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Master in Human Recourses Management

Master's Thesis

Does transformational leadership concurrently influence employee productivity and well-being?

Testing a dual-influence leadership model

By

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To my dear wife...

Acknowledgments

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Abstract

This study adds to the leadership literature by exploring the possible influence of transformational leadership on employee productivity and well-being simultaneously. Drawing on the leadership literature, transformational leadership theory, and job demands-resources theory, we proposed a dual-influence leadership model to evaluate whether transformational leadership behavior (TLB) has a direct impact on employees' productivity (job performance) and well-being (emotional exhaustion) concurrently. Furthermore, we postulated and assessed the indirect effect of TLB on job performance and emotional exhaustion via two work stressors (work-family conflict and workplace anxiety). Self-report data was acquired from Greek employees (N = 574; 84% female) working in the healthcare industry. The data was analyzed using partial least squares structural equation modeling (PLS-SEM). Research findings indicate that TLB not merely enhances job performance but also decreases emotional exhaustion. Moreover, TLB seems to have an indirect effect on job performance by diminishing workplace anxiety as well as an indirect effect on emotional exhaustion by lowering both work-family conflict and workplace anxiety. Theoretical contributions, practical implications, and future research directions are discussed. As far as we know, no theoretical or empirical attempt has been made to conceptualize a framework that correlates transformational leadership behavior to job performance, emotional exhaustion, work-family conflict, and workplace anxiety.

Keywords: Transformational leadership; emotional exhaustion; job performance; work-family conflict; workplace anxiety; job demands-resources theory

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"Even when no leader is appointed, someone must begin to take initiatives and soon comes to be seen as a leader." (Avolio & Bass, 2002, p. 17)

1 Introduction

Today's organizations must incorporate practices that promote not only productivity but also employee well-being in order to stay sustainable and competitive (Beraldin et al., 2019; Cullinane et al., 2014; Fernet et al., 2015). Among the suggested practices, leadership is frequently portrayed as the cornerstone of organizational success or failure (Bass & Bass, 2008). Leaders are key components of the workplace because they can affect how employees see not only their job function but also the organization at large wherein they operate (Christian et al., 2011; Fernet et al., 2015; Montano et al., 2017). They have the ability to shape employees' attitudes (Doucet et al., 2015; Hobman et al., 2011; Mullen & Kelloway, 2009) as well as elevate their desires and ambitions (Bass, 1985b; Burns, 2003). A leader has an impact on organizational outcomes by managing meanings, perceptions, and behaviors (Chi et al., 2018; Montano et al., 2017).

When a team member alters the drive or skills of others in the team by leading their awareness of objectives and pathways to reaching them, this is referred to as leadership (Bass & Bass, 2008). For decades, leadership literature has sought to discover the characteristics, attributes, actions, and processes that enable people in positions of leadership to be effective at motivating, engaging, and inspiring desired follower attitudes and behaviors in pursuit of common goals (Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013). Leadership theories have moved in recent years from a focus on management processes and financial leader–follower transactions to a larger emphasis on the social dynamics, emotions, and values that transpire inside the leadership mechanism (Avolio & Bass, 2002; Hannah et al., 2014; Yukl, 1999). Lower-order changes in attitudes and behaviors can be interpreted as the outcome of a transactional leadership mechanism in which followers' desires are addressed if their performance meets their formal or informal arrangements with their leader (Bass, 1985b; Burns, 1978). However, higher-order progress necessitates charismatic-transformational leadership (Burns, 1978; House, 1976). Downton (1973) and Burns (1978) were the first to distinguish between transactional and transformational leadership. Transactional leaders pander to their followers' immediate self-interests, but transformational leaders enhance their followers' confidence, motivation, and

ethics and encourage them to accomplish more than they initially intended to undertake (Bass, 1999).

Despite criticism (see, Arnold et al., 2015; Crede et al., 2019; Hannah et al., 2014; Kranabetter & Niessen, 2017; Lin et al., 2019; Nielsen & Daniels, 2016; Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013; Yukl, 1999), transformational (Bass, 1985a) and charismatic (Conger & Kanungo, 1987) leadership paradigms have dominated since the late 1980s, particularly after Bass (1985a) introduced the transformational leadership framework building on Burns' transforming leadership theory (1978) and Conger and Kanungo (1987) conceptualized charismatic leader traits based on House's (1976) charismatic leadership theory. The development of leadership assessment instruments, such as the prominent multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995), was perhaps the most crucial cause for stressing and boosting research interest in these theories (van Knippenberg & Sitkin, 2013). It is worth noting that, according to research, transformational and charismatic leadership theories have received more attention than all other current theories of leadership put together (see Judge & Piccolo, 2004; Ng, 2017). In the existing literature, transformational leadership (Bass, 1985a) is perhaps the most significant element in describing how leaders can guide employees' desired behaviors and attain ideal high performance (see Antonakis et al., 2003; Clarkson et al., 2020; Gottfredson & Aguinis, 2017; Lowe et al., 1996; Ng, 2017; G. Wang et al., 2011). It is crucial to highlight that, even though, according to Bass's (1985a) framework, charismatic leadership is merely one component of charismatic leadership and that the charismatic leadership paradigm has spawned its own literature (see Conger & Kanungo, 1987, 1994; Sashkin, 1988; Shamir, 1991; Shamir et al., 1998), many scholars refer to the two notions as being one (see House & Aditya, 1997; Hunt, 1999; Kirkpatrick & Locke, 1996; van Knippenberg & Sitkin, 2013).

Transformational leaders are charismatic, inspiring, intellectually stimulating, and considerate of their followers, motivating them to genuine dedication and participation in the task at hand (Avolio & Bass, 2002; Bass, 1985a). They explore innovative methods of working, take into account each individual's desires, seek possibilities in the event of a crisis, favor effective solutions to efficient solutions, and are less willing to maintain the status quo (Lowe et al., 1996), empowering followers to perform above and beyond expectations (Bass, 1985a). Consequently, transformational

leadership behavior (TLB) seems to benefit individuals, teams, and organizations (see Antonakis et al., 2003; Bass & Riggio, 2006). Indeed, transformational leadership is a highly predictive leadership framework, associated with a wide range of desired attitudes, behaviors, and outcomes such as leader effectiveness (Carless et al., 2000; Lowe et al., 1996), employee self-efficacy (Ehrnrooth et al., 2021; Gao et al., 2020), organizational commitment (Parr et al., 2013; Patiar & Wang, 2016), job satisfaction (Hobman et al., 2011; Kammerhoff et al., 2019; Klaic et al., 2018; Tepper et al., 2018), work engagement (Aryee et al., 2012; Breevaart et al., 2016; Seitz & Owens, 2021), organizational citizenship behavior (Biswas & Varma, 2011; Buil et al., 2019; Doucet et al., 2015; Gottfredson & Aguinis, 2017; Ng, 2017; Yang et al., 2020), job performance (Camps & Rodríguez, 2011; Chi et al., 2018; Clarkson et al., 2020; Kensbock & Boehm, 2016; Luo et al., 2019; Montano et al., 2017; Pan & Lin, 2015), group performance (Bass et al., 2003; Howell & Avolio, 1993; G. Wang et al., 2011), and organizational performance (Judge & Piccolo, 2004; Katou, 2015). Furthermore, empirical research in the Netherlands (Breevaart & Bakker, 2018), Israel (Cohen et al., 2012), China (D. Fan et al., 2021), the United States (Hammond et al., 2015), Sri Lanka (Kailasapathy & Jayakody, 2018), India (Katou et al., 2020), Greece (Kloutsiniotis et al., 2022), France (Molines et al., 2022), Finland (Perko et al., 2016), Indonesia (Rahmadani & Schaufeli, 2022), Spain (Quintana et al., 2015), and Cyprus (Zopiatis & Constanti, 2010), has demonstrated the cross-cultural impact of TLB.

Apart from a few studies (e.g., Arnold et al., 2015; Crede et al., 2019; Lin et al., 2019; K. Nielsen & Daniels, 2016), the majority of the research has shown that TLB affects employees' attitudes, performance, positive facets of well-being, and even life satisfaction (see, Kara et al., 2013). However, the question of whether TLB plays a preventative role in manifestations of work strain remains unanswered. This might be due in part to the fact that transformational leadership theory was chiefly established with job performance rather than well-being in mind (see Bass, 1985a). Although some scholars have attempted to determine the association between TLB and negative dimensions of employee well-being such as stress (e.g., Diebig et al., 2017; Harms et al., 2017; Sosik & Godshalk, 2000), depression (e.g., Arnold, 2017; Fernet et al., 2015), and burnout (e.g., C. Cheng et al., 2016; Hildenbrand et al., 2018; Kloutsiniotis et al., 2022;

Tafvelin et al., 2019), the results have been inconsistent (see, Lin et al., 2019; Arnold et al., 2015; Stein et al., 2021).

In order to address these concerns, building on the transformational leadership theory (Bass, 1985a; Burns, 1978; Carless et al., 2000), and the job demands-resources theory (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001), we tested a dual-influence leadership model, which contends that TLB increases employee productivity by enhancing motivation and engagement while also fostering work well-being by shielding employees from work-related stress responses. The proposed model envisions as work stressors and mediators two negative representations of employee well-being (i.e., work-family conflict and workplace anxiety), which, while of recent research interest (see Allen et al., 2020; Bolino & Turnley, 2005; Harvey et al., 2017; Twenge, 2000), have been neglected in the leadership literature. This research seeks to contribute to leadership theory by bringing together previously unexplored "corners" of the literature, highlighting the multifaceted impact of transformational leadership not only on productivity but also on employees' work-life quality.

> *"Leaders can also shape and alter and elevate the motives and values and goals of followers through the vital teaching role of leadership. This is transforming leadership."* (Burns, 1978, p. 551)

2 Theoretical background

In this section, we will attempt to present the two most important theories that underpin this research: transformational leadership theory (Bass, 1985a; Burns, 1978), and job demands-resources theory (JD-R; Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001). Both theories are well-established conceptual paradigms that are widely used in the research literature. Indeed, as we're seeing in the upcoming chapters, these two theoretical approaches have frequently been combined for the conceptualization, analysis, and interpretation of numerous research hypotheses in a wide range of scientific areas, including organizational psychology (e.g., Arnold, 2017; Breevaart & Bakker, 2018; Diebig et al., 2017; Perko et al., 2016) and management (e.g., Hetland et al., 2018; Kloutsiniotis et al., 2022).

To summarize, the transformational leadership and job demands-resources theories will be employed to develop, assess, and interpret the proposed relations of the hypothesized model under analysis in the study.

2.1 The job demands-resources theory

The job demands-resources theory was first proposed over twenty years ago (JD-R; Demerouti, Bakker, Nachreiner, et al., 2001), and since then has influenced numerous researchers and practitioners (see Bakker & Demerouti, 2017; Beraldin et al., 2019; Crawford et al., 2010). The JD-R is a resource-based stress theory that incorporates many possible working conditions, can be used as a tool for human resource management, can be applied to a wide range of occupations, and can be used to improve employee wellbeing and performance (Bakker & Demerouti, 2007; Crawford et al., 2010).

As per Lazarus and Folkman (1984), stress is defined as a disruption of the cognitive, emotional, and environmental state's balance due to external factors. These external factors, which have traditionally been referred to as stressors, may also result in a balance of the cognitive and environmental structure or a state of well-being depending on the performance capacities, such as the available coping resources within the person at a given time (Demerouti, Bakker, de Jonge, et al., 2001; Demerouti, Bakker,

Nachreiner, et al., 2001). Burnout is identified as the manifestation of prolonged workplace stress (Hildenbrand et al., 2018). The JD-R theory is based on the assumption that, while each occupation may have specific working traits associated with job stress or burnout, these traits/factors can be classified into two broad categories: job demands and job resources, resulting in an integrated and holistic conceptual framework that can be applied to a variety of occupational settings, regardless of the specific demands and resources involved (Bakker et al., 2008; Bakker & Demerouti, 2007).

Demerouti, Bakker, Nachreiner, et al. (2001) conceptualize job demands as those aspects of a job that necessitate sustained physical, cognitive, and emotional effort or skills and are thus associated with psychological costs. Examples are work pressure, work overload, physical demands, work-family conflict, and emotionally demanding interactions with clients (Bakker et al., 2005). Although job demands are not always negative, they can become work stressors when meeting those demands necessitates a significant amount of effort from which the employee has not adequately recovered (Bakker & Demerouti, 2007). Conversely, job resources refer to those physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals, reducing job demands and the physiological and psychological costs associated with them, or encouraging personal growth and development. Employee autonomy, job control, potential for qualification, participation in decisions, information sharing, performance feedback, social support, and growth opportunities are examples of job resources.

