados que lhes são apresentados. Por isso, no consentimento informado, os participantes deverão ter a possibilidade de indicar se desejam ou não receber este feedback no (i.e., "Desejo receber feedback" - Sim/não) .

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Para atender globalmente a estas condicionantes, CEEP recomenda que, após a indicação de que "No final do preenchimento, e apenas se responder a todos os itens, irá obter um feedback gratuito gerado automaticamente relativo ao questionário de competências sociais, emocionais e comportamentais", seja inserido no consentimento informado o seguinte texto:

"Os resultados que partilharmos referem-se unicamente às respostas dadas no momento e no contexto específico em que respondeu ao questionário, sendo, por isso, limitado, nunca podendo constituir um diagnóstico nem uma avaliação fixa sobre a sua pessoa ou sobre as suas competências, e não deverá ser utilizado para decisões pessoais. O feedback deste tipo de instrumentos nunca podem substituir uma avaliação por um/a profissional qualificado/a.

A informação que receber tem apenas um propósito exclusivamente informativo, para que possa perceber melhor o que estamos a estudar nesta investigação. O feedback que receber será, por isso, muito geral (pontuação) e descritivo, baseado nas definições e categorias previstas pelo próprio instrumento, não sendo feita qualquer descrição interpretativa pessoal dos resultados. No entanto, embora descritivo, é possível que algumas pessoas possam sentir desconforto ou ter dúvidas, pelo que a receção desta informação será sempre opcional. Poderá indicar se deseja ou não receber este feedback no final do inquérito.

A equipa de investigação está disponível para esclarecer qualquer aspeto relacionado com o estudo. Estes esclarecimentos serão prestados dentro dos limites da nossa competência profissional e sem acesso a qualquer dado pessoal que permita identificá-lo/a, considerando o carácter anónimo de todas as respostas que fornecer ao inquérito".

Em consonância com recomendação anterior relativamente aos cuidados a ter com o feedback de resultados, no texto do *debriefing*, deverá ser retomada e reforçada a indicação de que os resultados se referem unicamente às respostas dadas no momento e no contexto específico em que o/a participante respondeu, possuem propósito informativo e não constituem diagnóstico nem avaliação definitiva sobre a pessoa ou sobre as suas competências em geral.

III – Parecer

Considerando a necessidade de efetuar alterações no consentimento informado, *debriefing* e questões sociodemográficas, mas estando assegurado que se mantêm todos os procedimentos previamente delineados respeitando os mesmos princípios éticos e metodológicos, e assumindo que as recomendações anteriores serão seguidas, e que serão entregues os textos completos e definitivos do consentimento informado e do *debriefing*, entende a Comissão de Ética Especializada de Psicologia emitir parecer final favorável à realização da investigação.

Appendix B – Pre Registration document



Meaningful Work and Procrastination: Engagement and Socioemotional Skills Roles (#235138)

Author(s)

This pre-registration is currently anonymous to enable blind peer-review.
It has 3 authors.

Pre-registered on: 2025/06/24 - 07:10 AM (PT)

1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?

Main question:

To what extent does work engagement mediate the relationship between meaningful work and workplace procrastination, and are these effects moderated by socioemotional skills?

We predict the following:

H1. Meaningful work is negatively associated with workplace procrastination.

H2. Work engagement mediates the relationship between meaningful work and workplace procrastination, such that higher levels of meaningful work are associated with greater engagement, which in turn is associated with lower levels of procrastination.

Given the lack of consistent empirical evidence on the role of socioemotional competencies, we will explore whether and how these skills interact with meaningful work and work engagement in predicting procrastination, without formulating a directional hypothesis.

3) Describe the key dependent variable(s) specifying how they will be measured.

Workplace procrastination will be assessed with the short version of the Procrastination At Work Scale (PAWS), previously validated for Turkey, the Netherlands and China (Metin et al., 2016; Wang et al., 2021), and comprising two subscales: i) soldiering (8 items); and ii) cyberslacking (4 items). All items are answered on a 7-point scale, ranging from 0 (never) to 6 (always / daily).

4) How many and which conditions will participants be assigned to?

