Review

Psikiyatride Güncel Yaklaşımlar-Current Approaches in Psychiatry 2026; 18(4):1512-1530

doi: 10.18863/pgy.1839306

Psychopathology of Procrastination: Causes, Types, and Coping Strategies

Ertelemenin Psikopatolojisi: Nedenleri, Türleri ve Baş Etme Stratejileri

Esra Gül Koçyiğit[1]

[1]Altınbaş University, Istanbul

ABSTRACT

This study is a conceptual/thematic review that examines procrastination behavior within the framework of theoretical perspectives and contemporary literature, and analyzes its psychopathological foundations as well as coping strategies from a multidimensional perspective. Procrastination is defined as a complex self-regulation process in which individuals deliberately delay tasks that need to be completed, often in order to avoid negative emotions. It has been observed that this behavior comprises cognitive, emotional, and behavioral components, and is closely associated with psychological factors such as anxiety, low self-esteem, perfectionism, intolerance of uncertainty, and deficits in self-regulation. In addition, psychopathologies such as attention deficit hyperactivity disorder and depression are reported to both trigger and maintain this behavior. The cyclical nature of procrastination is addressed, emphasizing that initial motivation and determination may gradually transform into anxiety, guilt, and regret, leading to behavioral inhibition. Procrastination is classified into active and passive types, and the determining role of individual differences in this process is highlighted. Furthermore, procrastination is considered a multifaceted construct that cannot be explained solely by time management, but is also associated with self-protection, avoidance, and emotion regulation processes. In the context of coping with procrastination, the importance of developing awareness, behavioral activation, cognitive restructuring, time management, and emotion regulation skills is emphasized. Accordingly, intervention programs developed in this direction may contribute to individuals' recognition of their motivational resources and the development of functional coping strategies.

Keywords: Procrastination, psychopathology, emotion regulation, self-regulation, intervention strategies

ÖZ

Bu çalışma, erteleme davranışını kuramsal çerçeveler ve güncel alan yazın doğrultusunda ele alan kavramsal/tematik bir derleme çalışması olup, erteleme davranışının psikopatolojik temellerini ve bu davranışla baş etme stratejilerini çok boyutlu bir yaklaşımla incelemektedir. Erteleme; bireyin yapılması gereken görevleri, çoğunlukla olumsuz duygulardan kaçınma amacıyla bilinçli biçimde geciktirmesiyle tanımlanan karmaşık bir öz-düzenleme sürecidir. Bu davranışın bilişsel, duygusal ve davranışsal bileşenler içerdiği; özellikle kaygı, düşük benlik saygısı, mükemmeliyetçilik, belirsizliğe tahammülsüzlük ve öz denetim eksikliği gibi psikolojik faktörlerle yakından ilişkili olduğu görülmektedir. Ayrıca dikkat eksikliği hiperaktivite bozukluğu ve depresyon gibi psikopatolojilerin bu davranışı hem tetiklediği hem de sürdürdüğü ifade edilmektedir. Çalışmada, ertelemenin döngüsel yapısı ele alınmış; başlangıçta hissedilen motivasyon ve kararlılığın zamanla kaygı, suçluluk ve pişmanlığa dönüşerek davranışsal inhibisyona yol açtığı vurgulanmıştır. Erteleme, aktif ve pasif türleriyle sınıflandırılmış; bireysel farklılıkların bu süreçteki belirleyici rolü ortaya konmuştur. Bununla birlikte ertelemenin yalnızca zaman yönetimiyle açıklanamayacak; benlik koruma, kaçınma ve duygu düzenleme süreçleriyle ilişkili çok katmanlı bir yapı sergileyebileceği değerlendirilmektedir. Erteleme ile başa çıkma bağlamında farkındalık geliştirme, davranışsal aktivasyon, bilişsel yeniden yapılandırma, zaman yönetimi ve duygu düzenleme becerilerinin önemine dikkat çekilmiştir. Bu doğrultuda geliştirilecek müdahale programlarının bireyin motivasyonel kaynaklarını tanımasına ve işlevsel başa çıkma stratejileri oluşturmasına katkı sağlayabileceği ifade edilmektedir.

Anahtar sözcükler: Erteleme, psikopatoloji, duygu düzenleme, öz denetim, müdahale stratejileri

Address for Correspondence: Esra Gül Koçyiğit, Altınbaş University, Institute of Graduate Education, Istanbul, Türkiye

e-mail: esragulkocyigit@gmail.com

Received: 09.12.2025 | **Accepted:** 22.04.2026

Introduction

Procrastination is a familiar phenomenon for many individuals (Çakmak-Tolan 2023). The phrase "I will finish it tomorrow" is commonly used by individuals who tend to leave tasks until the last minute. However, is it truly possible to enjoy the present moment when a task remains unfinished and the deadline is the following day? Or does postponing a task lead to feelings of guilt? As the time available to complete the task decreases, does stress begin to increase? Most individuals have, at some point in their lives, engaged in procrastination when faced with unpleasant tasks such as mowing the lawn, cleaning, completing minor household chores, or preparing for exams. While some individuals exhibit procrastination more frequently and across multiple areas of their lives, others display this behavior in a more limited manner (Jochmann et al. 2024). Procrastination is widely observed among individuals from different socioeconomic and educational backgrounds (Lu et al. 2021). Various studies indicate that task characteristics (e.g., unclear instructions, timing of rewards and punishments, task aversiveness), personality-related factors (e.g., the five-factor model, motivation, and cognitive processes), and environmental factors (e.g., incentives and responsibilities) are key determinants of procrastination (Yan and Zhang 2022). Research in this field aims to better understand the phenomenon of procrastination and to identify why individuals procrastinate in order to develop effective interventions (Rozental and Carlbring 2014).

This study is a traditional narrative review that examines the literature on procrastination from a comprehensive perspective. Within this framework, the theoretical foundations of procrastination, different classification approaches, its relationship with psychopathology, and coping strategies are examined. In the selection of sources, priority was given to studies published within the last 10–15 years. However, seminal studies that have played a key role in shaping the conceptual framework of the field were also included. The reviewed studies were selected based on their explanatory power regarding procrastination, their theoretical contributions, and their ability to elucidate underlying psychological processes.

Accordingly, the primary aim of this study is to examine procrastination within a theoretical framework; to identify its causes and types; to compare different theoretical approaches; and to evaluate the relationship between procrastination and psychopathology. In addition, the study aims to discuss, in light of the existing literature, methods that may help individuals cope more.

Definition and Dimensions of Procrastination

Procrastination is defined as a behavioral pattern in which an individual postpones a task that needs to be completed to a later time; it is a commonly observed phenomenon that often leads to feelings of discomfort (Solomon and Rothblum 1984, Uzun and Demir 2015, Duman 2018). However, procrastination is not merely a delay related to timing; rather, it represents a more complex process in which individuals consciously postpone tasks due to cognitive and emotional factors such as the desire for immediate pleasure, fear of failure, and low self-confidence (Gül 2015). Although various definitions of procrastination have been proposed, a common element among them is that a less important activity is prioritized over a more important task (Uzun and Demir 2015). From this perspective, procrastination should not be considered solely as a time management problem, but rather as a behavioral pattern associated with prioritization and self-regulation processes.

Procrastination encompasses not only a behavioral dimension, such as delaying or avoiding tasks, but also cognitive and emotional components (Solomon and Rothblum 1984). Each of these components contributes to a better understanding of the underlying causes of procrastination. The cognitive dimension of procrastination is often associated with automatic thoughts. These thoughts may be intertwined with emotional states such as anxiety, feelings of inadequacy, or perfectionism related to the task at hand. For example, a thought such as "I must complete this task perfectly; otherwise, I will fail" may trigger procrastination and lead to reluctance to initiate the task (Steel 2007). In addition, cognitive processes related to procrastination may impair individuals' planning and time management abilities, which are essential for achieving their goals (Ainslie 2001, Ariely and Wertenbroch 2002, Steel 2007).

The emotional dimension of procrastination is typically associated with feelings such as anxiety, guilt, and shame (Sirois 2007). This dimension reflects the emotional distress and tension individuals experience due to concerns about not completing a task within the required time frame (Bulut 2014). When individuals fail to complete a task, these negative emotions may intensify, thereby contributing to the emergence of a new cycle of procrastination. Although procrastination may provide temporary relief in the short term, it often results in increased anxiety and stress in the long term (Sirois 2007).

The behavioral component of procrastination involves the concrete actions related to initiating, maintaining, or completing a task (Uzun and Demir 2015). In this context, individuals may divert their attention toward activities that provide greater immediate gratification instead of fulfilling their responsibilities. For instance, engaging in social media or watching television instead of studying can be considered examples of such behavior. These types of distractions facilitate the maintenance and reinforcement of procrastination (Sirois and Pychyl 2013).

Procrastination Cycle

Individuals who experience procrastination often begin a task with great enthusiasm; however, as the process progresses, this initial enthusiasm tends to transform into reluctance (Çavdar 2024). Some researchers have described this process as involving emotional fluctuations (Burka and Yuen 2008). When individuals consider postponing a task and reflect on its completion, they go through a series of cognitive, emotional, and behavioral stages. At the beginning of a task, individuals who engage in procrastination tend to feel more hopeful compared to their previous unsuccessful attempts. With the thought, "This time I will start earlier than planned," they believe they will carry out their tasks in a rational and organized manner. However, as time passes, they fail to translate these plans into action. At this point, hope gradually gives way to anxiety. As anxiety increases and the intended start time has already passed, the individual attempts to take action by telling themselves, "I need to start working immediately." Nevertheless, they are still unable to begin. Consequently, the hope of being able to initiate the task diminishes over time. The thought "What if I cannot start?" takes hold, replacing earlier optimism with negative expectations about not being able to begin at all. At this stage, individuals may express regret, question themselves, feel ashamed, or even develop self-directed negativity. Despite experiencing these negative emotions, they continue to maintain a sense of hope, believing that there is still enough time to complete the task. However, both the initial intentions to start early and the subsequent feelings of shame, guilt, and regret fail to motivate action. Instead, concerns about completing the task are replaced by thoughts such as "There is something wrong with me." The individual begins to perceive themselves as lacking essential qualities such as courage and self-discipline in comparison to others. Accompanied by these feelings of inadequacy, the individual reaches a turning point between "doing" and "not doing." They may either choose a way out or, despite all the difficulties experienced, make a final effort and complete the task. In both cases, the task eventually comes to an end, leading to a sense of relief. However, this relief is often accompanied by profound exhaustion. Because the process is highly demanding and the individual does not wish to experience this cycle again, they make a promise to themselves, stating, "From now on, I will never procrastinate," and intend to begin working earlier in the future (Burka and Yuen 2008).