A second assumption in the JD-R theory is that job stress or burnout develops when certain job demands are high and certain job resources are limited (Demerouti, Bakker, Nachreiner, et al., 2001). Building on it, the JD-R theory also proposes two interaction effects (i.e., boosting and buffering effects) (Bakker et al., 2005). The first interaction effect, known as the boosting effect, implies that job resources increase employee engagement, particularly when job demands are high. It seems likely that employees feel especially engaged in their work on days when they have a sufficient amount of resources available to deal with challenging job demands (Breevaart & Bakker, 2018). In turn, the second interaction effect, known as the buffering effect, points out that job resources protect employees from the negative effect of hindering job demands. This is because job resources refill energetic reserves that are depleted

when meeting job demands by providing employees with tools to deal with workplace stressors (Breevaart & Bakker, 2018).

In total, the JD-R theory can be summarized in the following eight statements (Bakker & Demerouti, 2017):

1. All types of job characteristics can be classified into one of two categories: job demands and job resources. Job demands and job resources trigger two distinct processes: a health-impairment process, where job demands will initiate an energy depletion process, and employees will gradually feel used up and worn out as a result of the depletion of energy and increased stress caused by responding to demands; and a motivational process, where perceived job resources can help employees grow, learn, and develop, as well as meet their needs for autonomy and competence. They can also increase their willingness to devote their efforts and skills to the work task and thus invest in their task performance. Therefore, job demands predict exhaustion, whereas job resources predict engagement. In addition, job demands can predict task performance through exhaustion (Bakker et al., 2004, 2005), whereas job resources can predict contextual performance through engagement (Bakker et al., 2008; Breevaart et al., 2015).
2. Job resources can mitigate (the buffering effect) the effects of job demands on the strain. By extension, employees who have many job resources available can cope better with their job demands.
3. When job demands are high, job resources have a greater impact on motivation. This statement is consistent with the conservation of resources theory (Hobfoll, 1989, 2001) that all resources gain motivating potential and become especially useful when needed.
4. Personal resources, including optimism and self-efficacy, could indeed serve a similar purpose as job resources. Personal resources, in particular, refer to people's beliefs about how much control they have over their environment (Bakker & Demerouti, 2017). Individuals with high levels of optimism and self-efficacy genuinely think that good things will happen to them and that they will be capable of dealing with unexpected events. Thus, personal resources have an immediate positive impact on work engagement. Furthermore, personal resources mitigate the

negative impact of job demands on strain while enhancing the positive impact of job demands on motivation.

5. Job strain has a negative effect on job performance, whereas motivation has a positive effect. Motivation assists in being goal-oriented and concentrating on work tasks. Moreover, engaged employees have the energy and enthusiasm to perform well. Employees who are exhausted or have health problems, on the other hand, lack the energy to meet their work goals.
6. Motivated employees are more likely to engage in job crafting behaviors, which lead to higher levels of job and personal resources and even higher levels of motivation.
7. Employees who are stressed out by their jobs are more likely to engage in self-defeating behaviors, which leads to increased job demands and even greater job strain. Self-undermining is a result of high levels of job strain and serves as the fuel for a vicious cycle of high job demands and strain. It also refers to behavior that creates obstacles that may diminish performance (Bakker & Demerouti, 2017). Employees who engage in self-defeating behavior are more likely to experience high levels of job strain (e.g., exhaustion). As a result, they interact poorly, make more mistakes, and cause more conflicts, adding to the already demanding job demands.

In sum, according to the JD-R theory, the specific risk factors of every work environment associated with motivation and job stress can be classified into two general categories (i.e., job demands and job resources). Additionally, the JD-R theory assumes two processes that explain the relationships between engagement and burnout (Bakker et al., 2004; Crawford et al., 2010). First, job demands trigger an energy depletion process, which, when combined with increased stress from responding to demands, gradually leads to employees feeling used up and worn out. Thus, job demands have a direct positive relationship with burnout. Second, job resources activate a motivational process. At the same time, individuals with larger pools of resources are more easily able to meet demands and protect themselves from the strains of resource depletion. Hence, job resources have a direct positive relationship with engagement and a direct negative relationship with burnout.

To date, the JD-R theory has been successfully applied to a vast number of predictors across the literature, such as work overload (Chen et al., 2017; Karatepe, 2013), downsizing (Dlouhy & Casper, 2021), motivation (Gillet et al., 2020), emotional

exhaustion (Hatch et al., 2019), work-family conflict (Bande et al., 2019; Huynh et al., 2014; Karatepe, 2013), high-performance work systems (Kloutsiniotis & Mihail, 2020) and leadership (Breevaart et al., 2015; Perko et al., 2016). The leadership literature, in particular, emphasizes the JD-R theory's significant contribution to the transformational leadership theory (e.g., Diebig et al., 2017; Fernet et al., 2015; Hetland et al., 2018; Kloutsiniotis et al., 2022).

2.2 The transformational leadership theory

Leadership is one of the most researched concepts in the social sciences, with significant scholarly effort devoted to comprehending the impact of leadership (see Clarkson et al., 2020; Ng, 2017; G. Wang et al., 2011). At the same time, leadership is a critical challenge for many organizations (Fernet et al., 2015; van Knippenberg & Sitkin, 2013). Although there has previously been a strong emphasis on developing leaders at the highest organizational levels, new organizational mind-sets such as information sharing, decentralization of decision-making authority, and widespread use of teams have made the development of leaders at all organizational levels of increasing importance (see Bass, 1990; Lowe et al., 1996). There are numerous ways of defining leadership. Nevertheless, the definition of leadership should be determined by the goals to be served; at the same time, definitions can be broad, encompassing many aspects, behaviors, and attributions, or narrow (Bass & Bass, 2008).

Leadership, according to Bass and Bass (2008), is a widespread phenomenon in humans and several animal species. This phenomenon can be identified as a behavior of influence, a process, or a personality trait (Patiar & Wang, 2016). To be more accurate, leadership can be termed as the process of social influence among leaders and followers, that enhances the achievement of organizational goals (Yukl, 2010). To put it another way, leadership entails motivating followers to pursue collective or at least joint goals that reflect both the leaders' and followers' values and motivations (Bass & Bass, 2008; Biswas & Varma, 2011). Furthermore, on an academic level, leadership has been defined as a performative science, a process by which practitioners and scholars socially create the phenomenon of leadership (Hannah et al., 2014).

Burns (1978) gives a broader definition of leadership as he describes it as a framework of action that seeks to engage individuals, to various degrees, across the levels and interstices of society. Through the pivotal teaching role of leadership, leaders can influence, change, and enhance the motives, values, and goals of their disciples (Burns, 1978, 2003). Accordingly, concern for the needs and desires of followers is central to leadership principles and practices (see Biswas & Varma, 2011; Burns, 2003; Siangchokyoo et al., 2020). As such, leadership over human beings occurs when individuals with specific motives and goals mobilize institutional, political, psychological, and other resources in competition or conflict with others to arouse, engage, and satisfy the motives of followers; transforming leadership occurs when one or more people interact with others in such a way that leaders and followers raise each other's motivation and morale (Burns, 1978). Their objectives, which may have begun as distinct but related goals, have become merged.

Bass contrasts transactional or exchange-based leadership, in which leaders set expectations and reward followers for meeting them, with transformational leadership, in which leaders inspire followers to think beyond self-interest and work for the greater good (Bass, 1985b; Bass et al., 2003; Dvir et al., 2002). Bass identifies followers as those who engage in unrestricted behavior and cultivate follower autonomy under the leadership's vision (Bass, 1985b; Bass & Steidlmeier, 1999). Consequently, according to Bass' conceptual framework, genuine transformational leadership necessitates employee empowerment rather than employee dependence; thus, transformational leaders boost followers' self-esteem and performance value, resulting in higher levels of motivation (Bass, 1990; Lowe et al., 1996; Waldman et al., 1987; G. Wang et al., 2011). Therefore, whereas transactional leadership may result in expected performance, transformational leadership has the potential to result in performance that exceeds expectations (Bass, 1985a; Bass & Riggio, 2006; C. Cheng et al., 2016; G. Wang et al., 2011).

It is not strange that leadership concepts and definitions have evolved and expanded (see Bass & Bass, 2008; Hannah et al., 2014; Yukl, 2010). Leadership was thought to be a subject of trying to impress the leader's will and influencing obedience in the first few parts of the twentieth century. Now, in the digital age, leadership is viewed as more of a consulting and shared decision-making process. Granting there are

numerous conceptualizations of leadership, we chose Bass's transformational leadership model (1985a) as our main conceptual framework because, even though it has its detractors (for critical review, see Crede et al., 2019; Hannah et al., 2014; Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013; Yukl, 1999), transformational leadership is undoubtedly the broadest leadership framework (see Arnold, 2017; Clarkson et al., 2020; Judge & Piccolo, 2004; Ng, 2017; G. Wang et al., 2011). Moreover, transformational leadership theory has received extensive research and is commonly used in leadership development programs (see Bass & Bass, 2008; Bass & Riggio, 2006; G. Wang et al., 2011); at the same time, transformational leadership puts a premium on affect, emotion, attitude, behavior, and individualism (see Clarkson et al., 2020; Gottfredson & Aguinis, 2017; Lowe et al., 1996; Montano et al., 2017; G. Wang et al., 2011).

2.2.1 Historical retrospection of transformational leadership

Transformational leadership has promptly become the preferred approach for much of the research and practice of leadership theory (see Bass, 1999; Clarkson et al., 2020; Crede et al., 2019; Lowe et al., 1996; Montano et al., 2017; Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013; G. Wang et al., 2011), as such, has aroused the curiosity of scholars, practitioners, and students of social sciences, management, and economics in a variety of ways (Bass & Riggio, 2006).

The beginning of the foresaid theory's riveting influence is placed about a century ago, specifically in the 1920s, when the prominent sociologist and political economist Max Weber (1922/1947) introduced a spiritual concept—which he attributed as "charisma"—into the social sciences to term leaders who are perceived as endowed with extraordinary aptitudes (see Bass & Bass, 2008; Burns, 1978; Tucker, 1968; Weber, 1947). The term charisma, whose original meaning was "gift"—a Latinized form of Greek "χάρισμα"; favor, divine gift—, has a central role in transformational leadership theory and is typically reserved for leaders who, through their influence, can motivate followers to achieve exceptional accomplishments (House, 1976; Tucker, 1968). Such leaders frequently have a profound impact on not only their followers but also entire

social systems (Burns, 1978, 2003; Weber, 1947).

It is worth noting that depending on where the analysis's roots are located, such leadership has been referred to as charismatic (following Weber, 1947; House, 1976; e.g., Conger & Kanungo, 1987; Shamir et al., 1993), transformational (following Downton, 1973; Burns, 1978; e.g., Bass, 1985; Tichy & Devanna, 1990), charismatic/transformational (Hunt, 1999; Kirkpatrick & Locke, 1996), or visionary leadership (Bennis & Nanus, 1985; Sashkin, 1987, 1988). Whether these labels refer to the same concepts or not, is a point of discussion and negotiation among academics with some stating that there is talk of different perceptions (e.g., Avolio et al., 1999; Conger & Kanungo, 1987; Yukl, 1999), related but distinct views (e.g., Bass, 1999; Bass & Riggio, 2006; Bass & Steidlmeier, 1999; Tichy & Devanna, 1990), or, according to others, of absolutely identical concepts (e.g., Hunt, 1999; Kirkpatrick & Locke, 1996; van Knippenberg & Sitkin, 2013). That said, while this is an intriguing subject, it will not be explored further in this work because it falls outside of the scope of the matter at hand.

In “Wirtschaft und Gesellschaft” (1922), which was translated into English by Henderson and Parsons (1947), Weber described charisma as the utmost revolutionary force, capable of producing an entirely new orientation through followers’ complete personal dedication to leaders and of inspiring followers to accept and carry out the leader's will without hesitation, question, or regard for one's self-interest (House, 1976; Weber, 1947). Until then, charisma was a theological concept that refers to a certain quality of an individual personality under which he is distinguished from ordinary men and treated as blessed with supernatural, or at least specifically exceptional powers or qualities. Prophets, people with a reputation for therapeutic or legal wisdom, and war heroes all receive this unusual kind of deference in primitive circumstances (Bass & Bass, 2008; Burns, 2003; Weber, 1947). Thus, Weber (1947) applied the concept of charisma to enlighten the development and management of complex organizations in which the gift of extraordinariness as a person was now bestowed by colleagues and followers instead of by God (Tucker, 1968).

