# Psikoloji Çalışmaları Studies in Psychology

Psikoloji Çalışmaları - Studies in Psychology Cilt/Volume: 43, Sayı/Issue: 2, 2023 DOI: 10.26650/SP2021-915063

# From Perfectionism to Burnout: Testing of a Serial Mediation Model with Self-Esteem and Workaholism

# Mükemmeliyetçilikten Tükenmişliğe: Benlik Saygısı ve İşkolikliğin Seri Aracılık Modeli

Esra Atilla Bal<sup>1</sup>, Selma Arıkan<sup>2</sup>



<sup>1</sup>Dr. Faculty Member, Acıbadem University, Faculty of Arts and Sciences, Department of Psychology, Istanbul, Türkiye

<sup>2</sup>Prof. Dr., Istanbul Medeniyet University, Faculty of Letters, Department of Psychology, Istanbul, Türkiye

ORCID: E.A.B. 0000-0002-8651-9609; S.A. 0000-0002-9603-824

Corresponding author/Sorumlu yazar: Esra Atilla Bal, Acibadem Üniversitesi, Fen Edebiyat Fakültesi, Psikoloji Bölümü, Kayışdağı Caddesi No: 32 İçerenköy, Ataşehir /Istanbul, İstanbul, Türkiye Ernail/E-posta: Esra bal@acibadem.edu.tr

Submitted/Başvuru: 13.04.2021 Revision Requested/Revizyon Talebi: 25.10.2021 Last Revision Received/Son Revizyon: 20.03.2023 Accepted/Kabul: 04.04.2023 Published Online/Online Yayın: 10.08.2023

Citation/Attf: Atilla Bal, E., & Arikan, S. (2023). From perfectionism to burnout: Testing of a serial mediation model with self-esteem and workaholism. *Psikoloji Çalışmaları - Studies in Psychology, 43*(2): 289–319. https://doi.org/10.26650/SP2021-915063

#### ABSTRACT

In the literature, even though the role of perfectionism has been examined in various fields of study including psychology, education, sports sciences, counseling and medicine, studies which have focused on this concept in work life from an organizational point of view are scarce. In the past, perfectionism has been examined as a negative concept, yet recently it is being studied as a multi-dimensional construct in terms of both its positive and negative aspects. In light of current research, this study examined perfectionism with its adaptive and maladaptive dimensions and focused on the relation between these dimensions and self-esteem, workaholism and burnout, with the goal of contributing to the literature on employee well-being. In literature, despite the existence of studies that showed the association between perfectionism and burnout, there is a scarcity of research conducted on the mediating variables between these two constructs. This paper examined how perfectionism relates to burnout in the workplace by investigating the mediating role of self-esteem and workaholism and the relationship between these two constructs using a serial mediation model. A self-report questionnaire of key constructs was provided to a sample of 224 (63.4% women) Turkish employees. Correlation analyses and serial mediation analyses were conducted to test the proposed relations and mediating hypotheses. According to the results, maladaptive perfectionism is strongly related to burnout, to the extent that the mediational effects of selfesteem and workaholism are cancelled in the process. Adaptive perfectionism, however, does not have a direct effect on burnout, though it yielded a significant relationship with it through the mediation of self-esteem and workaholism. However, the total indirect effect for serial mediation between adaptive perfectionism and burnout was found to be insignificant. The findings add to the current literature findings by shedding light on the relationship between perfectionism and burnout as well as revealing the underlying mechanisms linking these two concepts.

Keywords: Perfectionism, burnout, self-esteem, workaholism, serial mediation



İSTANBUL UNIVERSITY PRESS

**Original Article** 

#### ÖZ

Literatürde mükemmeliyetçiliğin iş ortamındaki rolü, aralarında psikoloji, eğitim, spor bilimleri, rehberlik ve psikolojik danısmanlık ve tıbbi bilimlerin de bulunduğu farklı alanlarda arastırılmıs olsa da is yasamında bu kavrama örgütsel davranış perspektifinden odaklanan sınırlı sayıda çalışma bulunmaktadır. Geçmişte olumsuz yönleri ile ele alınan mükemmeliyetçilik, günümüzde çok boyutlu bir yapı olarak incelenmekte, olumlu ve olumsuz yönleri ile araştırılmaktadır. Bu çalışma, güncel araştırmaların ışığında mükemmeliyetçiliği uyumlu ve uyumsuz boyutlarıyla ele alarak ve bu boyutların benlik saygısı, işkoliklik ve tükenmişlik ile ilişkilerini inceleyerek çalışan esenliği ile ilgili literatüre katkı sunmayı hedeflemektedir. Literatürde çalışanların mükemmeliyetçilik ve tükenmişlik düzeyleri arasında ilişki olduğunu gösteren çalışmalar bulunmasına rağmen bu iki değişkeni birbirine bağlayan aracı değişkenler üzerine yeterli araştırma yapılmadığı görülmektedir. Bu çalışma, iş ortamında mükemmeliyetçiliğin tükenmişlikle ilişkisini, benlik saygısı ve işkolikliğin bu iki kavram arasındaki aracı rolünü seri aracılık modeliyle inceleyerek araştırmayı amaçlamaktadır. Araştırmanın ana kavramlarını içeren anket çalışması 224 (%63.4 kadın) Türk çalışan ile paylaşılmıştır. Araştırma değişkenleri arasındaki ilişkileri ve aracılık hipotezlerini test etmek için korelasyon analizi ve seri aracılık analizleri kullanılmıştır. Sonuçlar, uyumsuz mükemmeliyetçilik boyutunun tükenmişlik ile yüksek düzeyde ilişkili olduğunu ve bu iliskide benlik saygısı ve iskolikliğin aracı etkilerinin ortadan kalktığını göstermiştir. Uyumlu mükemmeliyetcilik boyutunun ise tükenmislik ile arasında doğrudan olmasa da benlik saygısı ve iskoliklik aracılığı ile istatistiksel olarak anlamlı bir iliski icinde olduğunu ortaya konmustur. Ancak, seri aracılığın toplam dolaylı etkisi ise anlamlı değildir. Sonuclar mükemmeliyetcilik ve tükenmislik arasındaki iliskiye odaklanarak hem mevcut literatüre katkı sağlamakta hem de bu iki kavram arasındaki iliskinin altında yatan faktörlere ısık tutmaktadır. Anahtar Kelimeler: Mükemmeliyetcilik, tükenmislik, benlik saygısı, iskoliklik, seri aracılık

'What is your weakness?' is a commonly asked job interview question to an applicant followed by the quite frequent reply of 'I'm a perfectionist'. Yet, many recuiters would consider perfectionism to be a strength. Research reveals that while perfectionism might be useful in the workplace, some aspects of perfectionism also clearly impair employees at work. As shared in a recent Harvard Business review article (Swider et al., 2018), a meta-analysis of 95 perfectionism studies encompassing four decades shed light on the question of whether perfectionists were better performers at work. The results of the data of 25.000 participants affirmed that perfectionism meaningfully predicts various beneficial workplace outcomes such as being motivated on the job and working longer hours. However, the findings also revealed that perfectionism was associated to detrimental outcomes like burnout, workaholism, and anxiety (Swider et al., 2018). But there is still scarce evidence in the literature as to how and why this personality characteristic is related to negative consequences for both employees and organizations.

In a recent article which entails a comprehensive review of perfectionism in organizations Ocampo and colleagues (2019) stated that, even though there is increasing research interest on perfectionism (e.g., Hill & Curran, 2016; Stoeber & Damian, 2016), the role of this construct in the workplace has not received much attention from an organizational behavior perspective. Recently, research attention started to focus on the mediating mechanisms that linked perfectionism dimensions to outcomes related to a work context (Ocampo et al., 2019), but studies focusing on these mediating mechanisms are scarce.

Previous studies pointed out that personality traits are related to an individual's tendency to experience burnout. People with idealistic, competitive, perfectionistic and goal-oriented dispositions were found to be more inclined to experience burnout symptoms (Ardıç & Polatçı, 2009). In a meta-analysis by Alarcon and colleagues (2009), the emotional stability, extraversion, conscientiousness and agreeableness dimensions of the Big Five personality factors were related to burnout. In the same study, the more malleable personality factors including self-esteem, positive and negative affectivity and optimism were also related to burnout. Among these factors, self-esteem is related to perfectionism (e.g., Gotwals et al., 2003; Sorotzkin, 1985). Studies demonstrated an increasing level of perfectionism could trigger an inner compulsion which predisposes workaholics to work harder than necessary (Killinger, 2006; Scott et al., 1997; Spence & Robbins, 1992) and that workaholism could develop due to feelings of lower self-esteem (Mudrack, 2006). To the authors' knowledge, there is no study in literature which focused on the role of self-esteem and workaholism and its relationship to perfectionism and burnout. This study aims to extend the current knowledge in the area of occupational health psychology by examining the relationship between perfectionism and burnout through focusing on the role self-esteem and workaholism in this relationship.