Individuals who engage in procrastination pass through certain stages during this process. Although this cycle may not be identical for every individual, it tends to follow a similar pattern. The procrastinator begins the process with the intention of being organized and disciplined and, at the end, resolves once again to continue in the same way. Nevertheless, the period between the beginning and the end constitutes a highly challenging and exhausting experience for the individual. In this context, the literature indicates that individuals enter the procrastination cycle through different types of procrastination (Ferrari 1992, Van Eerde 2003, Steel 2007, Sirois and Tosti 2012, Sirois and Pychyl 2013, Sirois 2014).

Types of Procrastination

As in its definitions, a full consensus has not been reached in the literature regarding the classification of procrastination behavior. For this reason, different researchers have classified procrastination based on

various criteria. Chun and Choi (2005) categorize procrastination into two main types: active procrastination and passive procrastination.

According to this classification, passive procrastinators experience difficulties in decision-making and initiating action; rather than intentionally delaying tasks, they exhibit procrastination because they are unable to take action. As deadlines approach, they tend to experience increased pressure, anxiety, and pessimism (Chun and Choi 2005, Çavdar 2024). In terms of its functional outcomes, passive procrastination has been reported to be significantly and negatively associated with academic performance (Kooren et al. 2024).

In contrast, active procrastinators make decisions on time but deliberately delay execution. These individuals postpone their tasks while engaging in other activities and often prefer to work under time pressure, particularly as deadlines approach (Chun and Choi 2005, Çavdar 2024). Active procrastinators tend to adopt the belief, "I will delay this for now because I perform better under pressure" (Simpson and Pychyl 2009, Odacı et al. 2023). However, findings in the literature suggest that the effects of active procrastination on academic performance are not consistent; rather, they vary depending on factors such as task duration and structure, the level of uncertainty, and the individual's capacity to function under time pressure (Kooren et al. 2024).

When the psychopathological dimensions of this distinction are considered, some studies indicate that active and passive procrastination are associated with different psychological profiles. Passive procrastination has been found to be positively associated with levels of depression and anxiety (Habelrih and Hicks 2015, Aziz and Tariq 2019, Odacı et al. 2023). Moreover, as passive procrastination increases, individuals are more likely to fail in fulfilling their responsibilities, experience repeated failures, and develop a sense of loss of control, which in turn contributes to a cyclical pattern reinforcing symptoms of depression, anxiety, and stress (Odacı et al. 2023). In contrast, active procrastination has been reported to show weaker or, in some cases, negative associations with adverse emotional states such as depression, anxiety, and stress (Habelrih and Hicks 2015, Aziz and Tariq 2019). It is suggested that active procrastination is more closely related to functional self-regulation, the effective use of time pressure, and motivational processes (Odacı et al. 2023).

These findings suggest that the distinction between active and passive procrastination encompasses not only behavioral differences but also underlying cognitive and emotional processes. The relationship between procrastination and individual differences has also been examined within the framework of personality traits (Kandemir 2012). Studies based on the Five-Factor Personality Model indicate that the conscientiousness (self-discipline) dimension is negatively associated with academic procrastination (Sirois 2014, Berber-Çelik and Odacı 2015). Similarly, it has been found that higher levels of conscientiousness are associated with lower levels of academic procrastination, and that this dimension is one of the strongest predictors of procrastination. In contrast, neuroticism (emotional instability) has been found to be positively associated with academic procrastination (Steel 2007, Berber-Çelik and Odacı 2015). These findings indicate that procrastination is not merely related to time management or lack of motivation, but is also closely associated with personality-based self-regulation processes. In another classification, procrastination behavior is categorized into five main types: compulsive or dysfunctional procrastination, decisional procrastination, neurotic procrastination, general procrastination, and academic procrastination. Among these, compulsive (dysfunctional) procrastination and academic procrastination are associated with avoidance of tasks that need to be completed, whereas decisional and neurotic procrastination are related to avoidance of decision-making processes. General procrastination, on the other hand, refers to a more pervasive tendency that is not limited to a specific task or decision context but can be observed across different domains of an individual's life (Balkıs 2007, Değirmenci et al. 2023). Some researchers have also classified procrastination based on its mode of occurrence as situational procrastination and trait procrastination. Situational procrastination refers to instances in which individuals who do not generally exhibit procrastination tendencies display such behavior under specific stressors, environmental conditions, or temporary life events. In contrast, trait procrastination refers to a more stable tendency in which procrastination behavior persists across different areas of an individual's life (Ocak and Bulut 2015).

Causes of Procrastination

The literature indicates that a wide range of variables contribute to the causes of procrastination. One of the most prominent reasons is that individuals are unable to find sufficient motivation to complete their tasks. This situation is associated with difficulties in regulating task-related emotional responses and is defined as a coping mechanism used to temporarily reduce negative emotions such as stress, anxiety, or fear (Tuckman 1991). In addition, there is evidence suggesting that procrastination is closely related to problems in emotion regulation (Ferrari and Díaz-Morales 2014) and self-control (Değirmenci et al. 2023). Przepiórka et al. (2019) demonstrated that low levels of self-control and self-efficacy are associated with increased procrastination behavior (Bandura 1997, Tangney et al. 2004, Steel 2007, Klassen et al. 2008, Przepiórka et al. 2019). Similarly, Rebetez et al. (2017) emphasized that impulsivity and intrusive thoughts are two key variables in explaining general procrastination behavior. In a meta-analysis conducted by Steel (2007), task aversiveness, self-efficacy, and conscientiousness were identified as the strongest and most consistent predictors of procrastination (Johnson and Bloom 1995, Milgram et al. 1995, Blunt and Pychyl 2000, Steel 2007, Gustavson et al. 2015). In light of these findings, procrastination can be understood as a multifaceted behavior associated with individual self-regulation difficulties, task-related characteristics, and personality traits.

Theoretical Approaches to the Causes of Procrastination

Procrastination is considered a complex phenomenon that cannot be reduced to a single cause. Theoretical approaches aimed at explaining the emergence and persistence of this behavior highlight its association with cognitive, motivational, emotional, and self-regulatory processes.

Zeigarnik Effect and Cognitive Tension

The Zeigarnik effect is defined as a cognitive phenomenon suggesting that incomplete tasks remain more vivid and persistent in the mind compared to completed ones (Köksal et al. 2004). This effect is explained by the persistence of cognitive tension that arises when an individual engages in a task, which does not dissipate if the task remains unfinished, thereby creating a state of psychological incompleteness (Erdin 2022). When a task is not completed or is deliberately left unfinished, it is not cognitively closed, and task-related mental activity continues (Seifert and Patalano 1991). This situation leads to more frequent and intense mental representations of incomplete tasks, particularly among individuals with higher levels of anxiety. The cognitive tension generated by unfinished tasks increases anxiety, making it more difficult for individuals to return to the task and reinforcing avoidance tendencies (Erdin 2022). Experimental findings demonstrate that unfinished goals can lead to mental intrusions, increase cognitive load, and negatively affect performance on unrelated tasks (Baumeister and Masicampo 2011). It has also been noted that this cognitive activity does not dissipate spontaneously over time but persists unless the individual forms a specific plan directed toward the goal (Goschke and Kuhl 1993). The study by Baumeister and Masicampo (2011) shows that even if a goal has not yet been completed, forming a concrete plan related to that goal can eliminate this cognitive tension. These findings suggest that the Zeigarnik effect is not merely a memory-related phenomenon limited to the enhanced recall of incomplete tasks; rather, the cognitive tension associated with incompleteness persists until the task is completed or psychologically resolved by the individual (Peifer et al. 2020). From this perspective, the Zeigarnik effect provides a theoretical basis for understanding procrastination not only as a behavioral delay but also as a cognitive process sustained by the perception of incompleteness.

Temporal Motivation Theory

Temporal Motivation Theory (TMT), developed by Steel, is a comprehensive theoretical framework that explains procrastination behavior through motivational components such as the perceived value of tasks, expectancy of success, delay in receiving rewards, and an individual's sensitivity to delay, while also addressing changes in intertemporal preferences within the framework of motivation theories (Steel and König 2006). Based on hyperbolic discounting theory, TMT suggests that individuals are more likely to procrastinate when they perceive the benefits of a task as low (Özdemir and Akatay 2022). According to

the theory, the attractiveness of an action for an individual is determined by expectancy regarding the outcome, the value assigned to that outcome, the delay in obtaining the reward, and the individual's sensitivity to delay (Steel and König 2006). Within this framework, TMT conceptualizes motivation as the interaction between perceived utility and time, emphasizing that time is a fundamental determinant of motivation (Özdemir and Akatay 2022). In particular, when rewards are temporally distant and tasks are not perceived as sufficiently meaningful or satisfying in the short term, individuals tend to shift toward alternatives that provide immediate gratification, thereby increasing the likelihood of procrastination (Rozental and Carlbring 2014). Empirical findings support this perspective, indicating that procrastination behavior is more pronounced in tasks associated with long-term goals and that higher levels of procrastination negatively affect goal attainment (Gustavson and Miyake 2017).