According to Weber (1947), the charismatic leader institutionalize his authority, not as a result of enacted position or traditional dignity, but as a result of grace gifts (i.e. charisma) (Tucker, 1968). However, the majority of both psychology and economics

scholars continued to conceptualize leadership first and foremost as an exchange relationship, supporting the notion of contingent reinforcement—providing a reward or compensation in exchange for the desired behavior—as the underlying concept for leadership research (see Bass & Riggio, 2006; Burns, 1978, 2003). Gradually, a wind of change blew up, and by the 1970s, behavioral theories of leadership effectiveness such as path-goal theory (House, 1971), and Four-Factor Theory (Bowers & Seashore, 1966) had taken hold, while transformational and charismatic leadership theories have been on the rise. House's (1976) theory of charismatic leadership and Burns's (1978) articulation on transforming leadership greatly expanded empirical work (Bass & Bass, 2008). The post-Weberian charismatic leadership theory was envisioned initially by Tucker (1968) and entrenched by House (1976) in terms of particular behaviors, attributes, and statements.

Consistent with Tucker, the “charismatic” effect of charismatic leadership seems to be more emotional than calculative in that the follower is inspired to give unquestioning obedience, loyalty, commitment, and devotion to the leader and the cause that the leader represents (see Conger & Kanungo, 1988; House, 1976; Tucker, 1968). Building on the ideas of Weber (1947) and Tucker’s work (1968), House (1976) formulated the charismatic leadership theory and defined operationally charismatic leadership in terms of its effects, stating that a charismatic leader is any leader who has the "charismatic effects" on followers to an unusually high degree, such as followers’ trust in the leader’s beliefs, unquestioning obedience, and approval of the leader, identification with the leader, emotional engagement with the mission, high objectives, self-efficacy, and collective effectiveness. House (1976) outlined the effects of charismatic leadership and developed eight prepositions that constitute the foundation of this theory. Furthermore, he identified the charismatic leader's characteristics, namely dominance, self-confidence, need for influence, and a strong conviction in the moral righteousness of his or her beliefs. It is hypothesized that charismatic leaders will employ these characteristics in conjunction with specific behaviors (i.e., goal articulation, role modeling, personal image building, demonstration of confidence and high expectations for followers, and motive arousal behaviors) (see House, 1976, 1999).

Based on House's theory, refined versions of charismatic leadership have been proposed by several theorists, including Conger and Kanungo (1987, 1988, 1994),

Sashkin (1987, 1988), and Shamir, House, and Arthur (1993; 1998). Downton (1973) was the first to mention transformational leadership as a distinct leadership behavior from transactional leadership (Bass & Bass, 2008; Bass & Riggio, 2006). To be more specific, Downton (1973) observed that followers of a transactional leader are most eager to transact commodities with the leader relying on their perception that the leader can grant them their most desired choices. By contrast, the charismatic leader particularizes a vision that the follower considers certainly worthy of additional effort, enhancing the follower's commitment. The opportunity for action in the development of this "charismatic" commitment is likely to be greater than in strictly transactional relationships because a follower who identifies with a leader can transform his behavioral pattern without necessarily bargaining with the leader. This process is what Downton described as transformational leadership (Downton, 1973).

More than a quarter-century ago, Burns (1978) was the first to formalize transformational leadership as a theory, but along with Downton (1973), he presented the new paradigm as opposed to the transactional leader. In his seminal book “Leadership” (1978), Burns conceptualized leadership as either transactional or transformational. With perspectives from Maslow’s needs hierarchy (1970) and based on a qualitative analysis of the biographies of various political leaders (e.g. Franklin D. Roosevelt, John F. Kennedy, etc.), Burns suggested the construct of transformational leadership—using the lesser-used term “transforming”—as a contrast to the transactional leadership. Thus, per Burns, on one there are transactional leaders who exchange valent rewards contingent upon a display of desired behaviors, and on the other, there are transforming leaders who ask their followers to put the group, organization, or society ahead of their self-interests and motivate them to go above and beyond what they expected to do.

Inspired by House’s theory of charismatic leadership (1976), and Burns’ theory of transforming leadership (1978), Bass and his colleagues established the transformational leadership theory (Bass, 1985a, 1985b) as well as the metrics for measuring it (Multifactor Leadership Questionnaire – MLQ; Bass & Avolio, 1995), stimulating the growth of interest in transformational leadership research in organizational behavior (van Knippenberg & Sitkin, 2013). Howbeit, Bass proposed that transformational leadership augmented the effects of transactional leadership on the

efforts, satisfaction, and effectiveness of followers, modifying Burns' conceptualization of leadership as either transforming or transactional. In a nutshell, Bass developed the multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995) to assess different leadership styles, visualizing transformational and transactional leadership constructs as complementary rather than antagonistic. This led to an examination of the entire spectrum of leadership, from passive, laissez-faire leadership to levels of transactional leadership and, finally, transformational leadership (Avolio & Bass, 2002; Bass & Bass, 2008).

In addition to the foregoing, the concepts of charismatic and transformational leadership styles have been addressed in the works of many scholars (e.g., Bennis & Nanus, 1985; Conger & Kanungo, 1987, 1988; Hunt, 1999; Kirkpatrick & Locke, 1996; Podsakoff et al., 1990; Rafferty & Griffin, 2004; Sashkin, 1987, 1988; Tichy & Devanna, 1990; Yukl, 2010). Unlike conventional leadership theories, which focus on rational mechanisms, transformational and charismatic leadership theories emphasize emotions and values. The importance of symbolic behavior and the role of the leader in making events meaningful for followers is also acknowledged in the newer theories (see Conger & Kanungo, 1994; Hannah et al., 2014; Tichy & Devanna, 1990; Yukl, 1999, 2010). Briefly, through an imaginary line that could connect Weber's charismatic leader, as the early part of the theory of transformational leadership, with the theory itself, the transformational leader could be identified as one who encapsulates a vision of the future that peers and followers can share, intellectually stimulates followers, and pays close attention to the personal differences between individuals (Bass, 1985a, 1999; Waldman et al., 1987). In the following section, we will attempt to define transformational leadership and its relationship to charismatic leadership.

2.2.2 Defining transformational leadership

Almost a decade ago, Van Knippenberg and Sitkin (2013,) two of the fiercest "opponents" of the charismatic and transformational leadership theories, raised the question of what leadership is and how it can be defined. As they aptly argue, there does not appear to be a theoretically sound and circumscribed definition of transformational

leadership (see also Hannah et al., 2014; Siangchokyoo et al., 2020; Yukl, 1999), hence it is described in operational terms rather than conceptually defined. Indeed, a study of the leadership literature reveals that the prevailing definition of transformational leadership is entirely based on Bass's theoretical model (Bass, 1985a, 1985b, 1990) and the accompanying measurement instrument, the multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995), which he and his colleagues established (Antonakis et al., 2003; Avolio et al., 1999; Bass & Avolio, 1995). And, while several leadership theorists have attempted to define transformational leadership, almost all of their efforts appear to have remained within this theoretical context.

As such, transformational leadership has been termed as visionary, empowering, and intellectually stimulating leadership behaviors emphasizing shared goals and mutual respect between leader and followers (see Carless et al., 2000; Lowe et al., 1996); as a construct used to describe how leaders to influence and stimulate followers to make altruisms, stir followers to consider more than their self-interest for the common good, devote to astounding goals, and perform above and beyond the expectations specified in the implied or stated exchange arrangement by changing their morale, ideals, interests, and values (see Antonakis et al., 2003; Dvir et al., 2002; Katou et al., 2020; Luo et al., 2019; Pieterse et al., 2009); as a leadership style that improves followers' motivation, morale, and performance through a variety of behaviors, including serving as role models; promoting a sense of vision; and challenging followers' beliefs and assumptions (see Dóci & Hofmans, 2015; Howell & Avolio, 1993).

That shown, leadership researchers and theorists defined transformational leadership in terms of its impact on followers and, by extension, societal systems—fostering pride, respect, and trust; shifting motivation away from self-interest and toward the common good; empowering and motivating above-average performance, uplifting change, and innovation—while the same can be said for charismatic leadership (see also Burns, 1978; Downton, 1973; House, 1976; Weber, 1947). For instance, Weber (1947), who was the first to discuss the implications of charismatic leadership for organizations (Clarkson et al., 2020; Judge & Piccolo, 2004), described the charismatic leader more spiritually as someone who unveils a supreme mission or course of action that may appeal to potential disciples in and of itself but is carried out because the disciples believe their leader is exceptionally bestowed. House (1976), the first to use

the notion of charismatic leadership in emerging organizational research (Avolio & Bass, 2002; Judge & Piccolo, 2004), built on Weber (1947) and Tucker (1968) to define charismatic leadership more operationally. House proposed that charismatic leaders influence their followers by instilling trust in the leader's beliefs, unquestioning obedience, and acceptance of the leader; identification with the leader; emotional involvement with the mission; elevated goals; self-efficacy; and collective efficacy (House, 1976, 1999).

Counting on House's work, Bass (1985a, 1990) argues that charismatic leaders have a lot of power and authority, and they stimulate and inspire their followers with the idea that, with some additional effort, they can achieve great things. Simultaneously, followers want to identify with them, and they have a lot of trust and confidence in them. After all, it's not by chance that charisma or charismatic leadership is central to Bass' transformational leadership conceptual framework (Bass, 1985a), although it was inspired by Burns's (1978) definition of a transforming leader. Despite transformational leadership sharing many characteristics with charismatic leadership, charisma is only one constituent of transformational leadership (Bass, 1985a; Bass & Riggio, 2006; Yukl, 1993).

Downton (1973) and then Burns (1978) were the first to distinguish a transforming from a transactional leader (Avolio & Bass, 2002; Gao et al., 2020), where the latter is seen as a leader who makes contact with followers to exchange something of value, such as performance bonuses, mutual support, or bilateral disclosure (Lowe et al., 1996). In other words, transactional leadership is characterized by a "give-and-take" relationship between leader and followers in which followers receive financial or social benefits in exchange for following a leader's wishes (Burns, 1978, 2003) and then keeping track of these "give-and-take" relationships (Avolio & Bass, 2002; Podsakoff et al., 1990). Therefore, transactional leadership is thought to be a more common and traditional type of leadership that is based on an exchange between the leader and the follower that illustrates the self-interest of the follower (Bass, 1999), and where the leaders provide rewards in return for the follower's performance (Bass, 1990; Katou, 2015).

At the other end of the leadership style spectrum, Burns (1978) viewed

transforming leadership as a leadership behavioral context where the leader and the follower both boost each other's motivation and morale. In particular, Burns' transforming leader engages followers closely rather than using power; uses moral leadership; enhances followers' level of awareness regarding the worth and significance of designated outcomes and means of achieving them; uplifts followers' level of competence, principles, and concerns for the well-being of others, the organization, and society; and gets followers to surpass their self-interests for the sake of the common good (Bass, 1985a; Burns, 1978, 2003). Burns' transforming leader has the unique ability to transform individuals, groups, organizations, and societies.

2.2.2.1 The full range of leadership framework

In his influential book "Leadership and performance beyond expectations", Bass (1985a) introduced his multidimensional theory of transformational and transactional leadership, which was grounded in Burns's (1978) conceptualization, with several alterations. Nonetheless, Bass disagreed with Burns that transformational and transactional leadership are two ends of the same continuum. Rather, he suggested that transformational leadership supplements transactional leadership and proposed that leaders can be both transformational and transactional (Bass, 1985a, 1985b). Additionally, Bass postulated that transformational leadership augmented the effects of transactional leadership (see augmentation effect) on the efforts, satisfaction, and effectiveness of followers (Bass, 1985a) and demonstrated empirically that transformational and transactional leadership are two positively correlated dimensions (Bass, 1985b). Burns eventually agreed that transformational and transactional leadership were multidimensional rather than opposite ends of a single dimension (Bass & Bass, 2008; Burns, 2003).

Bass and colleagues (Avolio et al., 1999; Avolio & Bass, 1995; Bass, 1985b; Bass & Steidlmeier, 1999; Bycio et al., 1995; Howell & Avolio, 1993; Waldman et al., 1987) conceptualized transactional and transformational leadership as two multidimensional constructs and identified a total of seven dimensions of leadership behaviors—four-dimensional transformational leadership, two-dimensional transactional leadership, and laissez-faire or non-leadership—which they termed idealized influence (or charisma

or idealized leadership), inspirational motivation (or inspirational leadership), intellectual stimulation, individualized consideration, contingent reward, management-by-exception (active and passive) and laissez-faire leadership (or non-leadership). These seven dimensions of leadership behaviors comprise the so-called full range of leadership model (FRL; Avolio & Bass, 2002; Bass, 1990, 1999), and each can be assessed with the multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995).

2.2.2.2 Transformational leadership behavior dimensions

As previously stated, transformational leaders do more with colleagues and followers than simply establish simple transactions or arrangements, because they behave in a way to attain superior results by employing one or more of the four core components of transformational leadership, that is, idealized influence (or charisma or idealized leadership), inspirational motivation (or inspirational leadership), intellectual stimulation, and individualized consideration (Avolio & Bass, 1995; Bass & Riggio, 2006).