## Perfectionism and Its Adaptive and Maladaptive Dimensions

Perfectionism is defined as aiming for excessively high and frequently unrealistic standards of performance, as well as recurrent thoughts about reaching these standards and an exceedingly negative evaluation of one's own performance (Flett & Hewitt, 2006; Sirois & Molnar, 2016). Recently, studies confirmed that this construct has a multidimensional nature and is related with both adaptive and maladaptive outcomes (Enns & Cox, 2002). The two main dimensions are what Grzegorek, and colleagues (2004) called adaptive and maladaptive perfectionism. Adaptive perfectionism entails high personal standards and a need for order, whereas maladaptive perfectionism is composed of doubts about oneself and a focus on mistakes and deficiencies. Slaney and colleagues (2002) suggested that the main factor that differentiates a healthy form of perfectionism from neurotic perfectionism is a dimension called "discrepancy" (p. 69), which is "the perception that one consistently fails to meet the high standards one has set of oneself". Maladaptive perfectionists are described as the ones who have tremendously high personal standards of performance and tend to be judgmental in their self-appraisals (Slaney et al., 1996). On the other hand,, adaptive perfectionists tend to have insignificant levels of self-criticism, even though in terms of setting high personal standards for performance they resemble maladaptive perfectionists. In previous studies, the high standards factor of perfectionism was found to be positively associated with self-esteem (Ashby & Rice, 2002), whereas the discrepancy factor was found to be positively correlated with psychological distress, depression (Rice et al., 1998) and anxiety (Johnson & Slaney, 1996).

# Perfectionism and Self-Esteem

Self-esteem, which entails an individual's belief in him/herself to be adequate, competent and valuable (Newstrom et al., 1999), was found to be related to perfectionism. In a study conducted with high school students, Ashby and Rice (2002) found high personal standards to be positively related with self-esteem, whereas discrepancy was found to be negatively related. In a study with a sample of athletes, Gotwals and colleagues (2003) found that maladaptive perfectionism was linked to low self-esteem. According to Sorotzkin (1985), perfectionists evaluate how worthy they are by the achievement of usually unreachable goals, and that "any deviation from the perfectionistic goal is likely to be accompanied by moralistic self-criticism and lowered self-esteem" (p. 564). Individuals that have high self-esteem do not have problems in their perceptions of self-worth and do not require excessive work to prove their self-worth (Graves et al., 2012). Those employees who are workaholics are presumed to be driven by the motive to abstain from negative feelings, since not dealing with work activities causes stress and negative emotions like shame and guilt (Killinger, 2006; Schaufeli et al., 2008). In actuality those employees who are workaholics are inclined to be driven by the urge to convince themselves that they are worthy, which is in line with Mudrack's (2006) suggestion that workaholism could develop as a response to feelings of lower self-esteem and higher self-doubts.

# Perfectionism and Workaholism

In a review of the literature regarding perfectionism, Scott and colleagues (1997) stated that perfectionism was a precursor of workaholism. Quite a few definitions of workaholism emphasized working to the omission of other life domains (e.g., Ng et al., 2007) and being absorbed with thoughts and feelings about working (e.g., Scott el al., 1997). Schaufeli and colleagues (2008) defined workaholism as the inclination to work excessively hard and be preoccupied with work, which is related to working compulsively. This definition is congruent with other conceptualizations of workaholism, whose main dimensions are a strong internal urge to work hard to the exclusion of anything else in life. (Ng et al., 2007). Prior studies stated that various other factors such as personal and situational variables could act as antecedents to workaholism (e.g., Liang & Chu, 2009). Although a high expenditure of effort and hardworking could be due to organizational and contextual factors in the work environment, individual dispositions have a significant impact, as well. Among these personal factors, perfectionism has received increasing scrutiny (e.g., Clark et al., 2016; Stoeber & Damian, 2016).

Studies about perfectionism at work showed that perfectionism and workaholism have similar attributes (Burke, 2000). If perfectionists set exceedingly high standards for themselves and evaluate their work output to be less than ideal, it is possible that they will spend more effort and time at work in contrast to others who do not have these

tendencies. Indeed, in a meta-analysis, a strong and positive correlation between perfectionism and workaholism was reported (Clark et. al., 2016). Similarly, the results of a study carried out among 153 banking professionals in Turkey showed that an increase in perfectionist tendencies also increased the tendency to work compulsively (Teber, 2021). Another recent study carried out among academicians revealed that maladaptive perfectionists had the highest tendencies toward workaholism (Çimşir & Tümlü, 2021).

The interactions of perfectionism (e.g., Moore et. Al., 2018) and workaholism (e.g., Malinowska et al., 2018; Stoeber et al., 2013; Van den Broeck, et. al., 2011) were investigated using self-determination theory (SDT; Ryan & Deci, 2000) to discover the relationship to controlled motivation and autonomous motivation. SDT might be a useful theoretical background to discern the two dimensions of perfectionism and its association with workaholism and other related variables like self-esteem. SDT denotes that activities which are internally rewarded by pleasure, interest, curiosity or inherent satisfaction are intrinsically motivating and the action of an intrinsically motivated person is free of external pressures and rewards and the person chooses this action autonomously. From complete lack of motivation (amotivation) to highly autonomous, productive and spontaneous intrinsic motivation four regulatory mechanisms of extrinsic motivation exist that vary according to their internalization levels: external regulation, introjected regulation, identified regulation, and integrated regulation. External regulation indicates actions that are controlled by means of external rewards and punishment while introjected regulation directs behaviors via feelings of guilt and anxiety. On the other hand, identified and integrated regulations are regarded as autonomous motivation since in identified regulation an external pressure is seen as a useful and personally accepted and self-desired goal, and in integrated regulation external factors are completely combined with internal interests, personal values, and aspirations (Cook & Artino Jr., 2016).

The two dimensions of perfectionism are differentially related with autonomous and controlled motivation. The self-critical aspect (maladaptive form) of perfectionism is related with a self-definition that depends on self-regulation shaped by guilt and fear (Shahar et al., 2003) which corresponds to introjected regulation in SDT (Moore, et. al., 2018). Self-criticism which is also related with feelings of guilt, shame and anxiety was shown to be positively related with controlled motivation and negatively related with autonomous motivation (Moore et al., 2018; Shahar et al., 2003; Stoeber et al., 2013); while personal standards (adaptive) perfectionism was reported to be positively associated with autonomous motivation (e.g., Harvey et al., 2015).

The working excessively and working compulsively dimensions of workaholism and the divergent employee related outcomes were reported to be differentially related with autonomous and controlled motivation. In their study on 370 Belgian employees Van den Broeck and colleagues (2011) showed that autonomous motivation negatively predicted emotional exhaustion whereas controlled motivation positively affected both working compulsively and working excessively. Stoeber and colleagues (2013) investigated the mediating roles of both identified and introjected regulation in the association between perfectionism and workaholism. Self-oriented perfectionism positively explained workaholism, both identified and introjected regulation acted as full mediators, and introjected regulation was strongly associated with perfectionism and workaholism. Based on these empirical findings and the propositions of SDT, both maladaptive perfectionism and the cognitive basis of workaholism seem to be related mostly with the introjected regulation as it is based on feelings of guilt and anxiety. This is congruent with the positive associations of maladaptive perfectionism (Moore et al., 2021; Moroz & Dunkley, 2015) and workaholism (Aziz et al., 2018) with negative self-image, mood and negative self-esteem.

#### **Perfectionism and Burnout**

Burnout is a critical state for both employees and organizations due to its relations with deteriorating employee well-being (e.g., Schaufeli et al., 2008), physical health (e.g., Clark et al., 2016) and declines in commitment to the organization, job performance and job satisfaction (Halbesleben & Buckley, 2004). Burnout is often defined as emotional exhaustion, cynicism, and a feeling of inefficacy (Maslach et al., 2001). Exhaustion, characterized by a decay in one's emotional resources, is regarded as the core dimension of burnout. Cynicism is characterized by an aloof attitude towards work and to those with whom one is working. Inefficacy, or reduced personal accomplishment is related to feelings of incompetence and inadequacy at work and to a decreased ability to cope with problems that come up (Maslach et al., 2001).

The associations between perfectionism and burnout are supported by studies conducted on various populations in literature. In a study with nurses, Balevre and colleagues (2012) reported a positive relationship between burnout and perfectionism. In another study conducted with doctors, Badawy and Mohamad (2015) found a significant association between these two constructs. In a study conducted with athletes, Demirci and Çepikkurt (2018) demonstrated that those athletes showing maladaptive tendencies were prone to burnout. Another positive association was found between maladaptive perfectionism and burnout in a college study carried out by Zhang and colleagues (2007). In another recent study carried out in Turkey on 158 employees in the marble sector a positive relationship was reported between self-oriented perfectionism and the burnout dimensions (Gürel et al., 2021).

# Self-esteem and Workaholism as Mediators in the Perfectionism - Burnout Relationship

In recent years, studies aimed to uncover the factors that might act as mediators between perfectionism and psychological outcomes. A review of perfectionism literature identified self-esteem's mediator role between maladaptive perfectionism and distress (Rice et al., 1998). Blatt (1995) stated that perfectionism could be associated with significant mental health outcomes through self-esteem and that the two types of perfectionism could play differing roles in the process. This could be due to the fact that perfectionists with excessive standards are seldom content with their accomplishments and are more inclined to experience low self-esteem, thus negatively impacting their psychological well-being. In a study conducted with undergraduates Flett and colleagues (1991) found that adaptive perfectionism was positively related with self-esteem and not directly related to depression; yet in the same study, maladaptive perfectionism was reported to be associated with lower self-esteem and higher depression. Thus, in line with studies which pointed out that self-esteem was a mediator between perfectionism and distress (Rice et al., 1988) as well as the relations of this concept with perfectionism (e.g., Gotwals et al., 2003) and burnout (e.g., Alarcon et al., 2009) self-esteem could also act as a mediator in the perfectionism-burnout relationship.