This study does not have experimental conditions. It employs a correlational design. Participants will be recruited using a combination of convenience sampling and snowball sampling methods through Qualtrics. Participants will be asked about sociodemographic data (age, gender, nationality, native language, country of residence and employment, education level, job status, organizational type, sector of activity and functional work area), and will respond to the following measures:

1. Behavioral, Emotional, and Social Skills Inventory (BESSI; Soto et al., 2022), comprising 192 items with six subscales: self-management, social engagement, cooperation, emotional resilience, innovation, and compound, all answered on a 5-point scale, ranging from 1 (not at all well) to 5 (extremely well).
2. Work And Meaning Inventory (WAMI; Steger et al., 2012), comprising 10 items with three subscales: Positive Meaning, Meaning-Making through Work, Greater Good Motivations, all answered on a 5-point scale (from 1 = absolutely untrue to 5 = absolutely true).
3. Utrecht Work Engagement Scale – short version (UWES-9; Schaufeli et al., 2006), comprising 9 items with three subscales: Vigor, Dedication, and Absorption, all answered on a 7-point scale, ranging from 0 (never) to 6 (always / everyday).

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Although the hypotheses are based on broad constructs, each construct comprises several subscales. At this stage, no hypotheses have been specified for each subdimension. Before testing H1 and H2, we will begin by examining the linear relationships among all measures using visual inspection of scatterplots and Person correlations. Only predictors that demonstrate significant associations with the outcome variables will be included in the subsequent analyses within the OLS regression framework to test H2. Given the potential issue of collinearity among multiple variables, particularly among predictors and outcome variables, we will assess collinearity using the Variance Inflation Factor (VIF) and tolerance values. Collinearity will be considered problematic when VIF values exceed 5 or tolerance values < 0.20. In such cases, additional analyses (e.g., combining, removing, or separately analyzing highly correlated variables) will be conducted, and bootstrapping procedures may also be applied to ensure robustness. We will also examine standard assumptions of OLS regression such as homoscedasticity, normality of residuals (e.g., visually inspecting plots of standardized residuals against predicted values and Q-Q plots).

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

Data from a participant will be excluded if they fail the attention check item. For most variables, we will assess internal consistency and subsequently compute composite scores using the mean, provided that internal consistency, as measured by both Cronbach's alpha and McDonald's omega, is equal to or greater than .70. These mean scores will only be computed when there are no more than 20% of missing data in a given measure. Influential outliers will be assessed using Cook's distance, with values greater than 1.0 considered potentially influential. Observations will be excluded from the analyses under the following conditions: (1) participants will be removed if they failed to respond correctly to the attention check item; and (2) for any given composite variable, if more than 20% of the items are missing. Internal consistency of all multi-item scales will be assessed using both Cronbach's alpha and

McDonald's omega. Composite scores will be computed using the mean of the items only when internal consistency is acceptable (α and $\omega \geq .70$). Influential outliers will be examined using Cook's distance in the OLS regressions. Observations with a Cook's distance greater than 1.0 will be flagged as potentially influential. If any such cases are identified, their impact on the results will be examined.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

Our target sample size is 250 participants. We will attempt to recruit up to 300, assuming not all participants will complete the survey.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

If any sociodemographic variables are found to be meaningfully associated with the outcome variables, they may be included as covariates or as moderators in the analyses. However, in these cases all main models will be tested both with and without these covariates / moderators to assess the robustness of the results. Exploratory analyses may also be conducted on individual subdimensions of the socioemotional skills. Additionally, the dataset collected for the analysis of socioemotional skills is expected to be combined with samples from other studies to examine the psychometric properties of this construct in a larger and more diverse sample. This particular study will be included in a separate pre-registration.

Appendix C – Informed consent and debriefing



Bem vindo/a!

Qual o objetivo do estudo?

O presente estudo visa estudar **o modo como as pessoas percecionam o seu trabalho** e fatores associados, incluindo fatores sociais, emocionais e comportamentais. Está a ser desenvolvido no âmbito de uma dissertação de mestrado em Ciências das Emoções, no Iscte - Instituto Universitário de Lisboa, por Elisabete Fei e sob orientação de Anabela Caetano Santos e de Patrícia Arriaga, professoras no departamento de Psicologia Social das Organizações.

A quem se dirige o inquérito?