Self-Regulation Failure Theory

Self-regulation is defined as an individual's capacity to consciously direct their thoughts, emotions, and behaviors in line with their goals (Zimmerman 2000). This process includes stages such as goal setting, planning, initiating behavior, and maintaining action, and requires individuals to regulate their short-term impulses in accordance with long-term objectives (Zimmerman 2000, Baumeister and Vohs 2007). From this perspective, self-regulation is considered a comprehensive self-management process that involves not only the formation of intentions but also the translation of these intentions into action and their sustained execution over time. While Temporal Motivation Theory explains the conditions under which procrastination becomes more appealing, self-regulation theory focuses on why individuals fail to initiate or sustain goal-directed behavior despite this appeal (Zimmerman 2000, Steel and König 2006, Baumeister and Vohs 2007). This distinction suggests that procrastination is not solely a motivational issue but is also closely related to self-regulatory processes involved in initiating and maintaining behavior. Within this framework, procrastination is conceptualized as a behavioral manifestation of disruptions in the processes of initiating and sustaining goal-directed actions (Zimmerman 2000, Baumeister and Vohs 2007, Steel 2007).

Katrin Klingsieck further elaborates this perspective by conceptualizing procrastination as a specific form of self-regulation failure (Steel 2007, Klingsieck 2013). According to Klingsieck, procrastination emerges when individuals deliberately delay initiating or maintaining behaviors that are aligned with more functional and long-term goals (Klingsieck 2013). This tendency becomes particularly pronounced when individuals are confronted with tasks that are challenging, uncertain, or emotionally aversive (Sirois and Pychyl 2013). Such tasks often elicit negative emotional responses, including anxiety, feelings of inadequacy, fear of failure, and evaluation concerns (Akın 2011). In this context, procrastination functions as a strategy that allows individuals to temporarily avoid these negative emotions (Çakıcı 2003). From Klingsieck's self-regulation failure perspective, procrastination is therefore understood not merely as a cognitive or behavioral deficiency, but as an active avoidance pattern with a clear emotion regulation function (Steel 2007, Klingsieck 2013, Sirois and Pychyl 2013). Qualitative studies indicate that individuals often maintain procrastination due to reasons such as not feeling ready, fear of inadequacy, and avoidance of confronting negative emotions (Klingsieck et al. 2013). These findings suggest that procrastination is not a passive delay, but rather a form of self-regulation failure that leads individuals to temporarily distance themselves from long-term goals in order to achieve short-term emotional relief. Consistent with this view, studies conducted with both academic and clinical samples demonstrate that fear of failure, perceived threats to self-worth, and contingent self-esteem are closely associated with procrastination behavior (Sirois 2014, Eckert et al. 2016). Furthermore, although procrastination may provide short-term emotional relief, it has been shown to have detrimental effects on academic functioning and psychological well-being in the long term (Sirois and Pychyl 2013).

Fear of Failure and the Self-Protection Model

The self is composed of an individual's beliefs about their own personality as well as their way of perceiving and evaluating themselves (Baymur 1983, Özen and Gülaçtı 2010). Self-esteem, on the other hand, constitutes the emotional component of the self and is related to the degree to which individuals like, accept, and value themselves (Adams 1995, Kulaksızoğlu 2001). Individuals with high self-esteem tend to

perceive themselves as worthy of respect and acceptance, whereas those with low self-esteem approach themselves more negatively and may struggle to trust their own abilities (Temel and Aksoy 2001). For individuals who associate self-worth with high performance, failure may be perceived as a serious threat to self-value (Doğan 2008). In this context, procrastination may emerge as a functional strategy that delays the evaluation of one's actual capacity and serves to protect self-esteem. In the event of potential failure, individuals may maintain the belief that "I could have done better," thereby preventing a possible decline in self-esteem (Beswick et al. 1988). However, in the long term, procrastination may negatively affect both the individual's self-concept and the self-image they present to others (Ferrari et al. 2007). Procrastinators may avoid confronting failure and the evaluation of their performance during the process of initiating or completing a task. This avoidance tendency serves a defensive function aimed at protecting both social respect and self-esteem (Ferrari et al. 1995). It has been reported that individuals with low self-esteem or low self-confidence tend to exert less effort, abandon tasks more easily, and develop defensive patterns aimed at concealing perceived inadequacies (Ferrari 1994). Accordingly, individuals with low self-esteem have been shown to exhibit higher levels of procrastination compared to those with high self-esteem (Burka and Yuen 2008, Owens and Newbegin 1997). Solomon and Rothblum did not conceptualize procrastination merely as a time management problem; rather, they emphasized that it often co-occurs with fear of failure (Solomon and Rothblum 1984). When individuals believe that they will not be able to perform a task adequately, they become more prone to procrastination as a means of delaying the moment of evaluation. In this way, potential failure can be attributed to external or situational factors rather than to personal inadequacy (Solomon and Rothblum 1984, Kandemir 2012). This perspective is consistent with views that conceptualize procrastination as a self-protective avoidance strategy (Balkıs and Duru 2010). Studies on procrastination indicate that fear of failure is one of the key determinants of this behavior (Solomon and Rothblum 1984, Kandemir 2012). As the perceived threat of failure increases, individuals tend to exhibit greater avoidance in initiating and maintaining goal-directed behavior (Kandemir 2012). Recent review studies also emphasize that fear of failure is among the primary underlying causes of procrastination (Steel 2007, Balkıs and Duru 2010). Furthermore, findings suggest that psychological counseling and intervention programs focusing on fear of failure can be effective in reducing levels of procrastination (Dinç and Ekşi 2019).

When these theoretical approaches are considered together, it becomes evident that procrastination cannot be reduced to a single cause; rather, it represents a multidimensional behavioral pattern shaped by the interaction of cognitive tension, self-regulation failure, motivational processes, and self-protection mechanisms. This framework provides an important theoretical basis for understanding the relationship between procrastination and psychopathology, as well as for explaining why intervention strategies need to be multidimensional.

Psychological Factors Associated with Procrastination

Procrastination has negative effects on psychological well-being. It not only contributes to anxiety and depression but may also lead to feelings of shame and guilt (Steel 2007, Başkurt 2020). Research has shown that the stress associated with procrastination can also have detrimental effects on physical health (Sirois et al. 2003). Although longitudinal studies support the view that stress is a consequence of procrastination, it has also been suggested that the reverse relationship may be possible. Accordingly, procrastination behavior may also emerge as a result of increased stress (Steel 2007). Studies conducted by Tice et al. (2001) have demonstrated that negative emotions and stress can lead individuals to engage in procrastination. Recalling past procrastination behaviors may increase anxiety and emotional distress. Similarly, attempting to complete previously postponed tasks may also trigger heightened levels of anxiety and worry (Steel 2007).

Perfectionism

One of the factors associated with procrastination is perfectionism (Flett et al. 1992). Perfectionism is generally defined as a personality trait characterized by excessive self-criticism and the setting of very

high personal standards (Yılmaz 2021). However, perfectionism is often conceptualized in two forms: adaptive (positive) and maladaptive (negative). Individuals with adaptive perfectionism tend to plan their tasks effectively and utilize their high standards in a functional manner rather than postponing their responsibilities. These individuals can demonstrate flexibility in their standards and strive for excellence while completing their tasks. They do not perceive performance solely as a means of self-evaluation; they experience satisfaction when successful and engage in problem-solving when faced with failure (Altun and Yazıcı 2010). In contrast, individuals with maladaptive perfectionism typically pursue unrealistic goals and experience dissatisfaction with their performance (Stöber and Joorman 2001). They adopt rigid attitudes based on irrationally high standards and exhibit excessive sensitivity to mistakes. Their tendency to equate performance with self-worth leads them to focus more on proving themselves than on completing the task itself. When they fail to meet the excessively high standards they have set, they become more prone to procrastination. This situation causes them to focus solely on achieving perfection, which may prevent them from completing tasks willingly and may ultimately result in task non-completion (Büyükbayraktar 2011). A substantial body of literature has demonstrated a strong positive relationship between procrastination and perfectionism, particularly its socially prescribed dimension (Frost et al. 1990, Flett et al. 1991, Flett et al. 1992, Saddler and Sacks 1993, Martin et al. 1996, Brownlow and Reasinger 2000, Stöber and Joorman 2001, Akkaya 2007, Bulut 2014, Ghosh and Roy 2017, Kurtovic et al. 2019). However, some studies have reported a negative relationship between perfectionism and procrastination (Bong et al. 2014). It should be noted that most studies examining the relationship between perfectionism and procrastination are based on cross-sectional designs and self-report measures. This limits the ability to draw causal conclusions regarding whether perfectionism is a cause or a consequence of procrastination (Steel 2010, Smith et al. 2021). Therefore, when evaluating the relationship between perfectionism and procrastination, it is important to interpret existing findings with caution, taking into account these methodological limitations.

Intolerance of Uncertainty

One of the factors reported to be associated with procrastination is intolerance of uncertainty. Intolerance of uncertainty is a construct that describes the level of discomfort individuals experience when faced with uncertain situations and the responses they exhibit in such contexts (Carleton et al. 2007). This construct consists of two primary components: the desire for predictability and uncertainty paralysis (Birrell et al. 2011). The desire for predictability refers to an individual's tendency to seek control and anticipate future outcomes in order to cope with uncertainty. Uncertainty paralysis, on the other hand, is associated with difficulty in taking action and avoidance of decision-making when confronted with uncertain situations (Duman 2018). The literature indicates that individuals with higher levels of intolerance of uncertainty tend to procrastinate in order to reduce the discomfort arising from uncertainty (Fourtounas and Thomas 2016). Similarly, individuals who experience difficulties in time management are reported to struggle with uncertainty and, as a result, delay productive work by engaging in less important activities (Balkıs and Duru 2010). The relationship between intolerance of uncertainty and procrastination has predominantly been examined in samples consisting of university students. This limits the generalizability of the findings to clinical populations and different age groups (Carleton 2016, McEvoy and Mahoney 2019). Therefore, when evaluating the relationship between intolerance of uncertainty and procrastination, it is important to interpret the findings cautiously, taking into account sample characteristics and methodological limitations.