The association of workaholism to burnout has been widely studied and numerous studies showed workaholism to be positively correlated with burnout (e.g., Andreassen et al., 2007; Burke & Matthiesen, 2004). Indeed, working longer than others, workaholics' spare time was limited for activities that could lead to rest (Ng et al., 2007). Naktiyok and Karabey (2005) carried out a study among Turkish academicians and found that, an increase in the level of academics' workaholism increased their mental, physical and emotional exhaustion. Furthermore, two separate studies carried out among lawyers (Arslantaş et al., 2016; Macit & Ardıç, 2018) reported a positive relationship between workaholism and burnout. Scott and colleagues (1997) stated that, "perfectionist workaholics experience greater susceptibility to stress and to physical and psychological problems [...] than do non-workaholic organization members" (p. 304). Confirming this statement, Taris and colleagues (2005) demonstrated in their study that workaholics obtained less favorable ratings on burnout and mental health. In addition, it showed that workaholism had a mediating role in the perfectionism and burnout relationship (Taris et al., 2010). Previous studies pointed out that workaholics work harder due to an inner drive that could be related to a high level of perfectionism and tend to be driven by the urge to feel worthy which could be due to lower self-esteem (Mudrack, 2006). In line with these findings and the previously noted relations of self-esteem and workaholism with burnout, self-esteem and workaholism could act as mediators in the relationship between perfectionism and burnout.

According to the Job Demands-Resources (JD-R) model (Demerouti et al., 2001), employee well-being is attributed to the characteristics of the work environment. Recent studies relating to this model proposed that its framework could be extended to include personal demands and resources (e.g., Lorente et al., 2008; Xanthopoulou et al., 2007). In the few studies conducted with this perspective, personal demands was defined as "the requirements that individuals set for their own performance and behavior that force them to invest effort in their work and are therefore associated with physical and psychological costs" (Barbier et al., 2013, p. 751). In line with this perspective, Lorente and colleagues (2008) suggested that personality traits such as perfectionism could be a personal demand that needs further investigation. Workaholism was examined as a personal demand using the JD-R model. Schaufeli and colleagues (2009) described workaholism as a risk factor which leads to burnout apart from contextual factors at work. Guglielmi and colleagues (2012) reported that workaholism was positively correlated with burnout. Indeed, workaholics frequently work longer than others, with little time for activities that could lead to rest (Ng et al., 2007). In addition, workaholics constantly think and worry about work, even when they are out of the work context (Scott et al., 1997). These findings showed that it is worthwhile to examine the role of workaholism as a personal demand for employees.

Researchers focusing on the JD-R model (Bakker et al., 2005) stated that, individuals' personal resources which are composed of a sense of their ability to successfully impact their environment (Hobfoll et al., 2003) also support their adaptation to the organizational context (e.g., Xanthopoulou et al., 2007). The JD-R model further pointed out that under difficult work conditions, employees with higher resource levels are more inclined to be competent in dealing with work demands and are likely to experience less exhaustion (Bakker et al., 2005). From a positive psychology perspective it would be worthwhile to examine the role of self-esteem as a personal resource that protects employees from the negative impact of perfectionism, workaholism and burnout.

Although studies on perfectionism and its relation to health-related outcomes are increasing, there are still limited studies that examined the positive and negative impact of this personality disposition in the context of the workplace. Even though relations between the two dimensions of perfectionism and burnout were explored before, there is still a lack of consensus regarding the results of this relationship. In various studies, maladaptive perfectionism was shown to be positively related to this concept (e.g., Çalışkan et al., 2014; Demirci & Çepikkurt, 2018; Sancar et al., 2021; Zhang et al., 2007), but the results with respect to the relationship between adaptive perfectionism was found to be negatively related to burnout, whereas other studies reported insignificant relationships between these two concepts (e.g., Hill and Curran, 2016; Tashman et al., 2010; Zhang, et al., 2007). Thus, one of the aims of this study was to examine the relationship between adaptive perfectionism and burnout and contribute to the current knowledge regarding this relationship in literature. The hypotheses is listed below:

H1: Adaptive perfectionism is negatively related to burnout.

Recently, research interest started focusing on the mechanisms that link perfectionism dimensions to various work and health outcomes (Ocampo et al., 2019). Yet, to date, research focusing on these mediating mechanisms are scarce in literature. There are some studies which reported the role of workaholism as a mediator between perfectionism and burnout (e.g., Falco et al., 2014; Taris et al., 2010). Researchers suggested that perfectionism could be related to crucial mental health outcomes through self-esteem (Blatt, 1995). Studies also reported that self-esteem acts as a mediator between maladaptive perfectionism, distress, (Rice et al., 1998) and depression (Flett et al., 1991). The current study explored self-esteem's mediator role between the two dimensions of perfectionism and burnout. The hypothesis is shared below:

*H2:* The relationship between perfectionism and burnout is mediated by self-esteem; such that (a) through its negative relationship with self-esteem, maladap-

tive perfectionism predicts burnout positively and, (b) through affecting self-esteem positively adaptive perfectionism predicts burnout negatively.

To the authors' knowledge, no study focused on the mediating role of self-esteem and workaholism, specifically the relationship between perfectionism and burnout. Previously, a positive relationship was noted between adaptive perfectionism and self-esteem in that self-esteem has a significant relationship with burnout (Alarcon et al., 2009), whereas maladaptive perfectionism is negatively related to this concept (e.g., Ashby & Rice, 2002). Furthermore, workaholism which is closely related to perfectionism (Killinger, 2006) and burnout (Andreassen et al., 2007) could develop in response to lower self-esteem (Burke, 2004; Mudrack, 2006). In addition, focusing on the mechanisms linking perfectionism with burnout, Taris and colleagues (2010) found that workaholism mediated the relationship between maladaptive perfectionism and emotional exhaustion. However, in the same study, the high standards factor of perfectionism was found to be unrelated to both the workaholism and burnout dimensions. Even though previous studies showed that perfectionists were more prone to burnout (Appleton et al., 2009; Chen et al., 2008; Zhang et al., 2007), studies on the processes accounting for this relationship are scarce (Taris et al., 2010). In line with this discussion, this study aimed to extend the literature on occupational health psychology by focusing on the mechanisms linking perfectionism with burnout through examining the role of personal characteristics which received limited attention (Taris et al., 2010). It is expected that the differential relationship between the different forms of perfectionism and burnout are at least partly mediated by self-esteem and workaholism. The hypothesis is listed below:

*H3:* The relationship between perfectionism and burnout is serially mediated by self-esteem and workaholism; such that (a) maladaptive perfectionism predicts self-esteem negatively, self-esteem predicts workaholism negatively, through low self-esteem and higher workaholism maladaptive perfectionism predicts burnout positively, whereas (b) adaptive perfectionism predicts self-esteem positively, self-esteem predicts workaholism negatively, and workaholism predicts burnout positively, through higher self-esteem and lower workaholism adaptive perfectionism predicts burnout positively.

This yields a three-path mediation model, depicted in Figure 1, which is defined as a serial mediation (Hayes, 2013).

#### Figure 1

Hypothesized Model of the Study





### Participants

Two hundred and twenty-four full-time white-collar employees, employed in the metropolitan city of İstanbul in Turkey participated in this study. The majority of these employees were women (N = 142, 63.4 %), and married participants (N = 146, 65.2%). Employees were aged between 22 and 66 with a mean of 39.48 (SD = 8.39) and 57% of the participants were under 41 years old. The participants' total work experience (M = 15,97, SD = 7,66), tenure (M = 8,35, SD = 7,66) and duration of employment in their current departments (M = 7,70, SD = 7,52) ranged between one to 40 years. Ninety-five percent of the sample had received a bachelor's or higher degree. Most of the participants were from the service sector (N = 146), followed by production, (N = 60) IT, technology, the telecommunication (N = 14) sector and others (N = 4).

## Measures

# Almost Perfect Scale-Revised (APS-R)

In order to measure the participants' levels of adaptive and maladaptive perfectionism, the Almost Perfect Scale-Revised (APS-R) developed by Slaney and colleagues (1996) was used. The APS-R is a three-dimensional scale consisting of 23 items. Seven of these items measure the High Standards dimension (e.g., "I set very high standards for myself"), four items measure Order (e.g., "I think things should be put away in their place"), and the remaining 12 items measure Discrepancy (e.g., "I often feel frustrated because I can't meet my goals"). High standards and order measure the adaptive aspects of perfectionism. Both adaptive and maladaptive perfectionists have high scores in high standards and order, but discrepancy scores are crucial in differentiating maladaptive perfectionists from adaptive perfectionists, as maladaptive perfectionists score high in this dimension while the adaptive perfectionists do not. Both three-dimensional (high standards, order, and discrepancy) and two-dimensional (adaptive perfectionism and maladaptive perfectionism) structures of the Turkish form were found to be valid and reliable (Ulu, 2007). A Confirmatory Factor Analysis (CFA) was conducted with the data of this study and the three-dimensional factor structure of the scale showed an acceptable fit (X<sup>2</sup>/df=2,256, CFI=0,913, NFI=0,857, IFI=0,915, GFI=0,863, RM-SEA=0,075, RMR=0.105). The items of the APS-R were evaluated on a 6-point scale "1: I strongly disagree" to "6: I strongly agree." The internal reliability coefficients of the overall scale and its subdimensions yielded satisfactory reliability scores for the data: APS-R=. 90, High Standards=.78, Order=.88, and Discrepancy=.91.