Idealized influence or charisma or idealized leadership is the most essential element of transformational leadership, and it is one of the factors that distinguishes the ordinary manager from the true leader in the organizational context (Bass, 1985b). Idealized influence (or charisma or idealized leadership) refers to both the qualities that followers attribute to the leader and the leader's behavior in terms of being a role model and doing the proper thing (Bass & Riggio, 2006), and it is demonstrated when leaders are respected and trusted, and followers identify with them (Bass, 1990). Leaders accomplish this by first communicating the organization's values, purpose, and also the meaning of its mission, and then behaving under their words (Tichy & Devanna, 1990). To put it more simply, the ability of a leader to debate clear visions that are congruent with organizational goals, thereby cultivating followers' trust and respect, is referred to as idealized influence or charisma or idealized leadership (Bass, 1999), which in turn may provide followers with roles through which to define models for performance improvement (Avolio & Bass, 1995).

When a leader behaves as a role model, exhibiting determination and confidence whilst also inspiring followers to exceed performance requirements, this is termed

inspirational motivation or inspirational leadership and constitutes the second component of transformational leadership (Bass, 1999). Leaders with inspirational motivation communicate high expectations, use symbols to focus efforts, and express important purposes in simple ways (Bass, 1990). In short, inspirational leadership entails leaders acting in ways that inspire followers and stimulate their desire for development by providing purpose and demonstrating positivity and excitement for goals and the future (Avolio et al., 1999; Bass, 1999). All the same, a key aspect of charisma is the ability to inspire, arouse emotions, animate, enliven, or even exalt (Bass, 1985b).

Charismatic leaders, as Bass (1985a) argued, elicit enthusiasm, faith, loyalty, and pride in themselves and their ambitions. Moreover, both idealized leadership (charisma or idealized influence) and inspirational leadership (or inspirational motivation) emerge when a leader envisions a desirable future, demonstrates how it can be achieved, serves as a role model to be followed, establishes high-performance expectations, and demonstrates determination and self-belief (Bass, 1999). Thus, given the easily observable vigorous overlap between notions such as vision, mission, and collective sense of purpose, idealized influence and inspirational motivation are generally so highly correlated in empirical research (see Antonakis et al., 2003; Avolio et al., 1999; Avolio & Bass, 2002; Bass & Bass, 2008; Bass & Riggio, 2006) that they are combined into one construct labeled charisma or charismatic leadership (see also Judge & Piccolo, 2004; Lowe et al., 1996; van Knippenberg & Sitkin, 2013; G. Wang et al., 2011; Yukl, 1999). To be precise, the original three-factor model of Bass (1985a, 1985b), rather than the later four-dimensional model, is quite common in the transformational leadership literature, and the multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995) scale of idealized influence is the most frequently used measure that goes by the label of charismatic leadership (see Rowold & Heinitz, 2007; van Knippenberg & Sitkin, 2013; Yukl, 1999).

The third component of transformational leadership, intellectual stimulation, occurs when a leader motivates followers to be creative and focus on finding solutions to the challenges (Bass, 1985a, 1985a). Intellectual stimulation is defined as behavior that promotes problem-solving and meticulous and innovative consideration of the matters at hand (Bass, 1999); and, may open up new avenues for improving decision-making abilities (Avolio & Bass, 1995). When leaders stimulate their followers' critical

resonance mechanisms by questioning assumptions, restructuring problems, and reaching old situations in innovative ways, they demonstrate intellectual stimulation (Bass, 1990; Bycio et al., 1995).

Individualized consideration, the fourth and final component of transformational leadership, emerges when leaders retain a constructive and individualistic approach toward followers (Bass, 1985b); genuinely care about and are empathetic about them (Bass & Steidlmeier, 1999); and allot effort and consideration to their followers' needs and aspirations (Bass & Bass, 2008), ensuring that they are accountable for their growth but also for the growth of everyone else (Howell & Avolio, 1993). Individualized consideration entails recognizing the diverse needs of followers (Kranabetter & Niessen, 2017), treating each follower as an individual, providing personalized attention, and devoting time to coaching, advising, and developing their skills (Avolio & Bass, 1995; Bass & Steidlmeier, 1999).

2.2.2.3 Transactional leadership behavior dimensions and laissez-faire (non-leadership) behavior

Until the seventies, leadership theory and empirical research were almost entirely focused on the concept of transactional leadership (Avolio & Bass, 2002). Transactional leadership is an exchange relationship between a leader and followers focused on meeting their self-interests (Bass, 1985a; Burns, 1978). According to Avolio and Bass (2002), transactional leadership behaviors take place when a leader rewards or disciplines a follower based on the effectiveness of the follower's performance.

Transactional leaders identify what course of action their followers must implement to reach results; add context role and task demands for their followers so that they are confident in activating required efforts; recognize followers' needs and desires and specify how they will be pleased if required efforts are made (Bass & Bass, 2008). Obtaining goals will appear to be emotionally or materially rewarding (Avolio & Bass, 2002; Bass & Riggio, 2006). Failure, if not overlooked or forgiven, will result in frustration, justification, discontentment, and affective or material punitive measures. If the transaction takes place and the requirements of the leader and follower are

fulfilled, and the leader has the formal or informal authority to provide it, he or she recompenses the follower for the fruitful performance

Transformational and transactional factors were envisaged as continuous on the leadership behavior spectrum (see Antonakis et al., 2003; Avolio et al., 1999; Avolio & Bass, 1995; Bass, 1990; Bass & Avolio, 1995; Bass & Steidlmeier, 1999; Bycio et al., 1995; Waldman et al., 1987). Laissez-faire leadership or non-leadership was added to the bottom of the spectrum (see "2.2.2.1 The full range of leadership framework") as the avoidance of leadership (Bass & Bass, 2008). Transactional leadership depends on contingent reward and management by exception (Avolio & Bass, 2002). The latter dimension is a corrective transaction that is divided into active and passive management-by-exception. If active, the leader oversees the deviations, mistakes, and errors in the followers' performance and takes corrective measures as needed (Bass, 1990; Bass & Bass, 2008). If passive, the leader waits for deviations, mistakes, and errors in the performance of the followers before actually taking corrective measures, believing that "if it ain't broke, don't fix it" (Avolio & Bass, 2002; Bass, 1985b). Negative feedback, criticism, disapprobation, or disciplinary action may be used as corrective measures (Bass & Bass, 2008). Management-by-exception behaviors tend to be inefficient, although they may be necessary for some situations (Avolio & Bass, 2002).

Contingent reward, in which followers acquire perks for complying with the leader's explanations of the paths to objectives (Bass, 1985a), is a fairly effective constructive transaction—although not as much as any of the transformational components—in empowering others to reach higher levels of growth and performance (Avolio et al., 1999; Avolio & Bass, 2002). This dimension of leadership behavior arises when leaders attempt to stimulate followers' behavior through the promise of reward (van Knippenberg & Sitkin, 2013), which includes assigning or obtaining agreement on what needs to be done; promising psychological (implicit) or material (explicit) incentives to followers in exchange for completing the assigned task with success (Avolio & Bass, 2002); and recognizing achievements (Bass, 1990).

The contingent reward has two aspects, namely, contingent reinforcement, and contingent punishment (Bass, 1985b). Contingent reinforcement takes two forms (Bass, 1985b; Bass & Bass, 2008), specifically, implicit (or psychological) processes such as

managerial positive feedback, approval, recognition, and praise for a follower's commendable performance, which are transformational (Antonakis et al., 2003; Avolio et al., 1999); and explicit (or material) processes such as a pay increase, bonuses, a prize, a merit citation, or a promotion, which are transactional (Antonakis et al., 2003; Avolio et al., 1999). On the other hand, contingent punishment can take several forms, such as negative feedback or—less frequently—penalties such as fines, unpaid suspensions, loss of leader endorsement, or discharge (Bass, 1985b).

The last dimension of the full range of leadership behaviors is laissez-faire leadership (Avolio & Bass, 2002; Bass, 1990). Laissez-faire leadership is the avoidance or absence of leadership, which is why it is also known as non-leadership or the lack of any leadership behavior (Antonakis et al., 2003; Bycio et al., 1995). Furthermore, since nothing is transacted under laissez-faire leadership, laissez-faire leaders are also referred to as non-transactional leaders (see Doucet et al., 2015; M. B. Nielsen et al., 2019).

Laissez-faire leaders relinquish responsibilities, elude making decisions (Avolio & Bass, 2002; Bass, 1990), waver to act, are unavailable when needed, and display a lack of consideration for their followers (Bass & Riggio, 2006; Doucet et al., 2015). By definition, laissez-faire leadership is the least active dimension of leadership, as well as the least effective, in line with almost all studies (see Antonakis et al., 2003; Christian et al., 2011; Judge & Piccolo, 2004; Quintana et al., 2015; Sosik & Godshalk, 2000). Granting that laissez-faire leadership shares some characteristics with passive management-by-exception leadership, it has been reasoned that since it represents the nonexistence of any leadership (transformational or transactional), it should be considered separately from the other transactional dimensions (see Antonakis et al., 2003; Avolio et al., 1999; Avolio & Bass, 2002).

Bass's transformational leadership theory is founded on the notion that leaders will typically exhibit behaviors per all three types of leadership (transformational, transactional, and laissez-faire leadership behaviors) to differing extents (Bass, 1985a, 1985b), with the greatest leaders being both transformational and transactional (see Avolio et al., 1999; Bass et al., 2003; Bass & Riggio, 2006; Bass & Steidlmeier, 1999; Bycio et al., 1995). Transactional leaders will communicate to their followers what is required

of them and what they can expect in return for meeting requirements (Bass, 1985a, 1985b). Illumination gives followers confidence that they can meet requirements and accomplish reciprocally beneficial outcomes. Nonetheless, followers' confidence and the significance they place on possible outcomes can be further augmented through transformational leadership (see "2.2.2.4 The augmentation effect").

2.2.2.4 The augmentation effect

Transactional leadership is the foundation for transformational leadership (see Bass, 1985a, 1990, 1999; Bass & Steidlmeier, 1999). Transactional leadership stresses the exchange or transaction that occurs between leaders, peers, and followers (Bass & Riggio, 2006). This exchange is entirely predicated on the leader discussing what is required with others and clarifying the prerequisites and incentives that those others will earn if those requirements are met. Transformational leadership, on the other hand, takes leadership to the next level (Bass & Bass, 2008; Waldman et al., 1987). Inspiring followers to devote to joint values and mission for an organization or unit, challenging them to be creative problem-solvers, and developing followers' leadership capacity through coaching, mentoring, and providing both challenge and support are all examples of transformational leadership (Bass, 1985a; Bass & Riggio, 2006). When a follower is praised with a carrot for reaching agreements and requirements or whipped with a stick for performing poorly to do what was expected of them, the leader is transactional (Bass & Bass, 2008).

Transformational leaders inspire their followers to go above and beyond what they initially planned and believed possible; set high standards for themselves and others, and, strive for greater goals. In some ways, transformational leadership is an extension of transactional leadership; it does not replace transactional leadership but adds to its effects on follower satisfaction and performance (Avolio & Bass, 2002; Bass & Riggio, 2006). While transactional leadership may deliver expected results, transformational leadership can produce results that exceed standards (G. Wang et al., 2011). Transactional leadership—in particular the contingent reward dimension—offers a broad foundation for effective leadership, but transactional leadership can accomplish more effort, efficiency, innovation, risk-taking, and satisfaction if it is augmented by

transformational leadership (Avolio & Bass, 2002).

In sum, a transactional leader fosters such confidence and urge by making clear what performance is required and how requirements will be met as a result, whereas a transformational leader motivates extra effort by straightforwardly boosting the follower's confidence as well as uplifting the value of results by broadening his or her transcendental interests. and that is what Bass (1985a) and his colleagues described as the “augmentation effect” (Bass, 1985a, 1985b; Howell & Avolio, 1993; Waldman et al., 1987)

2.2.3 The measurement of transformational leadership

The paradigms of transforming and transactional leadership were launched by Burns (1978) as a continuous spectrum, with the former at one end and the latter at the other. Transformational and transactional leadership require distinct behaviors (Yukl, 1999). Transactional leaders meet the needs of their followers' immediate self-interests, whereas transformational leaders boost their followers' confidence, motivation, and virtues (Bass, 1999). Bass (1985) and colleagues combined the transformational and transactional structures—which saw as separate but complementary constructs—after acknowledging that both can lead to the accomplishment of the organizational goals and created a tool, known as the multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995), to measure the entire spectrum of leadership behavior and to explore the nature of the relationship of the two structures (Judge & Piccolo, 2004).