Self-Esteem

Self-esteem is one of the psychological factors known to be associated with procrastination behavior (Tukuş 2010, Sachdeva and Prusty 2024). It is defined as an evaluative judgment reflecting how individuals perceive and assess themselves (Tukuş 2010). In this sense, self-esteem encompasses individuals' subjective evaluations of their own competence and worth. Studies examining the relationship between procrastination and self-esteem indicate that postponing the initiation or completion of a task may be related to the desire to avoid failure and the evaluation of one's abilities (Ferrari et al. 1995). From this

perspective, procrastination may serve a defensive function aimed at protecting both social regard and self-esteem. The literature suggests that individuals with low self-esteem tend to exert less effort and are more likely to abandon tasks (Ferrari 1994). Consequently, individuals with lower self-esteem may engage in procrastination more frequently than those with higher self-esteem (Pandey and Gupta 2022). Similarly, the study conducted by Aydoğan and Özbay (2012) found that individuals with low self-esteem exhibit higher levels of procrastination. In light of these findings, strengthening self-esteem may play a protective role in reducing procrastination behavior. However, a substantial portion of the findings regarding the relationship between self-esteem and procrastination is based on self-report measures, raising concerns about the risk of social desirability bias. In addition, conceptual differences regarding whether self-esteem is considered a situational or relatively stable trait complicate the interpretation of these findings (Sowislo et al. 2014, Orth and Robins 2019).

Anxiety

Anxiety is considered an important and functional emotion throughout the lifespan (Koçyiğit 2022). When experienced at mild to moderate levels and kept under control, anxiety can serve as a motivating force that enhances performance. Individuals with this level of anxiety are able to focus more effectively on the tasks they need to complete, thereby improving their performance (Yerkes and Dodson 1908; Eysenck et al. 2007). In contrast, when anxiety becomes intense and persistent, it may lead to various psychological problems (Yılmaz 2021). The literature indicates that there is a strong relationship between anxiety and procrastination, and that anxiety can function both as a consequence of procrastination and as a factor that triggers it (Değirmenci et al. 2023). In this context, procrastination is considered a behavior used to regulate mood and maintain emotional balance in the short term. Individuals may engage in procrastination to avoid confronting tasks or experiencing anxiety related to potential failure (Sirois and Pychyl 2013; Wu 2021). Theoretical explanations largely address the relationship between anxiety and procrastination through avoidance processes. According to the evaluation–anxiety avoidance model, avoidance behaviors aimed at reducing anxiety may provide short-term relief but reinforce procrastination in the long term (Milgram and Toubiana 1999). Similarly, Mowrer's two-factor theory of anxiety emphasizes that avoidance behavior plays a critical role in the maintenance of anxiety and, indirectly, in the رارمتسا of procrastination (Mowrer 1947). Within this framework, procrastination is conceptualized as a defensive avoidance behavior. Empirical findings also support these theoretical explanations. A comprehensive study examining the relationship between procrastination and negative emotions found that, among non-clinical individuals, procrastination is moderately associated with emotions such as anxiety, guilt, and shame (Nie et al. 2025). Furthermore, it has been reported that individuals who procrastinate tend to focus more on the past and present rather than the future, and that this temporal perspective may be associated with difficulties in thought control (Sirois and Pychyl 2013; Wu 2021).

At this point, the concept of rumination becomes particularly relevant. Rumination is defined as a repetitive and intrusive pattern of thinking about one's own concerns and experiences (Bugay and Erdur-Baker 2011). Research indicates that procrastination is closely associated with negative cognitive processes such as rumination (Sirois 2004, Flett et al. 2016). This pattern suggests a cyclical process in which negative thoughts increase anxiety, and heightened anxiety, in turn, reinforces procrastination behavior (Sanna et al. 2001). Similarly, individuals with anxiety disorders have been reported to exhibit a past-oriented time perspective, which is associated with rumination (Wu 2021). Procrastinating individuals may experience similar cognitive biases, leading to increases in their anxiety levels (Wu 2021, Poonacha and Bapu 2024). Taken together, these findings suggest that the relationship between anxiety and procrastination is closely associated with a tendency to focus on the past, the development of negative cognitive patterns, and the maintenance of avoidance behaviors (Sirois 2004). Findings regarding the direction of the relationship between anxiety and procrastination do not point to a consistent causal model in the literature. Existing studies suggest that anxiety may function both as an antecedent and as a consequence of procrastination; however, longitudinal evidence that would allow for a clear determination of this direction remains limited (Sirois and Pychyl 2016). Therefore, the relationship between anxiety and

procrastination should be interpreted with caution, taking into account the methodological limitations of the existing findings.

Attention Deficit / Hyperactivity Disorder (ADHD)

ADHD is considered by clinicians as a behavioral disorder that is frequently associated with hyperactivity and impulsivity in both children and adults (Brown 2008). However, contemporary perspectives emphasize that ADHD is fundamentally a developmental disorder of executive functions and is grounded in cognitive processes (Barkley et al. 2008). Individuals with ADHD experience significant difficulties related to executive functioning, including the organization of tasks, time management, prioritization, and task initiation (Abbasi and Alghamdi 2015). These executive function deficits lead to disruptions particularly in task initiation and maintenance processes, which are thought to be closely related to the tendency to procrastinate (Işık-Uçal 2024). The literature indicates that individuals with ADHD frequently exhibit excessive procrastination behaviors. These individuals often delay initiating tasks until the last moment and may experience difficulty starting even when the task is highly important. Task initiation may only become possible when the task reaches a level of urgency. This pattern suggests that individuals with ADHD are often able to mobilize themselves to begin a task only when a sense of urgency is present (Brown 2008). In some studies examining the relationship between ADHD and procrastination, self-reported ADHD symptoms have been used instead of clinical diagnoses. This approach may make it more difficult to clearly distinguish the specific contributions of executive function impairments associated with ADHD to procrastination behavior (Solanto et al. 2004, Kessler et al. 2005, Barkley 2018). Therefore, when evaluating the relationship between ADHD and procrastination, it is important to consider the measurement methods employed and the associated methodological limitations.

Depression

Depression is another mental health condition that has been reported to be associated with procrastination behavior (Stead et al. 2010). While some studies suggest that procrastination may exacerbate depressive symptoms (Rice et al. 2012, Jochmann et al. 2024), others indicate that depression may trigger procrastination behavior (Aftab et al. 2017, Reinecke et al. 2018). The relationship between depression and procrastination is often explained through factors such as low self-control and maladaptive self-schemas (Aftab et al. 2017). As negative emotions intensify, individuals are reported to experience significant disruptions in initiating, maintaining, and completing tasks (Akdoğan 2013). Moreover, procrastination may further intensify depressive symptoms by increasing negative emotions such as guilt and shame (Eckert et al. 2016). When examining the relationship between depression and procrastination, it is observed that the effects of common third variables, such as low levels of self-regulation or negative self-schemas, are not always adequately controlled. This creates uncertainty regarding whether the relationship between depression and procrastination is direct or mediated by indirect processes (Eckert et al. 2016). Therefore, in order to better understand the relationship between depression and procrastination, it is necessary to interpret existing findings with caution, taking into account their methodological limitations.

Emotion Regulation

Emotion regulation is defined as the capacity of individuals to modulate the intensity, duration, and expression of their emotions through conscious or unconscious mechanisms (Gross 1998). It is considered a form of self-regulation and, in certain contexts, may weaken other self-control processes (Pychyl and Sirois 2016). Challenging tasks can increase levels of anxiety and stress in individuals, and in order to avoid these negative emotional states, individuals may resort to procrastination as a regulatory strategy (Tice et al. 2001). Research indicates that individuals experiencing negative mood states are more likely to engage in procrastination and tend to delay their tasks by shifting toward more pleasurable activities as a means of mood repair (Tice et al. 2001). Gross' (2014) model of emotion regulation suggests that individuals employ various strategies to cope with negative emotions, and that procrastination may provide temporary relief through avoidance. Within this framework, although procrastination may offer short-term emotional relief,

it is conceptualized as a form of misregulation that, in the long term, hinders goal attainment and increases emotional burden (Koole 2009). Accordingly, interventions aimed at reducing procrastination have been reported to be more effective when they focus on enhancing individuals' ability to cope with negative emotions and on developing more adaptive emotion regulation strategies (Dinç and Ekşi 2019). However, a substantial portion of the studies examining the relationship between emotion regulation and procrastination focuses on short-term emotional fluctuations and momentary regulatory processes. In contrast, there is a relative lack of research addressing the long-term effects and temporal stability of emotion regulation strategies. Furthermore, methodological limitations exist regarding the extent to which laboratory-based experimental findings reflect emotion regulation processes and procrastination behaviors in real-life contexts (Gross 2015, Hagger et al. 2020). Therefore, the relationship between emotion regulation and procrastination should be interpreted with caution, taking into account the methodological characteristics and limitations of the existing findings.

Intervention Strategies for Coping with Procrastination

Although procrastination and its underlying causes have been extensively examined in the literature, it is noteworthy that studies focusing on strategies to reduce this behavior remain relatively limited (Uzun and Demir 2015). In this context, several approaches that may help individuals cope with procrastination are discussed.

Awareness

In order to overcome procrastination, individuals must first become aware of why they procrastinate and the function this behavior serves in their lives (Gelperin 2020). When the underlying causes of the problem are not sufficiently understood, the solutions developed often remain ineffective. From this perspective, as in many psychological problems, awareness and self-knowledge are among the key elements in addressing procrastination (Salguero-Pazos and Reyes-de-Cózar 2023). In some cases, simply understanding the reasons behind one's procrastination may weaken the need to maintain this behavior. Indeed, a study examining the relationship between awareness and procrastination found that individuals with higher levels of awareness exhibited significantly lower levels of procrastination (Moloney et al. 2024).