## Rosenberg Self-Esteem Scale (RSE)

The Rosenberg Self-Esteem Scale (RSE) was used to measure the construct of self-esteem. This scale is a single-factor 10-item scale that has been used in psychological studies since its development by Rosenberg (1965). The RSE was adapted to the Turkish language and validated by Çuhadaroğlu (1986). Five of the 10 items were reverse items, and these were revised before statistical analysis (e.g., "At times I think I am no good at all"). The remaining five items did not require a revision before the analysis (e.g., "I take a positive attitude toward myself"). Participants evaluated each item with a scale ranging from "1: Certainly wrong" to "4: Certainly right". A CFA with the data of this study was also conducted and the unidimensional structure of the scale showed an acceptable fit ( $X^2/df=1,776$ , CFI=0,966, NFI=0,923, IFI=0,967, GFI=0,951, RMSEA=0,059, RMR=0.021). The scale's internal reliability was also satisfactory, with a Cronbach  $\alpha$  coefficient of .84.

## **Dutch Work Addiction Scale (DUWAS)**

The 17-item version of the DUWAS was used to measure workaholism (Schaufeli et al., 2006). The DUWAS is a self-report questionnaire that measures workaholism by the

working excessively and working compulsively dimensions. The last Turkish adaptation and validation study of the DUWAS-17 was conducted by Doğan and Tel (2011). According to their study, items 3, 4, 8, 10, 12, 13, 15, and 17 (e.g., "I spend more time working than on socializing with friends, on hobbies, or on leisure activities") measure the dimension of working excessively; items 5, 7, 9, 11, 14, and 16 (e.g., "I feel that there's something inside me that drives me to work hard") measure the dimension of working compulsively. Doğan and Tel (2011) mentioned that both the single-factor and two-factor structures of the DUWAS-17 were valid and reliable for Turkish context. The responses of the DUWAS are gathered with a 4-point scale from "1: Never" to "4: Always." A test for the two-factor structure of the scale with a CFA with the data of this study showed an acceptable fit (X<sup>2</sup>/df=3,263, CFI=0,877, NFI=0,835, IFI=0,880, GFI=0,881, RMSEA=0,101, RMR=0,097). The unidimensional structure of the scale had a better fit with the data (X<sup>2</sup>/df=1,435 CFI=0,970, NFI=0,910, IFI=0,971, GFI=0,933, RMSEA=0,044, RMR=0,040). The internal reliability analysis showed that the Cronbach  $\alpha$  coefficients of the overall DUWAS-17 scale (Cronbach  $\alpha$ =.88), and of the working excessively (Cronbach  $\alpha$ =.83) and working compulsively (Cronbach  $\alpha$ =.79) dimensions were also satisfactory.

#### Maslach Burnout Inventory (MBI)

The burnout levels of participants was measured by MBI, which is the most widely used assessment tool for this construct. It was developed by Maslach and Jackson in 1981 and its adaptation to the Turkish language was carried out by Ergin (1992). The scale has 22 items which measure emotional exhaustion, cynicism/depersonalization, and reduced professional accomplishment. Nine of the 22 items measure emotional exhaustion (e.g., "I feel emotionally drained from my work"), five items measure cynicism/depersonalization (e.g., "I feel I treat some recipients as if they were impersonal objects"), and the remaining eight items measure reduced professional accomplishment (e.g., "I feel I am positively influencing other people's lives through my work"). The items of reduced professional accomplishment have positive meanings as reversed items, so these items were reversed before calculating the total burnout scores. Each participant evaluated the items in a 6-point scale from "1: I strongly disagree" to "6: I strongly agree." Two CFAs were conducted for testing the three-dimensional and unidimensional structure of the construct. For the three-dimensional structure of the scale the fit indices were found to be as follows:  $X^2/df=2,088$ , CFI=0,918, NFI=0,856, IFI=0,919,

GFI=0,870, RMSEA=0,070, RMR=0,148; and for the unidimensional structure of burnout the CFA results yielded a better fit ( $X^2/df=1,340$ , CFI=0,977, NFI=0,918, IFI=0,978, GFI=0,921, RMSEA=0,039, RMR=0,100). The Cronbach  $\alpha$  coefficients indicated satisfactory results for the data: overall MBI scale= .80, Emotional Exhaustion= .92, Cynicism/Depersonalization= .70, and Reduced Professional Accomplishment= .75.

#### **Demographic Information Form**

This form collected data about the participants' age, gender, marital status, industry of employment, work experience and tenures in their current organization, department and current position.

### Procedure

The Ethical Committee Approval for the study was granted from Istanbul Medeniyet University's Ethical Committee for Social Sciences (19.10.2020). The data was gathered over three months, between October and December 2020 online and the survey link was shared with full-time employees in the researchers' professional network through e-mails and on social media platforms such as WhatsApp and LinkedIn.

#### **Data Analysis**

The data was analyzed by the IBM Statistics SPSS 22 and AMOS Graphics 20. The construct validity of the scales was approved by using the CFA in AMOS 20. Internal reliability analyses were conducted for all scales and their subscales. In order to understand the relationship between variables, Pearson's correlation coefficients were calculated. For testing the mediation analysis, the PROCESS Macro Model 6 (Serial Mediation) was used as defined by Hayes (2013).

# Results

The means, standard deviations, and the Cronbach  $\alpha$  coefficients of all variables were calculated. In addition, a Pearson correlation analyses were also conducted to understand the relation between the variables of the study. These correlation coefficients, the means, standard deviations, and the Cronbach  $\alpha$  coefficients are all presented in Table 1.

In Table 1 the results of the correlation analysis showed that self-esteem was negatively associated with maladaptive perfectionism/discrepancy, workaholism and burnout, whereas maladaptive perfectionism was positively related with workaholism and

· · · · · · · · · · · · · · · · · · ·														
Variable	Μ	SD	1	7	3	4	S	9	7	8	6	10	11	12
1. Self Esteem	32.33	4.30	(.84)	.17*	56**	.11	.16**	22**	25**	16*	16*	31**	29**	46**
2. Adaptive Perfectionism	45.93	7.94		(.81)	.20**	.82**	**67.	.38**	.36**	.37**	.06	06	02	27**
3. Maladaptive Perfectionism / Discrepancy	, 31.55	11.21			(.91)	.31**	01	.47**	.48**	.40**	.26**	.31**	.36**	.28**
4. Standards	28.02	4.66				(.78)	.30**	.48**	.46**	.44**	.11	03	.05	27**
5. Order	17.91	4.30					(88)	.13	.10	.14*	02	08	-00	16*
6. Workaholism	32.48	7.61						(.88)	**96.	.93**	.22**	.14*	.17**	09
7. Working Excessively	18.55	4.44							(.83)	**67.	.23**	.17**	.18**	07
8. Working Compulsively	13.93	3.61								(67.)	.17*	60.	.15*	11
9. Burnout	71.96	13.50									(.80)	**06.	** <i>TT</i> .	.02
10. Emotional Exhaustion	25.24	11.22										(.92)	**69.	.40**
11. Cynicism / Depersonalization	10.20	4.61											(.70)	.34**
12.Reduced Personal Accomplishment	36.53	5.76												(.75)
$p_{0} = p_{0} + p_{0} + p_{0} = p_{0} + p_{0$	lues diagonal	ly presented	t in the parer	tthesis are t	he Cronbach	a coefficier	tts of the sci	ıles measuri.	ng the varial	bles				

-
ia
- N.
ъa
ja .
Ę.
0.0
2
r.
ns
ea.
ne
Se
rk-
3
S
2C
Ŧ
5
5
enta
CI.
£
ef.
8
2
0
ch
aci
np
quo.
~
$\circ$
the
t)
ş
a
thes
th
aren
2
in c
2
he
t
i.
q
ntea
вu
вu
nəs
y presen
y presen
y presen
onally presen
nally presen
onally presen
onally presen
es diagonally presen
ues diagonally presen
ues diagonally presen
values diagonally presen
values diagonally presen
values diagonally presen
he values diagonally presen
<ol> <li>The values diagonally present</li> </ol>
values diagonally presen
<ol> <li>The values diagonally present</li> </ol>
<ol> <li>The values diagonally present</li> </ol>
*p<.001. The values diagonally presem
p<.001. The values diagonally presen
, $***p<.001$ . The values diagonally presen
, $***p<.001$ . The values diagonally presen
.01, ***p<.001. The values diagonally presen
, $***p<.001$ . The values diagonally presen
p<.01, *** $p<.001$ . The values diagonally presen
.01, ***p<.001. The values diagonally presen
**p<.01, $***p<.001$ . The values diagonally present
**p<.01, $***p<.001$ . The values diagonally present
5, $**p<.01$ , $***p<.001$ . The values diagonally presen
**p<.01, $***p<.001$ . The values diagonally present

# From Perfectionism to Burnout: Testing of a Serial Mediation Model with Self-Esteem and Workaholism

Table 1

burnout. Self-esteem was found to be negatively correlated with both the working excessively and working compulsively dimensions of workaholism and emotional exhaustion, cynicism/depersonalization, and the reduced professional accomplishment dimensions of burnout. Moreover, the working excessively dimension of workaholism were positively associated with overall burnout, emotional exhaustion, and cynicism/ depersonalization.