The assumption that transformational leadership complements transactional leadership (Bass, 1985a) was empirically validated using MLQ, with subscales to distinguish leadership behaviors even more (see Antonakis et al., 2003; Avolio et al., 1999; Bass, 1985b; Bass et al., 2003; Bycio et al., 1995; Dvir et al., 2002; Howell & Avolio, 1993; Waldman et al., 1987). In particular, confirmatory factor analyses (see Antonakis et al., 2003; Avolio et al., 1999; Bass, 1985b; Bycio et al., 1995; Howell & Avolio, 1993) have identified the components of both transformational and transactional leadership; charisma (idealized influence), individualized consideration, intellectual stimulation, and inspirational motivation are elements of transformational leadership, whereas

contingent reward, and management by exception (passive and active), are elements of transactional leadership. By this reasoning, transformational leadership behavior are highly probable to be inefficient in the utter lack of transactional relationship behavior between leaders and followers (Bass, 1990; Waldman et al., 1987), thus, a leader can be both transformational and transactional (see Bass, 1985b, 1990, 1999; Bass et al., 2003).

2.2.3.1 Multifactor leadership questionnaire and intercorrelation issues

The full range model of transformational and transactional leadership has been applied to leaders in a variety of fields, along with the military, business, politics, nonprofit organizations, health care, public institution, and sports coaching (Bass & Riggio, 2006). Together, as stated by numerous meta-analyses (see Clarkson et al., 2020; Gottfredson & Aguinis, 2017; Judge & Piccolo, 2004; Lowe et al., 1996; Montano et al., 2017; Ng, 2017; van Knippenberg & Sitkin, 2013; G. Wang et al., 2011), the MLQ is the most prevalent instrument for measuring leadership behavior—which measures the full range of leadership model, including laissez-faire leadership—and it is possibly the main reason why Bass's transformational leadership theory spread so rapidly and eventually triumphed over other theories (Carless, 1998; van Knippenberg & Sitkin, 2013; Yukl, 1999). Although the content of the Bass and colleagues' full range model of leadership (FRL; Avolio & Bass, 2002) and its instrument multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995) has been revised quite a few times, the most used version includes four components of transformational leadership (i.e., idealized influence, individualized consideration, intellectual stimulation, inspirational motivation), three components of transactional leadership (i.e., contingent reward, passive management-by-exception, active management-by-exception), and laissez-faire leadership (non-leadership) dimension (see Clarkson et al., 2020; Judge & Piccolo, 2004; Lowe et al., 1996; Montano et al., 2017; Ng, 2017; G. Wang et al., 2011).

Initially, it was proposed that transformational leaders ordinarily employ one or more of the four leadership behaviors outlined in the previous paragraph (Avolio & Bass, 1995; Bass & Avolio, 1995). Even if quite a few research suggests that the four components of transformational leadership can be empirically separated (Avolio et al., 1999; Waldman et al., 1987), other research posits that the components may have little

or no discriminant validity (see Bycio et al., 1995; Carless, 1998; Howell & Hall-Merenda, 1999; Judge & Piccolo, 2004; Lowe et al., 1996; Rowold & Heinitz, 2007; G. Wang et al., 2011). Consistent with Bass and Riggio (2006), even though each component of the FRL framework is conceptually distinct, there are consistent commonalities between them, ergo in much of the research on transformational leadership, the components are combined; due to their high correlation, the MLQ subscales idealized influence (charisma) and inspirational motivation are frequently added to make a single factor of inspirational charisma or charismatic leadership; similarly, the MLQ subscales passive management-by-exception and laissez-faire leadership are frequently combined to constitute a single factor of passive leadership; and, to a smaller degree, all the components of transformational leadership are expected to correlate with the transactional leadership component of contingent reward. Nonetheless, as per Avolio and colleagues (1999), all of the remaining dimensions of the FRL framework can be considered distinct factors.

Given the high intercorrelations found by plentiful studies among the MLQ transformational leadership factors (e.g., Bass, 1985b; Bycio et al., 1995; Carless, 1998; Howell & Hall-Merenda, 1999; Judge & Piccolo, 2004; Lowe et al., 1996; Rowold & Heinitz, 2007; van Knippenberg & Sitkin, 2013; G. Wang et al., 2011), is acceptable all four components to be aggregated to represent the construct of transformational leadership (see Bass & Riggio, 2006; Carless, 1998; Carless et al., 2000). Therefore, oftentimes, the dimensions of transformational leadership are treated as indicators of a single higher-order transformational leadership factor (e.g., Buil et al., 2019; Chang & Teng, 2017; Dóci & Hofmans, 2015; Fernet et al., 2015; Hetland et al., 2018; Kammerhoff et al., 2019; Kloutsiniotis et al., 2022; M. B. Nielsen et al., 2019; Perko et al., 2016; Schermuly & Meyer, 2020; Stein et al., 2021; Tafvelin et al., 2019).

2.2.4 Alternative measures for transformational leadership

The multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995) developed by Bass and colleagues is the most globally acknowledged (see Bass & Bass, 2008; Bass & Riggio, 2006; Clarkson et al., 2020; van Knippenberg & Sitkin, 2013; G. Wang et al.,

2011) and broadly used (see Camarero Izquierdo et al., 2015; Carless, 1998; Crede et al., 2019; Ng, 2017; Siangchokyoo et al., 2020; Yukl, 1999) instrument for measuring transformational leadership. Nonetheless, in response to its components' intercorrelations and dimensionality issues (see "2.2.3.1 Multifactor leadership questionnaire and intercorrelation issues"), the MLQ has inspired other measurement instruments, the majority of which have largely followed Bass's conceptual context (van Knippenberg & Sitkin, 2013; Yukl, 1999). The transformational leadership behavior inventory (TLI) developed by Podsakoff, MacKenzie, Moorman, and Fetter (1990), the global transformational leadership scale (GTL) developed by Carless, Wearing, and Mann (2000), and the alternative multifactor leadership questionnaire (AMLQ) developed by Rafferty and Griffin (2004) are by far the most extensively used alternative instruments (see Bass & Riggio, 2006; Ng, 2017; G. Wang et al., 2011).

2.2.4.1 Transformational leadership behavior inventory

The transformational leadership behavior inventory (TLI; Podsakoff et al., 1990) assesses four essential facets of transformational leadership. The first facet encapsulates the fundamental transformational leadership behavior, which includes, developing and articulating a vision, providing a positive role model, and motivating employees to look beyond their self-interest for the good of the group. The three remaining facets assess the leader's individualized consideration, intellectual stimulation, and high-performance expectations (Podsakoff et al., 1990). The TLI is the most broadly applied alternative measure (see Bass & Bass, 2008; Bass & Riggio, 2006; Ng, 2017) in transformational leadership literature (e.g., Breevaart & Bakker, 2018; Camps & Rodríguez, 2011; Diebig et al., 2017; Luo et al., 2019; Matzler et al., 2015; Morgan et al., 2018; Parr et al., 2013; Yang et al., 2020).

2.2.4.2 Global transformational leadership scale

The global transformational leadership (GTL) scale was developed by Carless, Wearing, and Mann (2000) as a short measure of transformational leadership. This

seven-item scale evaluates a single global construct of transformational leadership. The items capture seven leadership behaviors, namely being charismatic, communicating a clear and positive vision, developing employees, supporting employees, empowering employees, being innovative, and leading by example (Carless et al., 2000). The GTL has been used to a significant degree in the transformational leadership literature (e.g., Buil et al., 2019; Chang & Teng, 2017; Dóci & Hofmans, 2015; Fernet et al., 2015; Kloutsiniotis et al., 2022; Mullen & Kelloway, 2009; K. Nielsen & Daniels, 2016; M. B. Nielsen et al., 2019; Perko et al., 2016; Rahmadani & Schaufeli, 2022; Schermuly & Meyer, 2020; Stein et al., 2021; Tafvelin et al., 2019).

2.2.4.3 Alternative multifactor leadership questionnaire

Rafferty and Griffin (2004) established an alternative measure of transformational leadership, based on leadership measures developed by House (1999) and Podsakoff et al. (1990), claiming that it has a better construct validity than the MLQ. This 15-item rating scale assesses five aspects of leadership: vision, inspirational communication, intellectual stimulation, supportive leadership, and personal recognition (A. E. Rafferty & Griffin, 2004). In the transformational leadership literature, Rafferty and Griffin's (2004) scale has a fairly substantial implementation (e.g., Hobman et al., 2011; Katou, 2015; Marescaux et al., 2019; Syrek et al., 2013).

2.2.5 Charismatic leadership and other concepts relevant to transformational leadership

Styles of leadership are varying behavioral approaches in which leaders structure their interactions with those they affect, that is, their followers (Bass & Bass, 2008). Attempts were made early in the scientific process to identify and categorize the behavioral manifestations of leadership. Researchers have distinguished between transactional leadership behaviors, in which leaders focus on an exchange process of what they and their followers want, and transformational leadership behavior, in which leaders aim to inflame and fulfill their followers' greater needs. The pivotal publications

of House's (1976) charismatic and Burns's (1978) transformational leadership theories proved to be massive leaps forward in the leadership literature. Since then, numerous significant ground-breaking leadership theories have been proposed, counting: charismatic (Conger & Kanungo, 1987, 1988, 1994; Shamir, 1991; Shamir et al., 1993, 1998); transformational (Bass, 1985a; Podsakoff et al., 1990; A. E. Rafferty & Griffin, 2004; Tichy & Devanna, 1990); visionary (Bennis & Nanus, 1985; Sashkin, 1987, 1988, 1998); charismatic/transformational (Hunt, 1999; Kirkpatrick & Locke, 1996; Rowold & Heinitz, 2007; van Knippenberg & Sitkin, 2013); and neocharismatic (House, 1999; House & Aditya, 1997) leadership.

2.2.5.1 Charismatic Leadership and additional measurement instruments

Over the last century, there has been a growing interest in leaders who possess such exceptional qualities that they can deeply influence not only their followers but also entire social systems (see Bowers & Seashore, 1966; Burns, 1978, 2003; Downton, 1973; House, 1971, 1976; Stogdill, 1948; Tucker, 1968; Weber, 1947). Weber's (1947) original charismatic leadership theory outlined how followers attribute extraordinary traits (charisma) to the leader. Transformational leadership shares many similarities with charismatic leadership, but charisma is only one constituent of transformational leadership (Bass & Riggio, 2006). As stated by Bass (1985a), charisma (or idealized influence) is the most important behavior pattern in transformational leadership, however, it is only one of several components with which it is associated, along with inspirational leadership, intellectual stimulation, and individualized consideration. Accordingly, along with its prominent role in transformational leadership theory, charismatic leadership has been the foundation of its own literature, and each has made a significant contribution to the other (Judge & Piccolo, 2004; Yukl, 1999).

Weber's concept of charismatic leadership was quite limited (Bass & Riggio, 2006; A. E. Rafferty & Griffin, 2004; Yukl, 1999). This concept has been customized and renewed to define charismatic leadership in formal organizations through more contemporary conceptual models (e.g., Conger & Kanungo, 1988; House, 1976; Shamir, 1991). These charismatic leadership models term charisma in regards to the amount of impact the leader has over followers and the pattern of leader-follower relationship that

develops (Bass & Bass, 2008; Yukl, 1999). Naturally, the central behaviors in charismatic leadership differ from model to model, and oftentimes from older to later adaptations of the same model (Hannah et al., 2014; Yukl, 1999). Conger and Kanungo's (1987, 1988, 1994) and Shamir and colleagues' (1991, 1993, 1998) conceptual frameworks of charismatic leadership are by far the most prominent among the various charismatic leadership theories.

In line with the Conger and Kanungo (1987, 1988, 1994) theory, core charismatic behaviors encompass vision and articulation, environmental sensitivity (detecting strengths, threats, limitations, and opportunities), unconventional behavior, sensitivity to member needs, taking personal risks and not maintaining the status quo. Furthermore, based on their charismatic leadership theory, Conger and Kanungo proposed an associated measurement instrument, the Conger-Kanungo scale (C-K scale; Conger & Kanungo, 1994). The C-K scale has been used sparingly (Bass & Riggio, 2006; van Knippenberg & Sitkin, 2013), and validation studies found decently good support for the overall assessment of charismatic behavior (Yukl, 1999). The C-K Scale had a much lower correlation among subscales than the MLQ, indicating that the behaviors are operationally defined more clearly and unambiguously.

In Shamir and colleagues' (1991, 1993, 1998) theory, the fundamental charismatic behaviors are ideological emphasis, displaying exemplary behavior, emphasizing collective identity, and supportive behaviors. Likewise, Shamir and colleagues (1994) developed a questionnaire linked to their model to assess these fundamental leadership traits, which appears to have received little consideration (van Knippenberg & Sitkin, 2013; Yukl, 1999). Lastly, Sashkin (1998) developed the leadership behavior questionnaire (LBQ; Sashkin, 1998), which assesses visionary leadership (Bennis & Nanus, 1985; Sashkin, 1987, 1988, 1998), a subset of charismatic leadership that is loosely related to transformational leadership (Bass & Riggio, 2006).