Taking Action

Individuals who exhibit procrastination are often perceived as lazy, lacking self-control, and inclined toward comfort (Gül 2015). Such perceptions may further reinforce inactivity. In order to overcome procrastination, it is emphasized that individuals should take action without delay (Sekman 2024). In this process, it is important to focus on tasks that are achievable, even if they are small in scale. Ruminating on potential failures and living with constant worry does not provide functional benefits for the individual. In this context, leaving tasks until the last moment may lead to the depletion of the emotional energy required to complete them. Rather than feeling overwhelmed by accumulated tasks, engaging in regret, or falling into hopelessness, initiating action directly is considered a more functional approach. Even small efforts and incremental progress made during the process of completing a task yield more positive outcomes than not working at all. In this regard, the analogy that pushing a completely stationary car is more difficult than pushing one that is already in motion provides a useful illustration of this principle (Parıltı 2003).

Enhancing Motivation

Procrastination often arises when a task is not perceived as sufficiently meaningful or appealing to the individual. In such cases, individuals tend to shift toward alternative activities that offer more immediate rewards (Steel 2007). Although the use of appropriate goal-setting strategies is one way to enhance motivation (Sekman 2024), many procrastinators require additional supportive methods, as the tasks they need to complete do not feel sufficiently rewarding (Rozental and Carlbring 2014). Both extrinsic and intrinsic factors play a significant role in increasing motivation. Extrinsic motivation can be strengthened

through rewards contingent upon the completion of a specific behavior. For example, taking a coffee break after studying for an hour may make the process more tolerable (Gelperin 2020). Eisenberg (1992) explains this through the concept of "learned industriousness," emphasizing that reward systems focusing not only on outcomes but also on the process itself are more effective. This approach is also consistent with the Premack principle, according to which activities that individuals engage in more frequently and with greater enjoyment can be used as rewards for completing less preferred tasks (Premack 1959, Gelperin 2020). To reduce the tendency to procrastinate, it may be beneficial for individuals to develop strategies that make tasks more engaging and enjoyable. In addition, interacting with sources of social support—such as choosing to study in groups rather than alone—can enhance motivation and increase individuals' commitment to their tasks (Liu et al. 2024). Another effective motivational strategy is to adopt a goal-oriented approach. Individuals are encouraged to identify their sources of motivation during their learning and development processes, to structure these elements in written form, and to use goal-tracking tools in order to systematically monitor progress. Making motivational sources and goals consistently visible can support both academic and personal development and enhance the overall efficiency of the process (Oettingen et al. 2000).

Behavioral Interventions and Establishing Routines

Since procrastination arises from a deliberate choice to delay a task, simplifying the decision-making process and eliminating unnecessary options are important (Atta et al. 2021). In this context, stimulus control can enhance focus on tasks by minimizing distractions (Rozental and Carlbring 2014). For example, turning off notifications, organizing the workspace, and removing distracting objects from the environment are among the effective strategies. In addition, stimulus cues can promote working at specific times and in particular settings, thereby facilitating the development of automated habits. For instance, establishing a habit of working in designated environments such as a library or office can make it easier for individuals to initiate tasks and support time management by reducing uncertainty (Gelperin 2020). Establishing routines is considered another effective method that enhances performance by reducing cognitive fatigue (Steel 2007). Creating schedules and planning activities in advance may help reduce procrastination, in a manner similar to the behavioral activation approach used in the treatment of depression (Jacobson et al. 2001, Svartdal and Løkke 2022). Moreover, aligning daily activities with social time cues—such as working during the day and resting in the evening—can contribute to the regulation of biological rhythms and help maintain balanced energy levels (Ehlers et al. 1988, Boege et al. 2021). Finally, the concept of ego depletion suggests that working for extended periods without breaks may weaken self-control and increase procrastination behavior (Baumeister et al. 1998). Individuals who procrastinate often either postpone tasks until the last moment or work continuously for long periods without interruption; this may lead to energy depletion and the maintenance of the procrastination cycle (Digdon and Howell 2006). Therefore, taking regular breaks and developing strategies to maintain energy levels are of critical importance in preventing procrastination.

Reducing Avoidance Behavior

Procrastination is often associated with avoidance behavior. Therefore, gradual exposure to the activities that individuals tend to avoid may help alleviate the negative emotions that contribute to procrastination (Solomon and Rothblum 1984, Scher and Osterman 2002, Sirois and Pychyl 2013, Rozental and Carlbring 2014). Research indicates that individuals who procrastinate frequently experience emotions such as boredom, anxiety, and dissatisfaction (Schraw et al. 2007). In this context, involving individuals in the task through small, manageable steps may be beneficial in overcoming the initial barrier to action (Gelperin 2020). During this process, it is recommended to identify a minimal level of effort that the individual can initially commit to and to gradually increase this threshold over time. For example, committing to working on a task for only 15 minutes before deciding whether to continue may facilitate engagement with the task (Gelperin 2020, Sekman 2024). This approach can be structured based on the individual's available energy or the intended outcome (Steel 2012). In addition, setting clear and attainable goals is considered an effective strategy for reducing procrastination. Vague or poorly structured goals may hinder the problem-

solving process and reduce motivation. Norcross (2012) explains this by stating that "vague goals lead to vague efforts," thereby emphasizing the importance of clear and measurable objectives. Establishing well-defined goals can help individuals evaluate their performance and reinforce goal-directed behaviors (Bailey 2017).

Cognitive Interventions

Cognitive interventions associated with procrastination primarily target the influence of irrational beliefs (Pychyl and Flett 2012). Perfectionism, fear of failure, and lack of self-confidence are among the cognitive factors that may hinder task completion (Schraw et al. 2007). Although the relationship between these beliefs and procrastination has been reported to be relatively weak (Steel 2007), clinical experience suggests that addressing these irrational thoughts plays an important role in preventing procrastination. Cognitive restructuring enables individuals to recognize their negative thought patterns and develop more adaptive cognitions and behaviors (Türkçapar 2018). For example, it is important to challenge rigid beliefs such as "Everything must be perfect" and to foster encouraging experiences that support timely task completion. Increasing awareness of irrational beliefs allows individuals to more clearly perceive the gap between their current state and their desired goals. This awareness, in turn, may enhance motivation and facilitate behavioral change (Hayes et al. 2010).

Time Management Strategies

Time management is defined as a form of self-management through which individuals regulate themselves, gain control over events in their lives, and manage processes effectively (Akyüz et al. 2015). Within this framework, although time management is considered an essential component in coping with procrastination (Aydemir 2018, Yardım and Engin 2022), it is not regarded as sufficient on its own (Kesim and Aydemir 2023). Despite individuals' intentions to use time effectively, certain behavioral and environmental factors, referred to as "time traps," may undermine time management efforts (Tortumlu et al. 2021). In this context, technology-related time traps are particularly prominent (Reinecke and Hofmann 2016). Social media, online video platforms, and instant messaging applications may initially be used for brief purposes but can unintentionally consume extended periods of time (Tortumlu et al. 2021). In addition, individual-related factors such as difficulties in prioritization (Tortumlu et al. 2021), inability to say no, excessive social interactions (Aydemir 2018), forgetfulness, and irregular sleep patterns are also identified as significant time traps (Tortumlu et al. 2021). These time traps may lead individuals to consistently postpone their responsibilities and contribute to the maintenance of procrastination behavior (Aydemir 2018). Therefore, in coping with procrastination, it is important for individuals to recognize their own time traps and limit distracting stimuli. However, not all time management techniques are equally effective in addressing procrastination. While some strategies help reduce procrastination, others may inadvertently reinforce it. For example, overly detailed planning, perfectionistic tendencies, or excessively rigid schedules may increase stress and anxiety, thereby strengthening the tendency to procrastinate. The most effective strategies are those that reduce fear and anxiety while emphasizing the anticipated benefits and sense of satisfaction associated with task completion (Gollwitzer and Sheeran 2006). In contrast, rigid approaches that amplify perceived task difficulty and increase anxiety may worsen procrastination and reduce productivity. For instance, preparing long and comprehensive "to-do lists" or planning every minute of the day in detail may increase stress and reinforce procrastination tendencies (Sekman 2024). Instead, creating a manageable task list, breaking larger tasks into smaller components, allowing flexibility, and allocating time for enjoyable activities as a reward for completed tasks are considered more effective approaches (Ariely and Wertenbroch 2002, Lucas 2024, Sekman 2024).

This study is a traditional (narrative) review that examines procrastination within a theoretical and thematic framework. Therefore, a systematic search process was not followed, and neither a quantitative synthesis nor a meta-analytic evaluation was conducted. The sources were selected to reflect both the theoretical development of the field and current trends. In addition, the predominance of Western literature in this study may have limited the extent to which cross-cultural differences in procrastination

behavior were addressed. These limitations should be taken into consideration when interpreting the findings.

Conclusion

Procrastination is a multidimensional and dynamic behavioral pattern that can negatively affect individuals' psychological well-being. The literature indicates that psychological factors such as perfectionism, anxiety, depression, low self-esteem, and intolerance of uncertainty contribute to an increased tendency to procrastinate (Balkis and Duru 2010, Steel 2007). Over time, this tendency may result in heightened stress, feelings of guilt, and the development of various psychopathological symptoms. In order to effectively cope with procrastination, it is essential to enhance awareness, develop strategies that support intrinsic motivation, and establish sustainable daily routines (Sirois and Pychyl 2013). Future research is encouraged to adopt neuroscientific approaches, particularly those focusing on the neurobiological underpinnings of procrastination. Understanding the relationships between procrastination behavior and specific brain structures may provide important insights into its biological foundations (Zhao et al. 2024). Furthermore, there is a need for empirical studies examining the effectiveness of psychoeducational programs designed to increase awareness of procrastination. Research exploring the effects of personality traits and psychological conditions on procrastination tendencies may contribute to the development of individualized intervention programs (Balkis and Duru 2010). In addition, evaluating the long-term effects of psychotherapy approaches may provide valuable insights into the sustainability of therapeutic processes. Investigating the impact of increasing digital dependency on procrastination behavior also represents a current research priority (Reinecke and Hofmann 2016). Finally, conducting comparative studies that examine the role of cultural context in procrastination, as well as evaluating the long-term effectiveness of coping strategies, may contribute to the development of effective skills that individuals can sustain throughout their lives.