#### Hypothesis Testing with Serial Mediation Model

The results of the serial mediation analysis are depicted in Table 2. The serial mediation analyses were conducted for both maladaptive perfectionism and adaptive perfectionism as independent variables.

#### Table 2

Hypothesis	Testing	Results via	Serial Mediation	n Analysis

	Serial Mediation	on 1: N	Ialadap	tive Perfectio	nism, Me	diators	and Burnout		
Outcome:	M1 (Sel	f-Estee	em)	M2 (Wo	rkaholisi	n)	Y (E	Burnout)	
Antecedent	Coefficient	SE	р	Coefficient	SE	р	Coefficient	SE	р
X (M. Perf)	214	.021	.000	.341	.049	.000	.215	.104	.039
M1 (S-Est)	-	-	-	.106	.126	.401	119	.245	.628
M2 (Work.)	-	-	-	-	-	-	.218	.130	.095
Constant	39.073	.716	.000	18.296	5.117	.000	61.932	10.184	.000
	R <sup>2</sup> :	.310		R	:.222		R <sup>2</sup> : .079		
	F (1,222): 9	9.741,	p<.001	F (2,221): 3	31.521, p<	<.001	F (3,220):	6.254, p<.	001

Total Effect of Maladaptive Perfectionism on Burnout: B:.310, SE:.078, p:.000

Notes. M. Perf: Maladaptive Perfectionism, S-Est: Self-Esteem, Work: Workaholism, M1: First Mediator, M2: Second Mediator

Outcome:	M1 (Se	lf Estee	m)	M2 (Wo	rkaholisi	n)	Y (B	Surnout)	
Antecedent	Coefficient	SE	р	Coefficient	SE	р	Coefficient	SE	р
X (A. Perf)	.098	.039	.013	.454	.063	.000	.016	.137	.906
M1 (S-Est)	-	-	-	514	.106	.000	393	.219	.074
M2 (Work.)	-	-	-	-	-	-	.327	.132	.014
Constant	27.821	1.830	.000	28.270	4.125	.000	73.325	8.917	.000
	$\mathbb{R}^2$	.027			R <sup>2</sup> :.229		R <sup>2</sup> : .061		
	F(1,222):	6.227, p	.05	F(2,221): 3	2,833, p<	.001.	F(3,220):	4,734, p<	.01

Serial Mediation 2: Adaptive Perfectionism, Mediators and Burnout

Total Effect of Adaptive Perfectionism on Burnout: B:.109, SE:.125, p:.383

Notes. M. Perf: Maladaptive Perfectionism, S-Est: Self-Esteem, Work: Workaholism, M1: First Mediator, M2: Second Mediator

The results of the regression analysis in the PROCESS Macro model 6 showed that both the direct and the total effect of maladaptive perfectionism on burnout were significant and positive. Additionally, the serial mediation analysis results displayed that maladaptive perfectionism had a significantly negative effect on participants' self-esteem levels and it was positively associated with workaholism. The same serial mediation analysis was conducted by taking adaptive perfectionism into consideration as the independent variable (X) in the model with the same mediating and dependent variables. The results revealed that, contrary to maladaptive perfectionism, adaptive perfectionism is positively related to self-esteem. The results also affirmed that adaptive perfectionism predicted workaholism in a positive manner, and workaholism positively predicted burnout. However, the effect of adaptive perfectionism on burnout was statistically insignificant. Hence,  $H_1$  was not supported.

Based on 5,000 bootstrap subsamples with 224 cases, Table 3 shows the indirect effects and total indirect effects of predictors on (Y) burnout. In Table 3, the mediating role of self-esteem (path 1) and workaholism (path 2) in the relationship between maladaptive perfectionism and burnout were found to be insignificant, as there were zero values between the lower limit and the upper limit confidence intervals. Hence it can be concluded that H2a was not supported. In addition, the mediating roles of self-esteem and workaholism between maladaptive perfectionism and burnout were also found to be insignificant which indicates that H3a was also not supported.

#### Table 3

#### Indirect Effects

Indirect effects from maladaptive perfectionism to burn	nout			
Indirect Effects	Effect	BootSE	BootLLCI	BootULCI
Path 1: Mal.Perf →SE→Burnout	.0254	.0536	0819	.1276
Path 2: Mal.Perf $\rightarrow$ Workaholism $\rightarrow$ Burnout	.0743	.0526	0246	.1807
Path 3: Mal.Perf $\rightarrow$ SE $\rightarrow$ Workaholism $\rightarrow$ Burnout	0050	.0085	0265	.0085
Total indirect effects	.0947	.0711	0395	.2407
Indirect effects from adaptive perfectionism to burnout	t			
Path 1: Adap.Perf →SE→Burnout	0386	.0281	1068	.0008
Path 2: Adap.Perf $\rightarrow$ Workaholism $\rightarrow$ Burnout	.1480	.0713	.0203	.3013
Path 3: Adap.Perf $\rightarrow$ SE $\rightarrow$ Workaholism $\rightarrow$ Burnout	0165	.0105	0418	0012
Total indirect effects	.0930	.0771	0542	.2544

#### Figure 2

Serial Mediation Analysis among Maladaptive Perfectionism, Self-Esteem, Workaholism and Burnout



\*p<.05, \*\*p<.01, \*\*\*p<.001

When the relationship between adaptive perfectionism and burnout was taken into consideration, the mediating role of self-esteem (path 1) was insignificant, while the mediating role of workaholism (path 2) and the mediating roles of both self-esteem and workaholism (path 3) were found to be significant, as there were no zero values between the lower limit and the upper limit confidence intervals. Total indirect effects were insignificant for both maladaptive and adaptive perfectionism. From these results, it can be inferred that H2a and H2b were not supported, and that the mediator analysis for H3 seems to be partially supported; as the results for adaptive perfectionism (Path 3) were significant in supporting H3b; and for maladaptive perfectionism insignificant. Despite the significance of Path 3, as the total indirect effect for the serial mediation between adaptive perfectionism and burnout is insignificant, a coherent conclusion cannot be made about the existence of serial mediation.

#### Figure 3

Serial Mediation Analysis among Adaptive Perfectionism, Self-Esteem, Workaholism and Burnout



\*p<.05, \*\*p<.01

#### Discussion

This study examined the predictive effects of perfectionism on burnout through the mediation of self-esteem and workaholism. The findings, as well as relevant studies both abroad and in Türkiye showed that, it is important to keep the multidimensionality of perfectionism in mind when appraising its adverse relations on employee well-being.

The results revealed that the two facets of perfectionism have different relationships with self-esteem, workaholism, and burnout. Earlier studies regarding different types of perfectionism showed that perfectionists were more susceptible to burnout (e.g., Appleton et al., 2009). Numerous study results showed perfectionistic concerns (maladaptive perfectionism) to be positively related with burnout and its dimensions, whereas perfectionistic strivings (adaptive perfectionism) lead to a non-significant relationship with this concept and its components (e.g., Kanten & Yeşiltaş, 2015; Kazemi & Ziaaddini, 2014). Though restricted to the exhaustion and cynicism sub-dimensions, some studies have found adaptive perfectionism to be positively correlated with burnout (e.g., Hrab-

luik et al., 2012) whereas some studies found an insignificant association (e.g., Kanten & Yeşiltaş, 2015).

Recently, various studies in Türkiye examined the association between perfectionism and burnout (e.g., Caliskan et al., 2014; Kakırman & Birsel, 2015; Sancar et al., 2021; Teber, 2021). Among these, the banking sector employees' study, Kakırman and Birsel (2015) found that achievement-oriented perfectionism which resembles adaptive perfectionism negatively predicted burnout. Moreover, the results of a recent study carried out among 153 banking professionals in Turkey showed that an increase in perfectionist tendencies of employees increased their tendency to work compulsively and decreased their well-being (Teber, 2021). In a similar vein, a study conducted with teachers, Sancar and colleagues (2021) showed that high standards and order dimensions of adaptive perfectionism were negatively related to burnout while discrepancy was positively related to this concept. In a study carried out on white collar employees in Türkiye, Caliskan and colleagues (2014) revealed the discrete and opposite effects of adaptive and maladaptive perfectionism on burnout through perceptions related with work-family conflict. The Chen and colleagues (2008) study on college athletes and Ozbilir and colleagues (2015) study on Canadian and Turkish employees indicated the differential relations of maladaptive and adaptive perfectionism on burnout. Similarly, the study of Moate and colleagues (2016) on counselor educators revealed that, for maladaptive perfectionist educators, the higher the maladaptive perfectionism scores, the higher the burnout levels compared to the adaptive and non-perfectionist educators. In terms of the associations of different aspects of perfectionism on burnout, the findings from this study are congruent with other studies' results. More specifically, the results convey that maladaptive perfectionism has a strong direct relationship with burnout, whereas there is not a direct relationship between adaptive perfectionism and this concept. Despite the finding of a negative correlation between adaptive perfectionism and burnout in the analyses, the regression coefficient of adaptive perfectionism on burnout was found to be insignificant which contradicts with some of the previous studies (e.g., Caliskan et al., 2014), but there are various studies that report similar insignificant results between adaptive perfectionism and burnout (e.g., Hill & Curran, 2016; Tashman et al., 2010; Zhang, et al., 2007). The contradictory results in the literature about the associations of adaptive perfectionism with employee burnout requires further investigation of the possible mediating and moderating variables of this relationship.