2.2.5.2 Charismatic versus transformational leadership, and the neocharismatic leadership model

It is difficult to compare transformational leadership to charismatic leadership

due to conceptual ambiguity and inconsistent terminology usage (see Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013; Yukl, 1999, 2010). Consequently, how equivalent and congruent transformational and charismatic leadership are is one of the most crucial theoretical challenges. Which variants of the theories are compared determines how equivalent they are. According to Bass (1985a), charisma and inspirational motivation dimensions comprised a single component distinct from the transformational indicators of intellectual stimulation and individualized consideration, whereas Conger and Kanungo (1987) defined charisma as a set of behaviors and attributions like being unconventional, visionary, and willing to take risks. Nonetheless, several researchers lessen the contrasts between transformational and charismatic leadership (see House, 1999; House et al., 1991; House & Aditya, 1997) or even refer to charismatic and transformational leadership as basically one notion with various names, whether as distinguishable concepts of transformational or charismatic leadership, considering the conceptual commonality between frameworks and the assertion that the available empirical evidence appears to elicit from robustly overlapping measurement instruments (see Hunt, 1999; Kirkpatrick & Locke, 1996; Rowold & Heinitz, 2007; Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013).

All four components of Bass's (1985a) transformational leadership theory are contained within House's (1977) concept of charismatic leadership, according to House. Furthermore, House and Aditya (1997) conflated charismatic leadership with transformational leadership, coining the term neocharismatic. Indeed, the main charismatic theories have been modified in the latest years in directions that appear to relocate them nearer to the transformational theories, whilst foremost transformational theories have been adjusted to integrate new forms of efficient leadership behavior and attitude (van Knippenberg & Sitkin, 2013; Yukl, 1999). For instance, House (1999) states, that most leadership frameworks have included inspirational motivation, intellectual stimulation, and individualized consideration components in varying degrees. Many writers have expanded the definition of transformational leadership to include nearly every single form of effective leadership, irrespective of the latent contextual factors (Yukl, 1999). The term applies to either individual followers as well as organizational units being transformed. In addition, Van Knippenberg and Sitkin (2013) highlight the notable theoretical and measurement resemblances, as well as the significant overlap,

among facets of varying transformational leadership (Bass & Avolio, 1995; Podsakoff et al., 1990; A. E. Rafferty & Griffin, 2004) and charismatic leadership (Conger & Kanungo, 1994; Sashkin, 1998; Shamir et al., 1998) theories.

House and Aditya (1997) took it a step further and developed the theory of the neocharismatic leadership paradigm (NLP; House & Aditya, 1997), which included theoretical approaches to transformational leadership (Burns, 1978; Bass, 1985a), charismatic leadership (House, 1977; Conger & Kanungo, 1987; Shamir, House, & Arthur, 1993), and visionary leadership (Bennis & Nanus, 1985; Sashkin, 1988). There is no dividing line between charismatic and transformational leadership, according to scholars such as House (1999), Hunt (1999), and van Knippenberg and Sitkin (2013). They endorse referring to charismatic and transformational leadership as a synthesis of the two paradigms since they see the same joint motivating factors in both; for instance, they see a robust commonality between Bass' idealized influence (charisma) and individualized consideration dimensions, Conger and Kanungo's vision articulation and sensitivity to follower needs dimensions, and Shamir and colleagues' ideological emphasis and supportive behaviors dimensions, as well as between Bass' intellectual stimulation dimension, Conger and Kanungo's engaging in unconventional behavior and not maintaining the status quo dimensions, and Shamir and colleagues' emphasizing collective identity dimension.

Unquestionably, treating the two models as equivalent has become standard procedure across many articles and books (see Hunt, 1999; Kirkpatrick & Locke, 1996; van Knippenberg & Sitkin, 2013; Yukl, 1999). Nonetheless, leadership scholars have questioned the assertion of equivalence, perceiving transformational and charismatic leadership as distinguishable but partially overlapping mechanisms (see Avolio et al., 1999; Bass et al., 2003; Bass & Steidlmeier, 1999; Burns, 2003; Conger & Kanungo, 1994; Yukl, 1999). In line with Bass (1985a, 1985b), charisma is a fundamental factor of transformational leadership, yet a leader can be charismatic without being transformational. Conger and Kanungo (1994), along with Sashkin (1998), concentrated on the procedural impacts of charisma on followers as well as the leader's need to communicate a vision that is embraced and pursued. Because charisma is also identified as "idealized influence", there is some debate about whether transformational leadership is a wider concept than charismatic leadership (van Knippenberg & Sitkin,

2013). But even so, several researchers contend that a leader could be transformational while not being charismatic (see Bass & Bass, 2008; Bass & Riggio, 2006; Bass & Steidlmeier, 1999; Burns, 2003; Tichy & Devanna, 1990), while others have even concluded that the two conceptualizations of leadership may be incongruent (Yukl, 1993, 1999, 2010).

House and Aditya (1997), and other theorists and empiricists, considered the transformational leadership framework to be similar to, if not identical to, charismatic leadership. Nonetheless, Bass and colleagues (Avolio & Bass, 2002; Bass, 1999; Bass & Bass, 2008; Bass & Riggio, 2006) advocate that while the same leaders seem to be inspirational, intellectually stimulating, and individually regarded as charismatics, it is beneficial to keep the constructs distinct since they engage different behaviors and growth. It should be noted that, while inspirational motivation and charismatic leadership are strongly correlated, and charismatic leaders are inspirational, inspirational leaders are not always charismatic (Bass & Bass, 2008). Tichy and Devanna (1986) outlined transformational leadership as a behavioral process that can be learned and managed rather than being solely due to charisma. They defined transformational leadership as a methodical leadership approach that includes a meaningful and organized quest for change, detailed analysis, and the ability to shift resources from areas of lower productivity to areas of higher productivity to achieve a strategic transformation (Tichy & Devanna, 1990).

Yukl (1999) elaborated on the significance of distinguishing between the two concepts. He highlights the necessity of acknowledging that existing leadership literature does not provide a solid answer about the congruence of transformational and charismatic leadership because questionnaires and qualitative studies were not designed to investigate this research question (Yukl, 1999, 2010). Transformational and charismatic leadership are frequently considered interchangeable, but there are significant differences that should not be overlooked or undervalued (see Bass & Bass, 2008; Bass & Riggio, 2006; Yukl, 1999). As Yukl (1999) debates, a transformational leader is more likely to engage in behaviors that will motivate followers and make them collaborate in achieving important goals, whereas a charismatic leader is more likely to accentuate the need for radical transformation, which can only be achieved if followers place their faith and confidence in the leader's proven capabilities. Because the central

behaviors of transformational and charismatic leadership are incompatible, both concepts of leadership are unlikely to take place simultaneously (Yukl, 1993, 1999). Accordingly, it appears best to consider the two concepts of leadership as distinguishable but somewhat interrelated processes for the time being (see Bass & Riggio, 2006; Burns, 2003; Yukl, 1999).

2.3 Conceptual approach summary

Before moving on to the structuring and presentation of the hypotheses that we will raise and investigate in this study, we should lay the groundwork for our conceptual framework by reviewing what has been debated in this chapter.

Although some have propounded the revision or even the abolition of this leadership theoretical model and related patterns (see Hannah et al., 2014; Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013), the significance of Bass's (1985a) transformational leadership theory is undeniable, and its contribution to the growth of the leadership literature is pivotal. However, we should acknowledge the reasonable concerns raised about Bass's (1985a) transformational leadership model and its associated measure dimensions' intercorrelation. As a result, we do not conceptualize as well as assess transformational leadership behavior using the multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995) but rather a single construct instrument established by Carless and colleagues (2000), the global transformational leadership (GTL) scale (see "2.2.4 Alternative measures for transformational leadership"). This index includes seven transformational behaviors: charisma, communicating a clear and positive vision, developing employees, supporting employees, empowering employees, being innovative, and leading by example. In fact, a recent meta-analysis reported that the GTL scale had the highest reliability index among the most commonly used instruments for measuring transformational leadership behavior (see Ng, 2017).

Concerning the critical conceptual issue of how similar and consistent transformational and charismatic leadership are, while there is a strong tendency to assimilate the two concepts—especially in recent leadership literature—we take the

more moderate stance advocated by several researchers, and thus we consider the two concepts of leadership as distinct but quite interrelated mechanisms (see Avolio et al., 1999; Bass et al., 2003; Tichy & Devanna, 1990).

Finally, in regards to the transformational leadership theory (Bass, 1985a; Burns, 1978), we will rely on the job demands-resources theory (JD-R; Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001) for a conceptual framework of both the interconnection of our hypotheses and the interpretation of the proposed relationships.

> *"Transformational leadership behaviors could play a more distal role than work organization factors by acting simultaneously on perceived job resources and job demands."* (Fernet et al., 2015, p. 27)

3 Hypotheses development

Leadership plays a critical, if not the most critical, role in industrial, instructional, and military settings and is thus a significant topic for investigation and analysis (Bass & Bass, 2008). Shifts in the world market and manpower during the last few decades have required leaders to become more transformational and less transactional in terms of staying successful (Bass & Riggio, 2006; Burns, 1978, 2003). Leaders were empowered to cultivate their followers into high-engagement employees centered on value, customer satisfaction, productivity, and cost-efficiency (Bass, 1999). By demonstrating transformational behaviors like being innovative, charisma, inspirational motivation, intellectual stimulation, individualized consideration, empowering employees, and leading by example (Carless et al., 2000; Schermuly & Meyer, 2020; Tichy & Devanna, 1990), transformational leaders motivate their followers to reach high levels of performance, display altruism for the betterment of the organization, develop their mental skills to approach problems in novel ways, and achieve remarkable goals (Chang & Teng, 2017; Podsakoff et al., 1990; Tse et al., 2018). The development of sample instruments that measured this type of leadership sparked an interest in transformational leadership research throughout the 1980s (Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013; Yukl, 1999). The establishment of the MLQ (Bass & Avolio, 1995), the most prevalently used scale to measure transformational leadership, fueled this growth in leadership literature (see Crede et al., 2019; Hannah et al., 2014; Ng, 2017; van Knippenberg & Sitkin, 2013).

Bass's transformational leadership theory (Bass, 1985a, 1985b; Bass & Avolio, 1995; Burns, 1978) has received some plausible criticisms (see "2.2.2 Defining transformational leadership"; "2.2.3.1 Multifactor leadership questionnaire and intercorrelation issues") regarding the structure and configuration of its main concepts and components, the associated measurement instrument, as well as the way it was defined and constructed as a framework from the start, and its underpinning procedures (see Hannah et al., 2014; Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013; Yukl, 1999). Despite that, the transformational leadership framework has been identified as the most dominant leadership paradigm in organizational behavior research by the vast majority of studies (see Christian et al., 2011; Clarkson et al., 2020;

Crede et al., 2019; Gottfredson & Aguinis, 2017; Harms et al., 2017; Judge & Piccolo, 2004; Lowe et al., 1996; Montano et al., 2017; G. Wang et al., 2011). Furthermore, numerous empirical research and meta-analyses have demonstrated that transformational leadership behavior (TLB) is one of the most productive ways to stimulate leader effectiveness (e.g., Carless et al., 2000; Judge & Piccolo, 2004; Lowe et al., 1996; Quintana et al., 2015) and have a beneficial effect on several followers' attitudes and behaviors, such as work engagement (e.g., Aryee et al., 2012; Breevaart et al., 2016; Breevaart & Bakker, 2018; Christian et al., 2011; Ehrnrooth et al., 2021; Katou et al., 2020; Rahmadani & Schaufeli, 2022; Seitz & Owens, 2021), job satisfaction (e.g., Biswas & Varma, 2011; Judge & Piccolo, 2004; Klaic et al., 2018; Ng, 2017; Tepper et al., 2018), motivation (e.g., Judge & Piccolo, 2004; Katou et al., 2020; Schermuly & Meyer, 2020), extra effort (e.g., Carless et al., 2000; Quintana et al., 2015; Stein et al., 2021), self-efficacy (e.g., Ehrnrooth et al., 2021; Gao et al., 2020; Ng, 2017), innovative behavior (e.g., Aryee et al., 2012; Katou, 2015; Matzler et al., 2015; Ng, 2017; Tse et al., 2018), satisfaction with the leader (e.g., Judge & Piccolo, 2004; Quintana et al., 2015; Tepper et al., 2018), and organizational citizenship behavior (e.g., Buil et al., 2019; Cohen et al., 2012; Doucet et al., 2015; Gottfredson & Aguinis, 2017; Katou et al., 2020; Lin et al., 2019; Tepper et al., 2018; Yang et al., 2020).