References

Abbasi IS, Alghamdi NG (2015) The prevalence, predictors, causes, treatment, and implications of procrastination behaviors in general, academic, and work settings. Int J Psychol Stud, 7:59-72.

Adams GR (1995) Adolescent Development. Thousand Oaks, CA, Sage.

Aftab S, Klibert J, Holtzman N, Qadeer K, Aftab S (2017) Schemas mediate the link between procrastination and depression: Results from the United States and Pakistan. J Ration Emot Cogn Behav Ther, 35:329–345.

Ainslie G (2001) Breakdown of Will, Cambridge, Cambridge University Press.

Akdoğan A (2013) Farklı depresyon, anksiyete, stres düzeylerine sahip üniversite öğrencilerinin akademik erteleme davranışlarının incelenmesi (Yüksek lisans tezi). Konya, Necmettin Erbakan Üniversitesi.

Akın A (2011) Akademik erteleme davranışı: Bir model testi. Eğitim ve Bilim, 36:234-246.

Akkaya İE (2007) Academic procrastination among faculty of education students: The role of gender, age, academic achievement, perfectionism, and depression (Yüksek lisans tezi). Ankara, Orta Doğu Teknik Üniversitesi.

Akyüz B, Ünal ÖF, Mete M, Doger F (2015) İnşaat sektöründe zaman yönetimi: Irak'ın kuzeyindeki Türk şantiyeleri üzerine bir araştırma. Süleyman Demirel Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 21:85-106.

Altun F, Yazıcı H (2010) Üstün yeteneklilerin olumlu olumsuz mükemmeliyetçilik özelliklerinin PDR bağlamında incelenmesi. XII. Rehberlik Sempozyumu, İstanbul, Türkiye. Özet Kitabı sayfa: 226–230.

Ariely D, Wertenbroch K (2002) Procrastination, deadlines, and performance: Self-control by precommitment. Psychol Sci, 13:219-224.

Atta M, Malik NI, Makhdoom IF, Fiaz N (2021) Decision-making styles predicting decisional procrastination among college principals. Indian J Econ Bus, 20:1635-1645.

Aydemir, S (2018) Çalışanlarda erteleme davranışı (işyeri prokrastinasyonu) gelişiminde zaman tuzaklarının etkisi. Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi, 6:1031–1040.

Aydoğan D, Özbay Y (2012) Akademik erteleme davranışının benlik saygısı, durumluluk kaygı, öz-yeterlilik açısından açıklanabilirliğinin incelenmesi. Pegem Eğitim ve Öğretim Dergisi, 2(3):1-9.

Aziz S, Irfan S, Loona MI (2019) An online comparative study of the mental health of adolescent non procrastinators, active procrastinators, and passive procrastinators. Journal of Behavioural Science, 29:104-126.

Bailey RR (2017) Goal setting and action planning for health behavior change. Am J Lifestyle Med, 13:615-618.

Balkıs M (2007) Öğretmen adaylarının davranışlarındaki erteleme eğiliminin, karar verme stilleri ile ilişkisi. Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 21:67-83.

Balkıs M, Duru E (2010) Akademik erteleme eğilimi, akademik başarı ilişkisinde genel ve performans benlik saygısının rolü. Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 27:159–170.

Bandura A (1997) Self-Efficacy: The Exercise of Control. W H Freeman/Times Books/ Henry Holt & Co.

Barkley RA, Murphy KR, Fischer M (2008) ADHD in Adults: What the Science Says. New York, Guilford Press.

Barkley RA (2018) Attention-Deficit/Hyperactivity Disorder: A Handbook for Diagnosis and Treatment, 4th ed. New York, Guilford Press.

Başkurt B (2020) Mükemmeliyetçiliğin çeşitli değişkenlere göre incelenmesi ve olumsuz değerlendirilme korkusu ile yetersizlik duygusu tarafından yordanması (Yüksek lisans tezi). İstanbul, Yıldız Teknik Üniversitesi.

Baumeister RF, Bratlavsky E, Muraven M, Tice DM (1998) Ego depletion: Is the active self a limited resource? J Pers Soc Psychol, 74:1252-1265.

Baumeister RF, Masicampo EJ (2011) Consider it done! Plan making can eliminate the cognitive effects of unfulfilled goals. J Pers Soc Psychol, 101:667–683.

Baumeister RF, Vohs KD (2007) Self-regulation, ego depletion, and motivation. Soc Personal Psychol Compass, 1:115-128.

Baymur F (1983) Genel Psikoloji. İstanbul, İstanbul Üniversitesi Edebiyat Fakültesi Yayınları.

Berber-Çelik Ç, Odacı H (2015) Akademik erteleme davranışının bazı kişisel ve psikolojik değişkenlere göre açıklanması. Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 30:31-47.

Beswick G, Rothblum ED, Mann L (1988) Psychological antecedents of student procrastination. Aust Psychol 23:207-217.

Birrell J, Meares K, Wilkinson A, Freeston M (2011) Toward a definition of intolerance of uncertainty: A review of factor analytical studies of the Intolerance of Uncertainty Scale. Clin Psychol Rev, 31:1198–1208.

Blunt AK, Pychyl TA (2000) Task aversiveness and procrastination: A multi-dimensional approach to task aversiveness across stages of personal projects. Pers Individ Dif, 28:153–167.

Boege HL, Bhatti MZ, St-Onge MP (2021) Circadian rhythms and meal timing: Impact on energy balance and body weight. Curr Opin Biotechnol, 70:1-6.

Bong M, Hwang A, Noh A, Kim SI (2014) Perfectionism and motivation of adolescents in academic contexts. J Educ Psychol, 106:711-729.

Brown TE (2008) ADD/ADHD and impaired executive function in clinical practice. Curr Psychiatry Rep, 10:407-411.

Brownlow S, Reasinger RD (2000) Putting off until tomorrow what is better done today: Academic procrastination as a function of motivation toward college work. J Soc Behav Pers, 15:15–34.

Bugay A, Erdur-Baker Ö (2011) Ruminasyon düzeyinin toplumsal cinsiyet ve yaşa göre incelenmesi. Türk Psikolojik Danışma ve Rehberlik Dergisi, 4:191-201.

Bulut N (2014) Sosyal bilgiler öğretmen adaylarının akademik erteleme davranışlarının çeşitli değişkenler açısından incelenmesi (Yüksek lisans tezi). Afyon, Afyon Kocatepe Üniversitesi.

Burka JB, Yuen LM (2008) Procrastination: Why You do it, What to do about it Now, Cambridge, Da Capo Press.

Büyükbayraktar Ç (2011) Üniversite öğrencilerinde mükemmeliyetçilik ve öfke ilişkisi (Yüksek lisans tezi). Konya, Selçuk Üniversitesi.

Carleton RN (2016) Into the unknown: A review and synthesis of contemporary models involving uncertainty. J Anxiety Disord, 39:30–43.

Carleton RN, Norton PJ, Asmundson GJG (2007) Fearing the unknown: A short version of the Intolerance of Uncertainty Scale. J Anxiety Disord, 21:105–117.

Chun Chu AH, Choi JN (2005) Rethinking procrastination: Positive effects of "active" procrastination behavior on attitudes and performance. J Soc Psychol, 145:245-264.

Çakıcı DÇ (2003) Erteleme davranışı: Nedenleri ve sonuçları. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 36:111-123.

Çakmak-Tolan Ö (2023) Developing university students coping skills with academic procrastination behavior: A cognitive behavioral theory-based psychoeducation practice. J Comput Educ Res, 11:728-743.

Çavdar AO (2024) Ortaokul öğrencilerinin akademik erteleme davranışları ve yapılandırmacı öğrenme ortamları arasındaki ilişkinin incelenmesi (Yüksek lisans tezi). Denizli, Pamukkale Üniversitesi.

Değirmenci H, Çetinkaya AB, Sayın Karakaş G (2023) Erteleme davranışının kişilik özellikleri, üstbilişsel inançlar ve endişe ile ilişkisi. Klinik Psikoloji Dergisi, 7:60-74.

Digdon NL, Howell AJ (2006) College student who have an eveningness preference report lower self-control and greater procrastination. Chronobiol Int, 25:1029-1046.

Dinç S, Ekşi H (2019) Akademik erteleme üzerinde grupla psikolojik danışmanın etkisi. Türk Psikolojik Danışma ve Rehberlik Dergisi, 9:391–420.

Doğan T (2008) Üniversite öğrencilerinde benlik saygısı ve akademik erteleme. Eğitim ve Bilim, 33:64–75.

Duman S (2018) Obsesif inanışlar ile akademik erteleme eğilimi ve stresle başa çıkma tarzları arasındaki ilişkinin incelenmesi (Yüksek lisans tezi). İstanbul, Fatih Sultan Mehmet Vakıf Üniversitesi.

Eckert M, Ebert DD, Lehr D, Sieland B, Berking M (2016) Overcome procrastination: Enhancing emotion regulation skills reduce procrastination. Learn Individ Differ, 52:10–18.

Ehlers CL, Frank E, Kupfer DJ (1988) Social zeitgebers and biological rhythms: A unified approach to understand the etiology of depression. JAMA Psychiatry, 45:948-952.

Eisenberg R (1992) Learned industriousness. Psychol Rev, 99:248-267.

Erdin, B. (2022). Kaygı türleri ile Zeigarnik etkisi arasındaki ilişkinin incelenmesi (Yüksek lisans tezi). İzmir, İzmir Ekonomi Üniversitesi.

Eysenck MW, Derakshan N, Santos R, Calvo MG (2007) Anxiety and cognitive performance: Attentional control theory. Emotion, 7:336–353.