Previous studies reported self-esteem as a mediator between maladaptive perfectionism and distress (Rice et al., 1998) and suggested that perfectionism could be related to significant mental health outcomes through self-esteem and that the two types of perfectionism could play differing roles in the process (Blatt, 1995). However, these studies' results did not find support for the mediating role of self-esteem. Yet, given the studies reporting the relationship of self-esteem with perfectionism (e.g., Gotwals et al., 2003) and burnout (e.g., Alarcon et al., 2009), the results warrant further investigation as to the possible role of self-esteem in this relationship. It is also worth examining the moderating role of self-esteem in the relationship between perfectionism and burnout. Although conducted in a different context, Raudasoja and colleagues' (2022) study among 479 Finnish mothers of infants found that self-esteem acted as a moderator in the relationship between socially prescribed (maladaptive) perfectionism and parental burnout. The same moderating effect is a strong possibility in the work context such that for employees who have higher self-esteem the association between perfectionism and burnout could be milder than those employees who have lower self-esteem.

It was also found that adaptive perfectionism, through its positive associations with self-esteem and workaholism; and self-esteem through its negative associations with workaholism are both indirectly connected to burnout. This result stresses the importance of these mediators in these associations. Hence, the study addressed this void with its findings that bring to light the role of self-esteem and workaholism in explaining the relationship between adaptive perfectionism and burnout, which calls for further investigation.

The findings are similar to those of many studies which confirmed that perfectionism is related to increasing levels of workaholism (e.g., Killinger, 2006). Specifically, the results showed that adaptive and maladaptive forms of perfectionism were found to be positively related with workaholism and its sub-dimensions. Past research showed that workaholics work hard to maintain and improve feelings of self-esteem and avoid negative emotions (Van Beek et al., 2013) and are usually perfectionists that try to achieve high performance standards (e.g., Flett & Hewitt, 2002). Various studies in literature demonstrated significant connections between perfectionism and workaholism (e.g., Arıkan & Atilla-Bal, 2011; Stoeber et. al, 2013).

As for the role of self-esteem, the study found that it negatively correlated with all of

the study variables except for adaptive perfectionism. These negative associations were similar to the results of prior studies investigating perfectionism and workaholism from the SDT's perspective by emphasizing the role of introjected regulations in maladaptive perfectionism (e.g., Moore et al., 2021) and workaholism (e.g., Van den Broeck et al., 2011). Feelings of guilt, shame and anxiety which may regulate maladaptive perfectionism and workaholism are in contrast with high self-esteem. That is, when controlled motivation drives employees, they may be inclined to exhibit extreme perfectionism in order to preserve their self-worth (Ocampo et al., 2019). With respect to the negative association of self-esteem to workaholism, the findings were in line with Burke's (2004) study, which reported lower self-esteem for work addicts. In a similar vein, Aziz and colleagues (2018) described the self-esteem and workaholism relationship as "the endless pursuit for self-validation through attainment" (p.74). Self-esteem was found to be positively associated with adaptive perfectionism. In a study of college athletes, Ashby and Rice (2002) found that self-esteem was positively correlated with standards that reflected the positive aspects of perfectionism. In a study by Accordino and colleagues (2000) among high school students, a positive relationship was found between adaptive perfectionism and self-esteem. In the same study, as the students' personal standards increased, so did the self-esteem levels which led to a decrease in their depression levels. However, the mediating role of self-esteem was found to be insignificant in the relationship between adaptive perfectionism, workaholism and burnout. The possibility that self-esteem could act as a moderator between adaptive perfectionism and other variables related to occupational health psychology requires further investigation.

The study results highlight the positive relations between maladaptive perfectionism and burnout as well as workaholism and the negative relations with this concept and self-esteem. Maladaptive perfectionism fits the definition of a personal demand as proposed by the JD-R Model (Barbier et al., 2013) and is negatively related to employee well-being. These research results also showed that workaholism is positively related to maladaptive perfectionism and burnout and negatively related to self-esteem. These findings are similar to other studies which pointed out that workaholism is a personal demand and a risk factor that leads to burnout (Guglielmi et al., 2012). Furthermore, it showed self-esteem's importance as a protective factor for employee well-being since it is negatively related with maladaptive perfectionism, workaholism, and burnout. Due to these results, and its significant positive relationship with adaptive perfectionism, self-esteem could be regarded as a personal resource as defined by the JD-R Model (Bakker & Demerouti, 2014; 2017). It is crucial to examine the role of self-esteem as a personal resource since it is a significant part of an individual's core self-evaluations related with valued outcomes such as motivation and performance (Judge et al., 2004).

Given the differential relations of the two dimensions of perfectionism on employee well-being and especially the strong positive relations of maladaptive perfectionism with burnout, it is important that researchers continue investigating the relationship between this concept and occupational health outcomes by focusing on the mediation and moderation of different personal and contextual variables. Moreover, since the outset of the Covid-19 pandemic, and as online working has become prevalent as a social distancing method, researchers could also conduct studies on the effects of perfectionism and this new work method on employee burnout.

Some limitations of this study should also be mentioned. Since this study was cross-sectional by design, a conclusion regarding the causal order of the study variables cannot be reached. Negative affectivity and social desirability could have affected the findings since the study used survey data with self-report measures. Therefore, these findings need to be replicated in the future with objective measures (such as data collected from managers, peers or subordinates) to eliminate the common method bias. Since the study was conducted in Türkiye among Turkish employees, the generalization of results to other work cultures warrants further examination.

Finally, this study has some practical implications. In the modern work context, characterized by a fast paced and results driven work environment, employees are urged to continuously strive for challenging goals that require a high level of effort which could set the stage for perfectionism (Stoeber et al., 2013). High-performing organizational cultures could trigger employees' perfectionistic tendencies and behaviors and both managers and human resources professionals need to be aware of the impact of such contextual factors on employee behavior. For instance, instead of rewarding their excessive work regime, managers can coach their employees to prioritize and delegate their work when possible.

Training and techniques aimed at boosting self-esteem levels of employees could also be helpful in reducing the negative impact of perfectionism on burnout and could act as a buffer in the perfectionism and workaholism relationship (Rosenow, 2013). Since workaholics tend to take on more work than they can handle, training programs related to time management and planning (Van Wijhe et al., 2010) which also focus on teaching efficient working methods might be helpful for those who are at risk of this syndrome.

Psychological counseling is shown to be a practical solution in reducing perfectionism (Pleva & Wade, 2007) and organizations could refer those employees suffering from maladaptive perfectionism to Employee Assistance Programs.

Finally, since continuous deficiency in resources will result in fatigue and ultimately in exhaustion; employees need to disengage and rest after a busy work day. Participating in sports and exercise activities during non-work hours is reported to be especially helpful for workaholics (Bakker et al., 2013).

In conclusion, since most people are inclined to be perfectionistic in the context of work (Stoeber & Stoeber, 2009), it is crucial to better understand how and why this construct is related to both individual and organizational outcomes. The findings of the present study extend the existing literature in occupational health psychology by examining the association between perfectionism and burnout through the mediation of self-esteem and workaholism. This study identified a series of relations through which the two types of perfectionism relate to burnout. An awareness regarding these mechanisms and their impact could be helpful for employees, managers and HR professionals to take the necessary action steps (e.g., making individual development plans, implementing coaching sessions, conducting interventions and training programs) in order to reduce the potential risks arising from a malfunctional level of perfectionism.

Peer-review: Externally peer-reviewed.

Ethics Committee Approval: xxxxxxx

Conflict of Interest: The authors have no conflict of interest to declare.

Grant Support: The authors declare that this study has received no financial support.

Hakem Değerlendirmesi: Dış bağımsız. Etik Kurul Onayı: xxxxxx Yazar Katkıları: xxxxxxx Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemiştir. Finansal Destek: Yazarlar bu çalışma için finansal destek almadığını beyan etmiştir.

# References/Kaynakça

Accordino, D. B., Accordino, M. P., & Slaney, R. B. (2000). An investigation of perfectionism, mental health, achievement, and achievement motivation in adolescents. *Psychology in the Schools*, 37(6),

Author Contributions: Conception/Design of Study- E.A.B., S.A.; Data Acquisition- E.A.B., S.A.; Data Analysis/ Interpretation- E.A.B., S.A.; Drafting Manuscript- E.A.B., S.A.; Critical Revision of Manuscript- E.A.B., S.A.; Final Approval and Accountability- E.A.B., S.A.

535-545.

- Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout: A meta-analysis. Work & Stress, 23(3), 244-263.
- Andreassen, S., C., Ursin, H., & Eriksen, H. R. (2007). The relationship between strong motivation to work, "workaholism", and health. *Psychology and Health*, 22(5), 615-629.
- Appleton, P. R., Hall, H. K., & Hill, A. P. (2009). Relations between multidimensional perfectionism and burnout in junior-elite male athletes. *Psychology of Sport and Exercise*, 10(4), 457-465.
- Ardıç, K., & Polatçı, S. (2009). Tükenmişlik sendromu ve madalyonun öbür yüzü: İşle bütünleşme. Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, (32), 21-46.
- Arıkan, S., & Atilla Bal, E. (2011). Workaholism: Relations with personal characteristics and employee well-being. [Paper presentation]. 12th European Congress of Psychology, İstanbul, Türkiye.
- Arslantaş, M., Soybaş, İ., & Yalçınsoy, A. (2016). İşkoliklik ile tükenmişlik arasındaki ilişkinin incelenmesi: Avukatlar Üzerine Bir Araştırma. *International Journal of Innovative Strategical Social Research*, 1(1), 11-18.
- Ashby, J. S., & Rice, K. G. (2002). Perfectionism, dysfunctional attitudes, and self-esteem: A structural equations analysis. *Journal of Counseling & Development*, 80(2), 197-203.
- Aziz, S., Zamary, S., & Wuensch, K. (2018). The endless pursuit for self-validation through attainment: An examination of self-esteem in relation to workaholism. *Personality and Individual Differences*, 121, 74-79.
- Badawy, S., & Mohamad, M. S. (2015). Perfectionism and job burnout: Does religious coping moderate the relationship? *International Journal of Business and Social Research*, 5(12).
- Bakker, A. & Demerouti, E. (2014). Job Demands-Resources Theory. In P. Y. Chen and C. I. Cooper (Eds.), Work and well-being: Well-being a complete reference guide Volume III (pp. 1-28). DOI: 10.1002/9781118539415.wbwell019
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. Journal of occupational health psychology, 22(3), 273-285.
- Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, 10(2), 170.
- Bakker, A. B., Demerouti, E., Oerlemans, W., & Sonnentag, S. (2013). Workaholism and daily recovery: A day reconstruction study of leisure activities. *Journal of Organizational Behavior*, 34(1), 87-107.
- Balevre, P. S., Cassells, J., & Buzaianu, E. (2012). Professional nursing burnout and irrational thinking: A replication study. *Journal for Nurses in Professional Development*, 28(1), 2-8.
- Barbier, M., Hansez, I., Chmiel, N., & Demerouti, E. (2013). Performance expectations, personal resources, and job resources: How do they predict work engagement? *European Journal of Work* and Organizational Psychology, 22(6), 750-762.
- Blatt, S. J. (1995). The destructiveness of perfectionism: Implications for the treatment of depression. *American Psychologist*, 50(12), 1003–1020. https://doi.org/10.1037/0003-066X.50.12.1003
- Burke, R. J. (2000). Workaholism in organizations: Concepts, results and future research directions. *International Journal of Management Reviews*, 2(1), 1-16.
- Burke, R. J. (2004). Workaholism, self-esteem, and motives for money. *Psychological Reports*, 94(2), 457-463.
- Burke, R. J., & Matthiesen, S. (2004). Workaholism among Norwegian journalists: Antecedents and consequences. Stress and Health, 20(5), 301-308.
- Caliskan, A. S. C., Arikan, A. S. C., & Saatci, A. E. Y. (2014). SMEs context of Turkey from the relational perspective of members' perfectionism, work family conflict and burnout. *International*

Journal of Business and Social Science, 5(4), 129-139.

- Chen, L. H., Chen, M. Y., Kee, Y. H., & Tsai, Y. M. (2008). Relation of perfectionism with athletes' burnout: Further examination. *Perceptual and Motor Skills*, 106 (3), 811-820.
- Clark, M. A., Michel, J. S., Zhdanova, L., Pui, S. Y., & Baltes, B. B. (2016). All work and no play? A meta-analytic examination of the correlates and outcomes of workaholism. *Journal of Management*, 42(7), 1836-1873.
- Cook, D. A., & Artino Jr, A. R. (2016). Motivation to learn: An overview of contemporary theories. *Medical Education*, 50(10), 997-1014.
- Çimşir, E., & Tümlü, G. (2021). The roles of latent perfectionism classes in academicians' tendencies toward workaholism, useless superiority effort and narcissism. *The Journal of General Psychology*, 1-26.
- Çuhadaroğlu, F. (1986). Adolesanlarda benlik saygısı [Self-esteem in adolescents]. [Unpublished medical specialty thesis]. Hacettepe University.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied psychology*, 86(3), 499.
- Demirci, E., & Çepikkurt, F. (2018). Examination of the relationship between passion, perfectionism and burnout in athletes. Universal Journal of Educational Research, 6(6), 1252-1259.
- Doğan, T., & Tel, F. D. (2011). Duwas İşkoliklik Ölçeği Türkçe formunun (DUWASTR) geçerlik ve güvenirliğinin incelenmesi. Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 11(1), 61-69.
- Enns, M. W., & Cox, B. J. (2002). The nature and assessment of perfectionism: A critical analysis. In G. L. Flett and P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 33–62). American Psychological Association. https://doi.org/10.1037/10458-002
- Ergin, C. (1992). Doktor ve hemşirelerde tükenmişlik ve Maslach Tükenmişlik Ölçeği'nin uyarlanması. In R. Bayraktar & İ. Dağ (Eds.), 7. Ulusal psikoloji kongresi bilimsel çalışmaları (p. 143-154). Ankara: Hacettepe Üniversitesi.
- Falco, A., Piccirelli, A., Girardi, D., Di Sipio, A., & De Carlo, N. A. (2014). "The best or nothing": The mediating role of workaholism in the relationship between perfectionism and burnout. TPM: Testing, psychometrics. *Methodology in Applied Psychology*, 21(2), 213-232.
- Flett, G. L., & Hewitt, P. L. (2002). Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 5–31). American Psychological Association.
- Flett, G. L., & Hewitt, P. L. (2006). Positive versus negative perfectionism in psychopathology: A comment on Slade and Owens's dual process model. *Behavior Modification*, 30(4), 472-495.
- Flett, G. L., Hewitt, P. L., Blankstein, K., & O'Brien, S. (1991). Perfectionism and learned resourcefulness in depression and self-esteem. *Personality and Individual Differences*, 12(1), 61-68.
- Gotwals, J. K., Dunn, J. G. H., & Wayment, H. A. (2003). An examination of perfectionism and selfesteem in intercollegiate athletes. *Journal of Sport Behavior*, 26, 17–37.
- Graves, L. M., Ruderman, M. N., Ohlott, P. J., & Weber, T. J. (2012). Driven to work and enjoyment of work: Effects on managers' outcomes. *Journal of Management*, 38(5), 1655-1680.
- Grzegorek, J. L., Slaney, R. B., Franze, S., & Rice, K. G. (2004). Self-criticism, dependency, selfesteem, and grade point average satisfaction among clusters of perfectionists and non-perfectionists. *Journal of Counseling Psychology*, 51(2), 192-200.
- Guglielmi, D., Simbula, S., Schaufeli, W. B., & Depolo, M. (2012). Self-efficacy and workaholism as initiators of the job demands-resources model. *Career Development International*, 17(4), 375-389.

Gürel, E. B. B., Kıran, F., & Bozkurt, Ö. Ç. (2021). The effect on perfectionism on burnout:

#### From Perfectionism to Burnout: Testing of a Serial Mediation Model with Self-Esteem and Workaholism

An investigation on marble employees. Business & Management Studies: An International Journal, 9(1), 110-125.

- Halbesleben, J. R., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of Management*, 30(6), 859-879.
- Harvey, B., Milyavskaya, M., Hope, N., Powers, T. A., Saffran, M., & Koestner, R. (2015). Affect variation across days of the week: Influences of perfectionism and academic motivation. *Motivation* and Emotion, 39(4), 521-530.
- Hayes, A. F. (2013). Mediation, moderation, and conditional process analysis: A regression-based approach. Guilford.
- Hill, A. P., & Curran, T. (2016). Multidimensional perfectionism and burnout: A metaanalysis. Personality and Social Psychology Review, 20(3), 269-288.
- Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology*, 84(3), 632-643.
- Hrabluik, C., Latham, G. P., & McCarthy, J. M. (2012). Does goal setting have a dark side? The relationship between perfectionism and maximum versus typical employee performance. *International Public Management Journal*, 15, 5-38.
- Johnson, D. P., & Slaney, R. B. (1996). Perfectionism: Scale development and a study of perfectionistic clients in counseling. *Journal of College Student Development*, 37(1), 29–41.
- Judge, T. A., Van Vianen, A. E., & De Pater, I. E. (2004). Emotional stability, core self-evaluations, and job outcomes: A review of the evidence and an agenda for future research. *Human Performance*, 17(3), 325-346.
- Kakirman, A., & Birsel, M. (2015). Bankacılık sektöründe mükemmeliyetçilik ve tükenmişlik arasındaki ilişkiyi inceleyen bir çalışma. *Siyaset, Ekonomi ve Yönetim Araştırmaları Dergisi, 3*(3), 107-128.
- Kanten, P., & Yesiltas, M. (2015). The effects of positive and negative perfectionism on work engagement, psychological well-being and emotional exhaustion. *Procedia Economics and Finance, 23*, 1367-1375.
- Kazemi, A., & Ziaaddini, M. (2014). Relationship between perfectionism, psychological hardiness, and job burnout of employees in executive organizations. *International Journal of Academic Research in Business and Social Sciences*, 4, 160-170.
- Killinger, B. (2006). The workaholic breakdown syndrome. In R. J. Burke (Ed.), Research companion to working time and work addiction (pp. 61-88). Edward Elgar Publishing.
- Liang, Y. W., & Chu, C. M. (2009). Personality traits and personal and organizational inducements: Antecedents of workaholism. *Social Behavior and Personality: An International Journal*, 37(5), 645-660.
- Lorente, P. L., Salanova, S. M., Martinez, M. I. & Schaufeli, W. (2008). Extension of the Job Demands-Resources model in the prediction of burnout and engagement among teachers over time. *Psicothema*, 20(3), 354–360.
- Macit, M., & Ardıç, K. (2018). İşkoliklik, iş-aile çatışması ve tükenmişlik arasındaki ilişkinin incelenmesi üzerine bir araştırma. Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi, 32(3), 825-844.
- Malinowska, D., Tokarz, A., & Wardzichowska, A. (2018). Job autonomy in relation to work engagement and workaholism: Mediation of autonomous and controlled work motivation. *International Journal* of Occupational Medicine and Environmental Health, 31(4).
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. Journal of

Organizational Behavior, 2(2), 99-113.

- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. Annual Review of Psychology, 52(1), 397-422.
- Moate, R. M., Gnilka, P. B., West, E. M., & Bruns, K. L. (2016). Stress and burnout among counselor educators: Differences between adaptive perfectionists, maladaptive perfectionists, and nonperfectionists. *Journal of Counseling & Development*, 94(2), 161-171.
- Moore, E., Holding, A. C., Hope, N. H., Harvey, B., Powers, T. A., Zuroff, D., & Koestner, R. (2018). Perfectionism and the pursuit of personal goals: A self-determination theory analysis. *Motivation and Emotion*, 42(1), 37-49.
- Moore, E., Holding, A. C., Moore, A., Levine, S. L., Powers, T. A., Zuroff, D. C., & Koestner, R. (2021). The role of goal-related autonomy: A self-determination theory analysis of perfectionism, poor goal progress, and depressive symptoms. *Journal of Counseling Psychology*, 68(1), 88.
- Moroz, M., & Dunkley, D. M. (2015). Self-critical perfectionism and depressive symptoms: Low selfesteem and experiential avoidance as mediators. *Personality and Individual Differences*, 87, 174-179.
- Mudrack, P. E. (2006). Understanding workaholism: The case of behavioral tendencies. In R. J. Burke (Ed.), *Research companion to working time and work addiction* (pp. 108-128). Edward Elgar Publishing.
- Naktiyok, A., & Karabey, C. N. (2005). İşkoliklik ve tükenmişlik sendromu. Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi, 19(2), 179-198.
- Newstrom, J., Gardner, D., & Pierce, I. (1999). A neglected supervisory role: Building self-esteem at work. Supervision, 60, 9-12.
- Ng, T. W., Sorensen, K. L., & Feldman, D. C. (2007). Dimensions, antecedents, and consequences of workaholism: A conceptual integration and extension. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior,* 28(1), 111-136.
- Ocampo, A. C. G., Wang, L., Kiazad, K., Restubog, S. L. D., & Ashkanasy, N. M. (2019). The relentless pursuit of perfectionism: A review of perfectionism in the workplace and an agenda for future research. *Journal of Organizational Behavior*, 41(2), 144-168.
- Ozbilir, T., Day, A., & Catano, V. M. (2015). Perfectionism at work: An investigation of adaptive and maladaptive perfectionism in the workplace among Canadian and Turkish employees. *Applied Psychology: An International Review, 64*(1), 252-280.
- Pleva, J., & Wade, T. D. (2007). Guided self-help versus pure self-help for perfectionism: A randomised controlled trial. *Behaviour Research and Therapy*, 45(5), 849-861.
- Raudasoja, M., Sorkkila, M., & Aunola, K. (2022). Self-esteem, socially prescribed perfectionism, and parental burnout. *Journal of Child and Family Studies*, 1-8. https://doi.org/10.1007/s10826-022-02324-y
- Rice, K. G., Ashby, J. S., & Slaney, R. B. (1998). Self-esteem as a mediator between perfectionism and depression: A structural equations analysis. *Journal of Counseling Psychology*, 45(3), 304–314. https://doi.org/10.1037/0022-0167.45.3.304
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton University Press.
- Rosenow, D. (2013). Stress, burnout and self-esteem among educators. *Journal of Border Educational Research*, 4(1), 87-92.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68–78.

- Sancar, Y., Kartal, S., & Gübeş, N. Ö. (2021). Öğretmenlerin tükenmişlik ve mükemmeliyetçilik düzeyleri arasındaki ilişkinin incelenmesi. Uşak Üniversitesi Sosyal Bilimler Dergisi, 14(1), 156-173.
- Schaufeli, W. B., Bakker, A. B., Van der Heijden, F. M., & Prins, J. T. (2009). Workaholism, burnout and well-being among junior doctors: The mediating role of role conflict. *Work & Stress*, 23(2), 155-172.
- Schaufeli, W. B., Taris, T. W., & Bakker, A. B. (2006). In R. J. Burke (Ed.), Research companion to working time and work addiction (pp. 193-217). Edward Elgar Publishing.
- Schaufeli, W. B., Taris, T. W., & Van Rhenen, W. (2008). Workaholism, burnout, and work engagement: Three of a kind or three different kinds of employee well-being? *Applied Psychology: An International Review*, 57(2), 173-203.
- Scott, K. S., Moore, K. S., & Miceli, M. P. (1997). An exploration of the meaning and consequences of workaholism. *Human Relations*, 50(3), 287-314.
- Shahar, G., Henrich, C. C., Blatt, S. J., Ryan, R., & Little, T. D. (2003). Interpersonal relatedness, self-definition, and their motivational orientation during adolescence: A theorical and empirical integration. *Developmental Psychology*, 39(3), 470.
- Sirois, F. M., & Molnar, D. S. (2016). Conceptualizations of perfectionism, health, and well-being: An introductory overview. *Perfectionism, Health, and Well-being*, 1-21.
- Slaney, R. B., Mobley, M., Trippi, J., Ashby, J., & Johnson, D. G. (1996). The Almost Perfect Scalerevised. [Manuscript submitted for publication]. The Pennsylvania State University.
- Slaney, R. B., Rice, K. G., & Ashby, J. (2002). A programmatic approach to measuring perfectionism. In G. L. Flett and P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 63–88). American Psychological Association.
- Sorotzkin, B. (1985). The quest for perfection: Avoiding guilt or avoiding shame? Psychotherapy: Theory, Research, Practice, Training, 22(3), 564.
- Spence, J. T., & Robbins, A. S. (1992). Workaholism: Definition, measurement, and preliminary results. Journal of Personality Assessment, 58(1), 160-178.
- Stoeber, J. & Damian, L. E. (2016). Perfectionism in employees: Work engagement, workaholism, and burnout. In M. Fuschia Sirois and S. Molnar Danielle, (Eds.). *Perfectionism, health, and well-being* (pp. 265-283). Springer.
- Stoeber, J., Davis, C. R., & Townley, J. (2013). Perfectionism and workaholism in employees: The role of work motivation. *Personality and Individual Differences*, 55(7), 733-738.
- Stoeber, J., & Stoeber, F. S. (2009). Domains of perfectionism: Prevalence and relationships with perfectionism, gender, age, and satisfaction with life. *Personality and Individual Differences*, 46(4), 530-535.
- Swider, B., Harari, D., Breidenthal, A. P. & Bujold Steed, L. (2018, December). The pros and cons of perfectionism according to research. *Harvard Business Review*. Retrieved from https://hbr. org/2018/12/the-pros-and-cons-of-perfectionism-according-to-research?ab=at art 1x1
- Taris, T. W., Beek, I. V., & Schaufeli, W. B. (2010). Why do perfectionists have a higher burnout risk than others? The meditational effect of workaholism. *Romanian Journal of Applied Psychology*, 12(1), 1-7.
- Taris, T. W., Schaufeli, W. B., & Verhoeven, L. C. (2005). Workaholism in the Netherlands: Measurement and implications for job strain and work–nonwork conflict. *Applied Psychology: An International Review*, 54(1), 37-60.
- Tashman, L. S., Tenenbaum, G., & Eklund, R. (2010). The effect of perceived stress on the relationship

between perfectionism and burnout in coaches. Anxiety, Stress, & Coping, 23(2), 195-212.

- Teber, D. (2021). Mükemmeliyetçilik ve işkolik olma durumunun psikolojik iyi olma haline etkisi: Bir alan çalışması. [Unpublished master's thesis]. Hacettepe Üniversitesi.
- Ulu, İ. P. (2007). An investigation of adaptive and maladaptive dimensions of perfectionism in relation to adult attachment and big five personality traits. [Unpublished doctoral dissertation]. Middle East Technical University.
- Van Beek, I. V., Taris, T. W., Schaufeli, W. B., & Brenninkmeijer, V. (2013). Heavy work investment: Its motivational make-up and outcomes. *Journal of Managerial Psychology*, 29(1), 46-62.
- Van den Broeck, A., Schreurs, B., De Witte, H., Vansteenkiste, M., Germeys, F., & Schaufeli, W. (2011). Understanding workaholics' motivations: A self-determination perspective. *Applied Psychology: An International Review*, 60(4), 600-621.
- Van Wijhe, C., Schaufeli, W. B., & Peeters, M. C. (2010). Understanding and treating workaholism: setting the stage for successful interventions. In C. L. Cooper and R. J. Burke (Eds.), *Risky Business: Psychological, physical and financial costs of high risk behavior in organizations* (pp.107-134). Wiley.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121.
- Zhang, Y., Gan, Y., & Cham, H. (2007). Perfectionism, academic burnout and engagement among Chinese college students: A structural equation modeling analysis. *Personality and Individual Differences*, 43(6), 1529-1540.