O estudo destina-se a adultos com idade igual ou superior a 18 anos, fluentes na língua portuguesa e que se encontram no ativo a trabalhar.

Como pode participar no estudo?

A participação no estudo é inteiramente **voluntária** pelo que, caso não se sinta confortável em responder a algumas perguntas, poderá interromper a qualquer momento, sem qualquer prejuízo e sem ter de justificar-se. Se aceitar participar, **solicitamos que preencha um inquérito** que inclui dados sociodemográficos e outras perguntas acerca de si e comportamentos em contexto de trabalho. Estimamos que demore entre **20 e 25 minutos. Não existem respostas certas ou erradas.** As pessoas diferem nas suas experiências, modos de pensar e há uma elevada variabilidade na forma como as pessoas experienciam os eventos e se comportam em contextos de trabalho.

Quais são os possíveis benefícios e riscos de participar?

Ao aceitar participar, estará a contribuir com dados úteis para o avanço do conhecimento científico neste domínio das Ciências Sociais, sendo por isso muito valorizada. No final do preenchimento, e apenas **se responder a todos os itens, irá obter um *feedback* gerado automaticamente relativo ao questionário de competências sociais, emocionais e comportamentais**. Os resultados que partilharmos referem-se unicamente às respostas dadas no momento e no contexto específico em que respondeu ao questionário, sendo, por isso, limitado, nunca podendo constituir um diagnóstico nem uma avaliação fixa sobre a sua pessoa ou sobre as suas competências, e não deverá ser utilizado para decisões pessoais. O *feedback* deste tipo de instrumentos nunca pode substituir uma avaliação por um/a profissional qualificado/a. Esta informação tem apenas um propósito exclusivamente informativo, para que possa perceber melhor o que estamos a estudar nesta investigação. O *feedback* que receber será, por isso, muito geral (pontuação) e descritivo, baseado nas definições e categorias previstas pelo próprio instrumento, não sendo feita qualquer descrição interpretativa pessoal dos resultados. No entanto, embora descritivo, é possível que algumas pessoas possam sentir desconforto ou ter dúvidas, pelo que a receção desta informação será opcional. **Poderá indicar se deseja ou não receber este *feedback* no final do inquérito**. Poderá também interromper ou deixar de responder a qualquer momento, se assim o entender.

Como são tratados os seus dados?

Para além de voluntária, a participação é também **anónima**. **Em nenhum momento do estudo precisa de se identificar**. A informação que fornecer será analisada em conjunto com os dados de outros participantes para fins educativos e de investigação, pelo que se antecipa apresentá-la em contextos educativos, conferências científicas e publicá-la em revistas científicas. Para aderir a práticas de ciência aberta pretende-se partilhar os dados anónimos finais com outros investigadores em repositórios de acesso aberto para efeitos de investigação e educação científica.

Quem posso contactar para obter esclarecimentos?

A equipa de investigação está disponível para esclarecer qualquer aspeto relacionado com o estudo. Estes esclarecimentos serão prestados dentro dos limites da nossa competência profissional e sem acesso a qualquer dado pessoal que permita identificá-lo/a, considerando o carácter anónimo de todas as respostas que fornecer ao inquérito. Poderá solicitar informação adicional contactando as investigadoras, através dos e-mails: Elisabete Fei (elisabete_fei@iscte-iul.pt), Anabela Caetano (anabela_caetano_santos@iscte-iul.pt) e Patrícia Arriaga (patricia.arriaga@iscte-iul.pt).

Por favor, selecione uma das seguintes opções:

Declaro que compreendo o que li, que tenho mais de 18 anos, que sou fluente em Português e que aceito participar no estudo

Não pretendo participar no estudo.

Qual a sua idade?

Qual o país em que reside atualmente?

Portugal

Outro

Identifica-se com que género?

Qual a sua nacionalidade?

Portuguesa

Outra

Por favor indique a outra nacionalidade

Qual o nível de educação mais elevado que concluiu?

Qual a sua língua materna?

Portuguesa

Outra (por valor, especifique):

Qual a sua situação atual de emprego? (selecione todas as opções aplicáveis)

Trabalho por conta de outrem a tempo inteiro (30 horas semanais ou mais)

Trabalho por conta de outrem a tempo parcial (menos de 30 horas por semana)

Sou trabalhador/a por conta própria

Sou reformado/a

Sou doméstico/a, sem outra ocupação

Sou estudante

Estou desempregado/a

Outro (por favor, especifique):

Qual o país em que trabalha atualmente?