Regarding productivity, it has also been shown that TLB has a positive impact on both individual-level performance (Breevaart et al., 2016; Buil et al., 2019; Camps & Rodríguez, 2011; Chang & Teng, 2017; Clarkson et al., 2020; Doucet et al., 2015; Gao et al., 2020; Kensbock & Boehm, 2016; Luo et al., 2019; Montano et al., 2017; Pan & Lin, 2015; Patiar & Wang, 2016; Quintana et al., 2015; Seitz & Owens, 2021; Yang et al., 2020), and group-level performance (Bass et al., 2003; C. Cheng et al., 2016; D. Fan et al., 2021; Judge & Piccolo, 2004; Katou, 2015; G. Wang et al., 2011), as well as a negative impact on employee turnover (C. Cheng et al., 2016; Sun & Wang, 2017; Waldman et al., 2015). Moreover, study results on employee well-being have found that leaders who engage in transformational behaviors decrease the incidence of employees experiencing work-family conflict (e.g., Breevaart & Bakker, 2018; Hammond et al., 2015), job stress (e.g., Arnold, 2017; Diebig et al., 2017; Harms et al., 2017; Kloutsiniotis et al., 2022; Sosik & Godshalk, 2000), workplace anxiety (e.g., Arnold, 2017; Fernet et al., 2015; Kloutsiniotis et al., 2022; Parr et al., 2013), work-related depression (e.g., Arnold, 2017;

Fernet et al., 2015) and emotional exhaustion (e.g., C. Cheng et al., 2016; Harms et al., 2017; Kensbock & Boehm, 2016; Kranabetter & Niessen, 2017; Molines et al., 2022; Perko et al., 2016; Syrek et al., 2013; Zopiatis & Constanti, 2010). All of the preceding have contributed to the widely held belief that TLB is a globally beneficial leadership practice (see Bass, 1999; Bass & Bass, 2008; Bass & Riggio, 2006).

Before we go any further, we should point out that there is always "the other side of the coin". Although most researchers have examined the relationship between TLB and employee well-being from a positive perspective, an emerging body of literature on the "dark side" of transformational leadership suggests that TLB may encompass factors that deplete followers' resources and, as a result, harm their well-being (see Arnold et al., 2015; Harms et al., 2017; Hildenbrand et al., 2018; Kranabetter & Niessen, 2017; Lin et al., 2019; K. Nielsen & Daniels, 2016; Stein et al., 2021). In a recent meta-analysis, Crede and colleagues (2019) called the cross-cultural generalization of the transformational leadership theory into question. They contend that TLB's effectiveness is moderated "by a country's cultural values and cultural practices" (Crede et al., 2019, p. 1). In terms of well-being, because leadership behaviors and leader-follower relationships are key indicators of stress and burnout in followers (Harms et al., 2017) and transformational leaders, by definition, can elevate followers' extra effort to higher levels (Bass, 1985a), the positive impacts of TLB in diminishing emotional exhaustion may not hold for all followers but are dependent on followers' levels of psychological detachment (see Kranabetter & Niessen, 2017; K. Nielsen & Daniels, 2016; Stein et al., 2021). Finally, empirical studies reported that TLB increases leaders' emotional exhaustion while not affecting followers' emotional exhaustion (e.g., Lin et al., 2019), with others even suggesting a positive relationship between TLB and burnout (e.g., Arnold et al., 2015).

3.1 Job performance

According to leadership systematic reviews and meta-analyses, followers' performance is perhaps the most commonly studied outcome (see Clarkson et al., 2020; Doucet et al., 2015; Gottfredson & Aguinis, 2017; Hiller et al., 2011; Montano et al., 2017). Abramis (1994) defined performance as an employee's *"effective execution of tasks or job and useful contribution to the social work environment"* (p. 549).

Accordingly, performance is composed of two parts: technical performance, which alludes to an employee's capacity to handle demands, take appropriate actions, and perform without errors; and social performance, which alludes to an employee's ability to get along with coworkers and supervisors, find common ground, and prevent unnecessary arguing or fighting.

Technical performance is also referred to as task performance (e.g., Borman & Motowidlo, 1997; Pan & Lin, 2015; Rotundo & Sackett, 2002), in-role performance (e.g, Biswas & Varma, 2011; Ng, 2017), or focal performance (e.g., G. Wang et al., 2011). Task performance is the efficiency through which employees perform tasks that are essential to an organization's technical core (Borman & Motowidlo, 1997). Employee behaviors that meet the specified prescribed job tasks and formal job descriptions while also contributing to the requirement of products or services to customers are regarded as task performance (Rotundo & Sackett, 2002).

A broader concept of social performance is contextual performance (e.g., Borman & Motowidlo, 1997; Doucet et al., 2015; Yang et al., 2020), which is also referred to as extra-role performance (e.g., Biswas & Varma, 2011; Cohen et al., 2012), or organizational citizenship behavior (e.g., Buil et al., 2019; Crede et al., 2019). Contextual performance alludes to self-motivated employee behaviors that surpass job descriptions and contribute to the overall organizational, social, and psychological workplace climate (Yang et al., 2020). The proclivity of an employee to engage in behaviors that advance organizational psychological and social goals and enhance organizational performance is defined as contextual performance (Borman & Motowidlo, 1997).

Task and contextual performance are critical for organizational success and sustainability (see Biswas & Varma, 2011; Crede et al., 2019; Ng, 2017; Yang et al., 2020). Furthermore, leadership research has revealed a strong positive relationship between TLB and either of these performance dimensions (e.g., Buil et al., 2019; Cohen et al., 2012; Doucet et al., 2015; Gottfredson & Aguinis, 2017; G. Wang et al., 2011). That being said, building on Abramis's (1994) model, we focus on performance by conceptualizing followers' performance—from now on referred to as "job performance"—as a "reflective-formative" higher-order construct (J.-M. Becker et al., 2012; Diamantopoulos

& Siguaw, 2006; Hair et al., 2017; Sarstedt et al., 2019) which is constituted by two reflective factors (i.e., technical performance, social performance).

3.1.1 Transformational leadership behavior and job performance

Transformational leadership is a behavior-based theory that identifies the essential behaviors that a leader employs to inspire their employees to exceed expectations (Bass, 1985a, 1985b; Burns, 1978, 2003). Transformational leadership behavior (TLB) boosts employees' satisfaction with leaders, leader job performance, and leader effectiveness by creating a climate that encourages employees to identify with organizational goals and strive to meet them (see Carless et al., 2000; Judge & Piccolo, 2004; Lowe et al., 1996; Quintana et al., 2015). Leaders use transformational behaviors to encourage employees to transition their values and goals away from themselves and toward collective interests (see Ehrnrooth et al., 2021; House & Aditya, 1997; Katou, 2015; Tepper et al., 2018).

Furthermore, several meta-analyses (e.g., Gottfredson & Aguinis, 2017; Montano et al., 2017; Ng, 2017) and empirical studies (e.g., Chang & Teng, 2017; Chi et al., 2018; Cohen et al., 2012; Luo et al., 2019; Pan & Lin, 2015) have found evidence to support a strong and significant positive correlation between TLB and employees' job performance and that transformational leaders inspire not just their employees but also their teams and organizations to achieve superior performance (see also Bass et al., 2003; Camps & Rodríguez, 2011; Judge & Piccolo, 2004; Katou, 2015; G. Wang et al., 2011). In particular, TLB has been reported to be significantly positively related to performance regardless of construct form (task performance, contextual performance, creative performance, absenteeism, employee turnover); evaluation level (individual, group/unit, organization); or evaluating method (i.e., objective, subjective) (see Avolio & Bass, 2002; Bass & Bass, 2008; Bass & Riggio, 2006; G. Wang et al., 2011).

Transformational leaders increase their employees' self-esteem (e.g., Kensbock & Boehm, 2016; Matzler et al., 2015); self-efficacy (e.g., Gao et al., 2020; Ng, 2017); self-determination (e.g., Ehrnrooth et al., 2021); work meaningfulness (e.g., Aryee et al., 2012; Schermuly & Meyer, 2020); and positive affect (e.g., Clarkson et al., 2020;

Hammond et al., 2015; Tepper et al., 2018), by paying attention to their employees' individuality; providing new perspectives on old problems (Quintana et al., 2015); teaching employees to view challenges as questions to be answered (Bass, 1990); emphasizing workable solutions (Schermuly & Meyer, 2020), and serving as mentors to those who require support in growing and developing (Camps & Rodríguez, 2011; Sosik & Godshalk, 2000). When leaders engage in TLB, they: enhance employees' psychological empowerment (Gao et al., 2020; Shamir et al., 1993); raise awareness of the group's purposes and mission (Bass, 1990; Bass et al., 2003); and stimulate employees' organizational identification with both the leader's and the organization's aims and objectives (see Buil et al., 2019; Chi et al., 2018; Ehrnrooth et al., 2021; Hobman et al., 2011; Yang et al., 2020), by instilling trust in the supervisor and the organization (Katou, 2015); establishing interactional justice (Doucet et al., 2015); and inspiring their employees and leading by example (Bass, 1985a; Carless et al., 2000). Employees feel organizational commitment (e.g., Doucet et al., 2015; Kara et al., 2013; Katou, 2015; Parr et al., 2013; Patiar & Wang, 2016), job satisfaction (e.g., Biswas & Varma, 2011; Hobman et al., 2011; Judge & Piccolo, 2004; Kammerhoff et al., 2019; Lowe et al., 1996), and work motivation (e.g., Fernet et al., 2015; Judge & Piccolo, 2004; Katou et al., 2020; Schermuly & Meyer, 2020), and as a result, they outperform expectations (e.g., Clarkson et al., 2020; Doucet et al., 2015; Gao et al., 2020; Kammerhoff et al., 2019; Matzler et al., 2015; Seitz & Owens, 2021; Tepper et al., 2018; Yang et al., 2020).

Moreover, leadership research reveals that TLB affects employees' job performance through work engagement (e.g., Aryee et al., 2012; Breevaart & Bakker, 2018; Buil et al., 2019; Christian et al., 2011; D. Fan et al., 2021; Gao et al., 2020; Seitz & Owens, 2021). TLB appears to create abundant job resources for followers (see Breevaart & Bakker, 2018; Hildenbrand et al., 2018). Indeed, Fernet and colleagues (2015) demonstrated that TLB leads to fewer job demands (e.g., work overload) and more job resources (e.g., quality of relationships), which was also confirmed by other empirical studies (see Breevaart & Bakker, 2018; Hetland et al., 2018). According to the job demand–resources theory (JD-R; Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001), the work environment has a significant impact on employees' work engagement. JD-R theory, in particular, identifies two types of job traits: job demands and job resources. Job demands are job elements that induce an

energy reduction procedure, consuming energetic resources, which may result in job strain and health complaints (health-impairment process), whereas job resources are job elements that foster personal growth and accomplishment, and dedication and investment in job performance (motivational process), which lead to employees' engagement in their work. Further, JD-R theory posits that job resources mitigate the effects of job demands on job strain (buffering effect). Employees who have a large number of job resources at their disposal can thus cope better with job demands.

As a corollary of the above, using the JD-R theory as a conceptual underpinning, TLB influences followers' work engagement (see Breevaart et al., 2016; Christian et al., 2011; Rahmadani & Schaufeli, 2022; Seitz & Owens, 2021) through increased job resources. Furthermore, employees can make use of these job resources to meet job demands. Specifically, when leaders display TLB, employees benefit from a plethora of job resources, such as participation in decision-making (Fernet et al., 2015); autonomy (Hammond et al., 2015; Tse et al., 2018); support for work-family balance (Hammond et al., 2015; Kailasapathy & Jayakody, 2018); psychological empowerment (Gao et al., 2020; Schermuly & Meyer, 2020); developmental opportunities (Katou et al., 2020; Sosik & Godshalk, 2000); and organizational justice (Doucet et al., 2015; Katou, 2015). By implication, these job resources contribute to employees' work engagement, which has a positive impact on employees' job performance (Aryee et al., 2012; Breevaart et al., 2016; Breevaart & Bakker, 2018; Buil et al., 2019; Christian et al., 2011; D. Fan et al., 2021; Gao et al., 2020; Seitz & Owens, 2021). According to Kahn (1990), an engaged employee meets his work duties with enthusiasm, consciousness, and energy. Likewise, when employees have trust in their leaders (Doucet et al., 2015; Yukl, 1999), and feel a sense of purpose and meaning in their work (Aryee et al., 2012; Schermuly & Meyer, 2020), they are more likely to dedicate and invest in their duties because they feel psychologically safe (Kahn, 1990; Mullen & Kelloway, 2009). Considering the foregoing, we propose the following hypothesis:

Hypothesis 1. Transformational leadership behavior will be positively related to employees' job performance.