Ferrari J, Díaz-Morales JF (2014) Procrastination and mental health coping: A brief report related to students. Indiv Differ Res, 12:8-11.

Ferrari JR (1992) Psychometric validation of two procrastination inventories: Arousal and avoidance measures. J Psychopathol Behav Assess, 14:97–110.

Ferrari JR (1994) Dysfunctional procrastination and its relationship with self-esteem, interpersonal dependency, and self-defeating behaviors. Pers Individ Dif, 17:673-679.

Ferrari JR, Driscoll M, Díaz-Morales JF (2007) Procrastination, self-esteem, and self-handicapping. J Soc Behav Pers, 15:1–14.

Ferrari JR, Johnson JL, McCown WG (1995) Procrastination and Task Avoidance: Theory, Research, and Treatment. New York, Plenum Press.

Flett AL, Haghbin M, Pychyl TA (2016) Procrastination and depression from a cognitive perspective: An exploration of the associations among procrastinatory automatic thoughts, rumination, and mindfulness. J Ration Emot Cogn Behav Ther, 34:169-186.

Flett GL, Blankstein KR, Hewitt PL, Koledin S (1992) Components of perfectionism and procrastination in college students. Soc Behav Pers, 20:85–94.

Flett GL, Hewitt PL, Blankstein KR, Mosher SW (1991) Perfectionism, self-actualization, and personal adjustment. J Soc Behav Pers, 6:147-160.

Fourtounas A, Thomas SJ (2016) Cognitive factors predicting checking, procrastination and other maladaptive behaviours: Prospective versus inhibitory intolerance of uncertainty. J Obsessive Compuls Relat Disord, 9:30–35.

Frost RO, Marten P, Lahart C, Rosenblate R (1990) The dimensions of perfectionism. Cogn Ther Res, 14:449-468.

Gelperin R (2020) Motivasyon Rehberi: Erteleme, Bağımlılık ve Tembellik Psikolojisi. Ankara, Psikonet Yayınları.

Ghosh S, Roy D (2017) Relating multidimensional perfectionism and academic procrastination among Indian university students: Is there any gender divide? Gend Manag, 32:518-534.

Gollwitzer PM, Sheeran P (2006) Implementation intentions and goal achievement: A meta-analysis of effects and processes. Adv Exp Soc Psychol, 38:69-119.

Goschke T, Kuhl J (1993) Representation of intentions: Persisting activation in memory. J Exp Psychol Learn Mem Cogn, 19:1211-1226.

Gross JJ (1998) The emerging field of emotion regulation: An integrative review. Rev Gen Psychol, 2:271–299.

Gross JJ (2014) Emotion regulation: Conceptual and empirical foundations. In Handbook of Emotion Regulation, 2nd ed. (Ed JJ Gross): 3-20. New York, Guilford Press.

Gross JJ (2015) Emotion regulation: Current status and future prospects. Psychol Inq, 26:1-26.

Gustavson DE, Miyake A (2017) Academic procrastination and goal accomplishment: A combined experimental and individual differences investigation. Learn Individ Differ, 54:160-172.

Gustavson DE, Miyake A, Hewitt JK, Friedman NP (2015) Understanding the cognitive and genetic underpinnings of procrastination: Evidence for shared genetic influences with goal management and executive function abilities. J Exp Psychol Gen, 144:1063-1079.

Gül AY (2015) İş yaşamında işi erteleme davranışı ve nedenleri (Yüksek lisans tezi). İzmir, Dokuz Eylül Üniversitesi.

Habelrih EA, Hicks RE (2015) Psychological well-being and its relationships with active and passive procrastination. Int J Psychol Stud, 7:25-34.

Hagger MS, Wood C, Stiff C, Chatzisarantis NLD (2020). Ego depletion and the strength model of self-control: A meta-analysis. Psychol Bull, 146:1261–1302.

Hayes SC, Strosahl KD, Wilson KG (2010) Acceptance and Commitment Therapy: The Process and Practice of Mindful Change, 2nd ed. New York, Guilford Press

Işık-Uçal H (2024) Yetişkin dikkat eksikliği ve hiperaktivite bozukluğu bulunan hastalarda sosyal medya bağımlılığı ve erteleme davranışı (Yüksek lisans tezi). İstanbul, Bezmialem Vakıf Üniversitesi.

Jacobson NS, Martell CR, Dimidjian S (2001) Behavioral activation treatment for depression: Returning to contextual roots. Clin Psychol (New York), 8:255–270.

Jochmann A, Gusy B, Lesener T, Wolter C (2024) Procrastination, depression and anxiety symptoms in university students: A three-wave longitudinal study on the mediating role of perceived stress. BMC Psychol, 12:276.

Johnson JL, Bloom AM (1995) An analysis of the contribution of the five factors of personality to variance in academic procrastination. Pers Individ Dif, 18:127-133.

Kandemir M (2012) Akademik erteleme davranışını açıklayan bir model. Eğitim ve Bilim, 37:250–265.

Kesim E, Aydemir E (2023) Zaman tuzaklarının örgütsel atalet üzerindeki etkisi. İşletme Araştırmaları Dergisi, 15:751-764.

Kessler RC, Adler L, Ames M, Demler O, Faraone S, Hiripi E et al. (2005) The World Health Organization Adult ADHD Self-Report Scale (ASRS): A short screening scale for use in the general population. Psychol Med, 35:245–256.

Klassen RM, Krawchuk LL, Rajani S (2008) Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination. Contemp Educ Psychol, 33:915-931.

Klingsieck KB (2013) Procrastination: When good things don't come to those who wait. Eur Psychol, 18:24–34.

Klingsieck KB, Grund A, Schmid S, Fries S (2013) Why students procrastinate: A qualitative approach. J Coll Stud Dev, 54:397–412.

Koçyiğit EG (2022) 50 Soruda Kaygı. İstanbul, Altınbaş Yayınları.

Koole SL (2009) The psychology of emotion regulation: An integrative review. Cogn Emot, 23:4-41.

Kooren NS, Van Nooijen C, Paas F (2024) The influence of active and passive procrastination on academic performance: A meta-analysis. Educ Sci (Basel), 14:323.

Köksal F, Gülsoy M, Eder A (2004) Zeigarnik etkisine yeni bir yaklaşım. Boğaziçi Üniversitesi Dergisi, 15:95-106.

Kulaksızoğlu, A. (2001). Ergenlik Psikolojisi. İstanbul, Remzi Kitabevi.

Kurtovic A, Vrdoljak G, Idzanovic A (2019) Predicting procrastination: The role of academic achievement, self-efficacy and perfectionism. Int J Educ Psychol, 8:1-26.

Liu X, Wang Y, Li Q (2024) Social support and academic procrastination in health professions education: A serial mediation model. Adv Health Sci Educ Theory Pract, 29:123-140.

Lu D, He Y, Tan Y (2021) Gender, socioeconomic status, cultural differences, education, family size and procrastination: A sociodemographic meta-analysis. Front Psychol, 12:719425.

Lucas O (2024) Başarıya Götüren Karakter (Çeviri Ed. A. Sönmez). İstanbul, Siyah Beyaz.

Martin TR, Flett GL, Hewitt PL, Krames L, Szanto GK (1996) Personality correlates of depression and health symptoms: A test of a self-regulation model. J Res Pers, 30:264-277.

McEvoy PM, Mahoney AEJ (2019) The impact of methodological and measurement factors on transdiagnostic associations with intolerance of uncertainty: A meta-analysis. Clin Psychol Rev, 72:101743.

Milgram N, Marshevsky S, Sadeh C (1995) Correlates of academic procrastination: Discomfort, task aversiveness, and task capability. J Psychol, 129:145–155.

Milgram N, Toubiana YE (1999) Academic anxiety, academic procrastination, and parental involvement in students and their parents. Br J Educ Psychol, 69:345-361.

Moloney L, Malouff JM, Meynadier J (2024) The association between mindfulness and procrastination: A meta-analysis. Using Psychology Blog. https://blog.une.edu.au/usingpsychology/2024/11/17/the-association-between-mindfulness-and-procrastination-a-meta-analysis/ (Accessed 10.12.2025)

Mowrer OH (1947) On the dual nature of learning—a reinterpretation of conditioning and problem solving. Harv Educ Rev, 17:102-148.

Nie Y, Wang W, Zhou F, Wang T, Li S, Liu C et al. (2025) The association between procrastination and negative emotions in healthy individuals: A systematic review and meta-analysis. Front Psychiatry, 16:1624094.

Norcross J (2012) Changeology. New York, Simon & Schuster.

Ocak G, Bulut R (2015) The scale of academic procrastination: Validity and reliability study. Int J Soc Sci Educ Res, 1:709-726.

Odacı H, Kaya F, Kınık Ö (2023) İstemsiz Erteleme Ölçeği'nin Türkçeye uyarlanması: Geçerlik ve güvenirlik çalışması. Marmara Üniversitesi Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi, 57:226-241.

Oettingen G, Höknig G, Gollwitzer PM (2000) Effective self-regulation of goal attainment. Int J Educ Res, 33:705-732.

Orth U, Robins RW (2019) Development of self-esteem across the lifespan. In Handbook of Personality Development (Eds DP McAdams, RL Shiner, JL Tackett):328–344. New York, Guilford Press.

Owens AM, Newbegin I (1997) Procrastination in high school achievement: A causal structural model. J Soc Behav Pers, 12:869–887.

Özdemir F, Akatay A (2022) Zamansal motivasyon teorisi ve erteleme davranışı. Int Soc Sci Stud J, 8:1664-1673.

Özen Y, Gülaçtı F (2010) Benlik kavramı ve benlik saygısı üzerine bir değerlendirme. Erzincan Üniversitesi Eğitim Fakültesi Dergisi, 12:21-38.

Pandey K, Gupta S (2022) Relationship between procrastination and self-esteem amongst social media users: A study. ResearchGate; doi: 10.13140/RG.2.2.15938.86727.