Portugal

Outro (por favor, especifique):

Trabalha em que tipo de organização?

Pública

Privada

Cooperativa e Social (ou do "Terceiro Setor")

Outra (por favor, especifique):

Trabalha em que setor de atividade?

Agricultura, floresta e pesca

Indústrias extrativas

Indústrias transformadoras

Produção e distribuição de eletricidade, gás, valor e ar condicionado

Captação, tratamento e distribuição de água; saneamento, gestão de resíduos e despoluição

Construção

Comércio por grosso e a retalho

Transportes e armazenagem

Atividades de alojamento e restauração

Atividades de edição, difusão e produção e distribuição de conteúdos

Telecomunicações, programação informática, consultoria, infraestrutura de computação e outras atividades dos serviços de informação

Atividades financeiras e de seguros

Atividades imobiliárias

Atividades de consultoria, científicas, técnicas e similares

Atividades administrativas e dos serviços de apoio

Administração Pública

Educação

Atividades de saúde humana e ação social

Atividades artísticas, desportivas e recreativas

Outras atividades de serviços

Atividades das famílias empregadoras de pessoal doméstico e atividades de produção de bens e serviços pelas famílias para uso próprio

Atividades dos organismos internacionais e outras instituições extraterritoriais

Outra (por favor, especifique):

Trabalha em que área funcional?

Área de apoio jurídico

Área comercial / apoio ao cliente

Área de comunicação / relações públicas

Área de cooperação / parcerias

Área de desenvolvimento comunitário

Área de gestão e administração

Área financeira / contabilidade

Área de investigação & desenvolvimento / inovação

Área de operações / logística

Área de marketing / publicidade

Área de gestão da mudança

Área de recursos humanos

Área de responsabilidade social / sustentabilidade

Área de segurança

Área de sistemas de informação / TIC / cibersegurança

Área técnica / produção / negócio (por favor, especifique):

Outra (por favor, especifique)

Muito obrigada por ter participado neste estudo!

O presente estudo tem como **objetivo compreender o papel da percepção de competências socioemocionais na relação entre a percepção de um trabalho com significado e a procrastinação** (i.e., adiamento constante de tarefas importantes, preferindo atividades mais fáceis ou menos urgentes). Mais especificamente, identificar quais as percepções sobre as competências que estão mais relacionadas com uma menor procrastinação e verificar se as pessoas que referem ter mais competências socioemocionais procrastinam menos quando o trabalho não tem muito significado.

A percepção de competências socioemocionais corresponde ao modo como as pessoas vêem as suas próprias capacidades nas relações sociais, regulação de emoções, gestão de objetivos e aprendizagem com a experiência. Como referimos inicialmente os resultados que partilharmos referem-se unicamente às suas respostas no contexto específico em que respondeu ao questionário, sendo, por isso, limitado, nunca podendo constituir um diagnóstico nem uma avaliação fixa sobre a sua pessoa ou sobre as suas competências ou capacidades, e não deverá ser utilizado para decisões pessoais.

Sendo estes resultados baseados na sua percepção, diferem de competências reais, as quais também não são fixas e podem ser aprendidas e melhoradas através da prática (Soto et al., 2022).

O *feedback* deste tipo de instrumentos nunca pode substituir uma avaliação por um/a profissional qualificado/a. A informação tem apenas um propósito exclusivamente informativo, para que possa perceber melhor o que estamos a estudar nesta investigação. O *feedback* que receber será, por isso, muito geral (pontuação) e descritivo, baseado nas definições e categorias previstas pelo próprio instrumento, não sendo feita qualquer descrição interpretativa pessoal dos resultados. No entanto, embora descritivo, é possível que algumas pessoas possam sentir desconforto ou ter dúvidas, pelo que a receção desta informação será sempre opcional.

Indique aqui se pretende ou não receber este *feedback* baseado na sua percepção acerca das suas competências socioemocionais.

Não tenho interesse em receber o feedback.

Sim, tenho interesse em receber o feedback.