Parıltı C (2003) Belli bir sürede bitirilmesi gereken işleri son ana erteleme ve bu durumun kişi üzerindeki etkileri. Kamu-İş, 7(2):2-6.

Peifer C, Syrek CJ, Ostwald V, Schuh E, Antoni CH (2020) Thieves of flow: How unfinished tasks at work are related to flow experience and wellbeing. J Happiness Stud, 21:1641-1660.

Poonacha NN, Bapu VKG (2024) Role of self-compassion on rumination and procrastination. International Journal of Indian Psychology, 12:3123-3131.

Premack D (1959) Toward empirical behavior laws: I. positive reinforcement. Psychol Rev, 66:219-233.

Przepiórka A, Błachnio A, Siu NYF (2019) The relationships between self-efficacy, self-control, chronotype, procrastination and sleep problems in young adults. Chronobiol Int, 36:1028.

Pychyl TA, Sirois FM (2016) Procrastination, emotion regulation, and well-being. In Procrastination, Health, and Well-Being (Eds FM Sirois, TA Pychyl): 163–188. Cambridge, Academic Press.

Pychyl TA, Flett GL (2012) Procrastination and self-regulatory failure: An introduction to the special issue. J Ration Emot Cogn Behav Ther, 30:203-212.

Rebetez MML, Rochat L, Barsics C, Van der Linden M (2017) Procrastination as a self-regulation failure: The role of impulsivity and intrusive thoughts. Psychol Rep, 121:26–41.

Reinecke L, Hofmann W (2016) Slacking off or winding down? An experience sampling study on the drivers and consequences of media use for recovery versus procrastination. Hum Commun Res, 42:441–461.

Reinecke L, Meier A, Aufenanger S, Beutel ME, Dreier M, Quiring O et al. (2018) Permanently online and permanently procrastinating? The mediating role of internet use for the effects of trait procrastination on psychological health and well-being. New Media Soc, 20:862–880.

Rice KG, Richardson CE, Clark D (2012) Perfectionism, procrastination, and psychological distress. J Couns Psychol, 59:288-302.

Rozental A, Carlbring P (2014) Understanding and treating procrastination: A review of a common self-regulatory failure. J Clin Psychol, 5:1488-1502.

Sachdeva R, Prusty B (2024) The effects of social media on procrastination and self-concept of young adults. International Journal of Engineering, Management and Humanities, 5(3):1-20.

Saddler OCD, Sacks LA (1993) Multidimensional perfectionism and academic procrastination: Relationships with depression in university students. Psychol Rep, 73:863-871.

Salguero-Pazos MR, Reyes-de-Cózar S (2023) Interventions to reduce academic procrastination: A systematic review. Int J Educ Res, 121:102228.

Sanna LJ, Turley Ames KJ, Meier S (2001) Mood, self-esteem, and simulated alternatives: Thought-provoking affective influences on counterfactual direction. J Pers Soc Psychol, 76:543–558.

Scher SJ, Osterman NM (2002) Procrastination, conscientiousness, anxiety, and goals: Exploring the measurement and correlates of procrastination. J Pers Soc Psychol, 30:451–465.

Schraw G, Wadkins T, Olafson L (2007) Doing the things we do: A grounded theory of academic procrastination. J Educ Psychol, 99:12-25.

Seifert CM, Patalano AL (1991) Memory for incomplete tasks: A re-examination of the Zeigarnik effect. In Proceedings of the 13th Annual Conference of the Cognitive Science Society (pp. 114–119).

Sekman M (2024) Ataleti Yenmek: Yılgınlık, Yorgunluk ve Erteleme Alışkanlığıyla Başa Çıkma Yolları, 77. Baskı. İstanbul, Alfa Yayınları.

Simpson WK, Pychyl TA (2009) In search of the arousal procrastinator: Investigating the relation between procrastination, arousal-based personality traits and beliefs about procrastination motivations. Pers Individ Dif, 47:906-911.

Sirois FM (2004) Procrastination and counterfactual thinking: Avoiding what might have been. Br J Soc Psychol, 43:269-286.

Sirois FM (2007) I'll look after my health, later: A replication and extension of the procrastination-health model with community-dwelling adults. Pers Individ Dif, 43:15-26.

Sirois FM (2014) Procrastination and stress: Exploring the role of self-compassion. Self Identity, 13:128–145.

Sirois FM, Melia-Gordon ML, Pychyl TA (2003) I'll look after my health, later: An investigation of procrastination and health. Pers Individ Dif, 35:1167–1184.

Sirois FM, Pychyl TA (2013) Procrastination and the priority of short-term mood regulation: Consequences for future self. Soc Personal Psychol Compass, 7:115–127.

Sirois FM, Pychyl TA (2016) Procrastination, emotion regulation, and well-being. In Procrastination, Health, and Well-Being (Eds FM Sirois, TA Pychyl): 163-188. London, Elsevier.

Sirois FM, Tosti N. (2012). Lost in the moment? An investigation of procrastination, mindfulness, and well-being. J Ration Emot Cogn Behav Ther, 30:237–248.

Smith MM, Sherry SB, Ge SYJ, Hewitt PL, Flett GL, Baggley DL (2021) Multidimensional perfectionism turns 30: A review of known knowns and known unknowns. Can Psychol, 63:16.

Solanto MV, Etefia K, Marks DJ (2004) The utility of self-report measures and the continuous performance test in the diagnosis of ADHD in adults. CNS Spectr, 9:649–659.

Solomon LJ, Rothblum ED (1984) Academic procrastination: Frequency and cognitive-behavioral correlates. J Couns Psychol, 31:503-509.

Sowislo JF, Orth U, Meier LL (2014) What constitutes vulnerable self-esteem? Comparing the prospective effects of low, unstable, and contingent self-esteem on depressive symptoms. J Abnorm Psychol, 123:737–753.

Stead R, Shanahan MJ, Neufeld RW (2010) 'I'll go to therapy, eventually': Procrastination, stress and mental health. Pers Individ Dif, 49:175-180.

Steel P (2007) The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. Psychol Bull, 133:65-94.

Steel P (2010) Arousal, avoidant, and decisional procrastinators: Do they exist? Pers Individ Dif, 48:926–934.

Steel, P. (2012). The Procrastination Equation: How to Stop Putting Things Off and Start Getting Stuff Done. New York, HarperCollins.

Steel, P., König, C. J. (2006). Integrating theories of motivation. Acad Manage Rev, 31, 889–913.

Stöber J, Joormann J (2001) Worry, procrastination, and perfectionism: Differentiating amount of worry, pathological worry, anxiety, and depression. Cogn Ther Res, 25:49–60.

Svartdal F, Løkke JA (2022) The ABC of academic procrastination: Functional analysis of a detrimental habit. Front Psychol, 13:1019261.

Tangney JP, Baumeister RF, Boone AL (2004) High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. J Pers, 72:271–324.

Temel ZF, Aksoy AB (2001) Ergen ve Benlik. Ankara, Nobel Yayın Dağıtım.

Tice DM, Bratslavsky E, Baumeister RF (2001) Emotional distress regulation takes precedence over impulse control: If you feel bad, do it! J Pers Soc Psychol, 80:53-67.

Tortumlu M, Uzun K, Yanık A (2021) Time traps of the modern age: Views of young adults about time management. J Curr Res Soc Sci, 11:377–396.

Tuckman BW (1991) The development and concurrent validity of the procrastination scale. Educ Psychol Meas, 51:473-480.

Tukuş L (2010) The self esteem rating scale-short form (Benlik Saygısı Değerlendirme Ölçeği-Kısa formu) Türkçe güvenilirlik ve geçerlik çalışması (Yüksek lisans tezi). Kocaeli, Kocaeli Üniversitesi.

Türkçapar MH (2018) Bilişsel Davranışçı Terapi: Temel İlkeler ve Uygulama. İstanbul, Epsilon Yayınevi.

Uzun B, Demir A (2015) Erteleme: Türleri, bileşenleri, demografik etkenler ve kültürel farklılıklar. Ege Eğitim Dergisi, 16:106-121.

Van Eerde W (2003) A meta-analytically derived nomological network of procrastination. Pers Individ Dif, 35:1401–1414.

Wu X (2021). Anxiety and procrastination: What is the association? Journal of Student Research, doi:10.47611/harp.28.

Yan B, Zhang X (2022) What research has been conducted on Procrastination? Evidence from a systematical bibliometric analysis. Front Psychol, 13:809044.

Yardım T, Engin G (2022) Sınıf eğitimi öğretmen adaylarının akademik erteleme davranışları ve zaman yönetimi becerileri arasındaki ilişkinin incelenmesi. Trakya Üniversitesi Sosyal Bilimler Dergisi, 24:347-368.

Yerkes RM, Dodson JD (1908) The relation of strength of stimulus to rapidity of habit-formation. Journal of Comparative Neurology and Psychology, 18:459–482.

Yılmaz H (2021) Üniversite öğrencilerinde hayal kurma, kaygı ve erteleme davranışı arasındaki ilişkinin incelenmesi (Yüksek lisans tezi). İstanbul, İstanbul Kent Üniversitesi.

Zhao X, Zhang R, Feng T (2024) The vmPFC-IPL functional connectivity as the neural basis of future self-continuity impacted procrastination: The mediating role of anticipated positive outcomes. Behav Brain Funct, 20:11.

Zimmerman BJ (2000) Attaining self-regulation: A social cognitive perspective. In Handbook of Self-Regulation (Eds M Boekaerts, PR Pintrich, M Zeidner):13–39. Cambridge, Academic Press.

Authors Contributions: The author(s) have declared that they have made a significant scientific contribution to the study and have assisted in the preparation or revision of the manuscript
Peer-review: Externally peer-reviewed.
Ethical Approval: This review study does not require ethical clearance.
Conflict of Interest: No conflict of interest was declared.
Financial Disclosure: No financial support was declared for this study.