3.2 Emotional exhaustion—the central quality of burnout

Extensive research on employee well-being and leadership has focused on emotional exhaustion (e.g., Chiang et al., 2021; Kong & Ho, 2018; Marescaux et al., 2019; Molines et al., 2022; Perko et al., 2016; Salas-Vallina et al., 2021; Stein et al., 2021). Emotional exhaustion is the central aspect and most visible manifestation of multidimensional burnout syndrome (Lemonaki et al., 2021; Maslach et al., 2001). Burnout syndrome comprises three core dimensions: a sense of cynicism and detachment from the job (depersonalization); disrupted feelings of personal accomplishment; and emotional exhaustion (Maslach et al., 2001). Emotional exhaustion is defined as a psychological strain that reflects a lack of energy and emotional resources (Summers et al., 2020) as the result of prolonged affective, mental, and physical stress (Freudenberger, 1974), such as the long-term effects of chronic job demands (Demerouti, Bakker, Nachreiner, et al., 2001).

Stress is the mental and physiological stimulation that takes place when a person feels threatened by something valuable to them and that threat taxes or exhausts the resources that are available to encounter it (Lazarus & Folkman, 1984). When people are exposed to chronic stressful periods and the resulting prolonged resource expense, burnout is more likely to emerge (Maslach, 1982). Freudenberger (1974) identifies burnout as the consequence of high involvement at work, whereas Maslach and colleagues (2001) define burnout as a psychological syndrome caused by prolonged interpersonal work stressors as well as an indicator of a disconnection between who individuals are and what they must do.

Work stressors are features of the workplace that put demands on employees' resources to meet those demands, or that otherwise threaten people's ability to meet their needs (Abramis, 1994). The emotional exhaustion dimension represents the fundamental personal stress aspect of burnout syndrome (Maslach et al., 2001) and refers to emotional responses to being overextended and depleted of an individual's physical and emotional resources (Halbesleben & Demerouti, 2005). The present study focuses on the emotional exhaustion component of burnout because it is most directly related to workplace stressors (Kroon et al., 2009; Maslach et al., 2001), such as work overload (Clauss et al., 2021; Montani & Dagenais-Desmarais, 2018; Oppenauer & Van

De Voorde, 2018; Shantz et al., 2016); emotional demands (Schaufeli & Bakker, 2004; Tims et al., 2013); cognitive demands (Fernet et al., 2004; Tims et al., 2013); problem-solving demands (Beraldin et al., 2019; Cullinane et al., 2014); work-family conflict (Kloutsiniotis & Mihail, 2020; Peltokorpi, 2020); role conflict (Dawson et al., 2016; Harju et al., 2021); affective rumination (Firoozabadi et al., 2018); job stress (Landay et al., 2022); role ambiguity (Fernet et al., 2004; Kilroy et al., 2016); workplace anxiety (B. H. Cheng & McCarthy, 2018; Welsh et al., 2020); lack of appreciation (Toppinen-Tanner et al., 2002); and time pressure (Harju et al., 2021; Peeters & Rutte, 2005).

3.2.1 Transformational leadership behavior and emotional exhaustion

Leadership behavior and leader-follower relationships have long been debated as critical factors in predicting employee stress and burnout levels (see Bass & Riggio, 2006, 2006; Folkman & Moskowitz, 2000; Harms et al., 2017). Burnout is a highly contentious issue due to the overall potentially harmful effects on employee well-being and performance, which include a decline in productivity (Bakker et al., 2008; Lemonaki et al., 2021; Shaukat & Khurshid, 2021; Vu et al., 2022) and job satisfaction (Schaufeli et al., 2008), as well as increased mental fatigue (Demerouti et al., 2002), health problems (Demerouti, Bakker, de Jonge, et al., 2001; Schaufeli & Bakker, 2004), and turnover intention (Jyoti & Rani, 2019). In addition, emotional exhaustion—the core dimension and most profound manifestation of burnout—has been directly linked, among other negative outcomes, to increased job-related depression (Hatch et al., 2019), increased occupational injuries (Halbesleben, 2010), lower employee job performance (Amarnani et al., 2020; Chiang et al., 2021; Marescaux et al., 2019; Salas-Vallina et al., 2021), increased counterproductive work behaviors (Naseer et al., 2021), less organizational citizenship behavior (Montani & Dagenais-Desmarais, 2018), and lower effective commitment (Lages et al., 2020).

Transformational leadership is thought to produce better results with employees than other types of leadership (see Christian et al., 2011; Clarkson et al., 2020; Gottfredson & Aguinis, 2017; Harms et al., 2017; Judge & Piccolo, 2004), due to its ability to encompass behaviors such as being considerate charismatic, and trustworthy; promoting an upbeat and desired future vision; developing employees; being innovative

and intellectually stimulating; serving as role models for employees; and exhibiting integrity (Avolio & Bass, 1995, 2002; Bass, 1985a, 1985b; Carless et al., 2000). Even though transformational leadership theory was not developed with employee well-being in mind, several studies have linked transformational leadership behavior (TLB) with lower levels of burnout (e.g., C. Cheng et al., 2016; Harms et al., 2017; Tafvelin et al., 2019; Zopiatis & Constanti, 2010) and its emotional exhaustion dimension (e.g., Arnold, 2017; Harms et al., 2017; Kranabetter & Niessen, 2017; Molines et al., 2022; Perko et al., 2016). Therefore, in addition to improving employee attitudes and performance, TFL also provides protection to employees' well-being by preventing work strain symptoms (see Diebig et al., 2017; Fernet et al., 2015; Kara et al., 2013; Klaic et al., 2018; Morgan et al., 2018; Sosik & Godshalk, 2000; Syrek et al., 2013). Leaders who practice TLB pay attention to their employees' personal needs, integrate their work into an elevated vision and aspirations and encourage employees to be creative in a secure working environment (Bass, 1985a; Burns, 2003; Carless et al., 2000), which may be a valuable job resource for preventing emotional exhaustion and burnout (see Breevaart & Bakker, 2018; Camps & Rodríguez, 2011; Hildenbrand et al., 2018; Kloutsiniotis et al., 2022; Molines et al., 2022). Indeed, researchers that have been trying to shed light on the aforementioned relationship have found that TLB enhances social identity (C. Cheng et al., 2016), increases employees' thriving at work (Hildenbrand et al., 2018), strengthens the leader-employee relationship (Molines et al., 2022), and reduces work stressors such as personal stress, workplace anxiety and loneliness (Kloutsiniotis et al., 2022), and work-family conflict (Hammond et al., 2015).

Based on the JD-R theory (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001), every work context consists of two types of job traits: job demands and job resources. According to the JD-R theory, job demands contribute to burnout—the health-impairing process—while job resources facilitate engagement—the motivational process. Job demands are those aspects of a job that require sustained physical or mental effort and, as a result, are associated with physiological and psychological costs. Although job demands are not always negative, they can convert to work stressors if employees are unable to recover from the effort required to meet them (Bakker & Demerouti, 2007; Demerouti, Bakker, de Jonge, et al., 2001; Demerouti, Bakker, Nachreiner, et al., 2001). Extreme job demands deplete energy—a health-

impairment process—resulting in constant excessive workload and, eventually, exhaustion. Indeed, job demands are the most significant predictors of emotional exhaustion (Bakker et al., 2005; Clauss et al., 2021; Cullinane et al., 2014; Dawson et al., 2016; Firoozabadi et al., 2018).

Job resources, in response to job demands, refer to organizational, psychological, social, and physical aspects of the job that are essential to attaining work objectives, reducing job demands and accompanying costs, and enhancing learning and growth (Demerouti, Bakker, Nachreiner, et al., 2001). Job resources include job control (Fernet et al., 2004; Y. Rafferty et al., 2001), qualification potential (Demerouti, Bakker, Nachreiner, et al., 2001), colleagues support (Y. Rafferty et al., 2001; Schaufeli & Bakker, 2004), developmental opportunities (Cullinane et al., 2014; Tims et al., 2013), participation in decision making (Demerouti, Bakker, Nachreiner, et al., 2001), task variety (Tims et al., 2013), job security (Demerouti, Bakker, Nachreiner, et al., 2001), performance feedback (Cullinane et al., 2014; Tims et al., 2013), shared values (Lages et al., 2020), workplace safety (Vu et al., 2022), autonomy (Peeters & Rutte, 2005; Tims et al., 2013), supervisor support (Montani & Dagenais-Desmarais, 2018; Schaufeli et al., 2008), supervisory coaching (Beraldin et al., 2019; Schaufeli & Bakker, 2004; Tims et al., 2013), and quality of leadership (Hatch et al., 2019). The extent to which employees are affected by workplace stressors (i.e., extreme job demands) is determined by the availability of job resources. To put it another way, job resources can help to mitigate the negative effects of job demands on stress reactions—the buffering effect—and boost employee work engagement—the boosting effect—especially when job demands are high. In fact, job demands have a weaker or no relationship with burnout and its dimensions when job resources are available in the workplace (Bakker et al., 2005).

TLB promotes employees' personal growth and development by providing coaching and mentoring (Sosik & Godshalk, 2000); encouraging innovative solutions to old problems by questioning assumptions and approaching old situations in novel ways (Matzler et al., 2015; Tse et al., 2018); responding to an employee's personal needs (Ehrnrooth et al., 2021); and nurturing a climate of trust, learning, and development (Kara et al., 2013; Klaic et al., 2018; Mullen & Kelloway, 2009; Sun & Wang, 2017). Moreover, by communicating values, purpose, and an appealing vision (Hetland et al., 2018); emphasizing mutual goals (Diebig et al., 2017); facilitating meaning, autonomy,

and challenges to employees (Hammond et al., 2015; Schermuly & Meyer, 2020); and fostering a high-performance work environment (Breevaart & Bakker, 2018; Cohen et al., 2012; Seitz & Owens, 2021; Tepper et al., 2018; Waldman et al., 2015; G. Wang et al., 2011), TLB provides employees with the essential means for achieving work goals and reducing job demands and the physiological and psychological costs associated with them. Therefore, building on the job resources definition of JD-R theory (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001), TLB can be considered a job resource for employees.

Verily, TLB has been conceptualized as a job resource in previous studies (Breevaart & Bakker, 2018; Hildenbrand et al., 2018; Kloutsiniotis et al., 2022; Molines et al., 2022; Perko et al., 2016), which is especially important on days when job demands are high because it boosts employee work engagement (the boosting effect) while also protecting employees from the negative effects of extreme job demands (the buffering effect). In addition, research indicates that TLB is one of the most productive ways to stimulate leader effectiveness (Bass et al., 2003; Bass & Bass, 2008; Bass & Riggio, 2006; Carless et al., 2000; Lowe et al., 1996; Quintana et al., 2015); enhance employee's work engagement (Aryee et al., 2012; Breevaart et al., 2016; Buil et al., 2019; Christian et al., 2011; Ehrnrooth et al., 2021; Rahmadani & Schaufeli, 2022; Seitz & Owens, 2021); and reduce the negative consequences of work stressors (extreme job demands) such as job stress (Diebig et al., 2017; Montano et al., 2017), work-family conflict (Hammond et al., 2015; Kailasapathy & Jayakody, 2018), workplace anxiety (Harms et al., 2017; Kloutsiniotis et al., 2022), cognitive and emotional demands (Fernet et al., 2015), time pressure (Syrek et al., 2013), work overload (Fernet et al., 2015), and role conflict (Diebig et al., 2017; Kammerhoff et al., 2019). According to meta-analytical findings and empirical data, TLB has a significantly negative impact on followers' emotional exhaustion (Harms et al., 2017; Kranabetter & Niessen, 2017; Molines et al., 2022; Perko et al., 2016; Stein et al., 2021; Zopiatis & Constanti, 2010). But effect sizes are limited to moderate, with some studies finding no evidence of a correlation between TLB and emotional exhaustion (Lin et al., 2019). As a result, the relationship between TFL and emotional exhaustion is ambiguous, leaving a theoretical shortfall in the leadership literature that the current study tries to address. Taking everything into account, we propose the following hypothesis:

Hypothesis 2. Transformational leadership behavior will be negatively related to employees' emotional exhaustion.

3.3 Work stressors

Stress, according to Lazarus and Folkman (1984), is defined as a disruption in the balance of the mental, emotional, and environmental states caused by external factors. These external factors, which have predominantly been termed stressors, may also result in instability of the cognitive and environmental structure or a state of well-being depending on performance capabilities, such as the person's available coping resources at a point in time (Demerouti, Bakker, de Jonge, et al., 2001; Demerouti, Bakker, Nachreiner, et al., 2001). In a working environment, stressors are factors that cause individuals to have strain reactions (Summers et al., 2020), such as job stress (Mansour & Tremblay, 2018), job dissatisfaction (Cuyper & Witte, 2006), job-related depression (Barsky et al., 2004), emotional exhaustion (Karatepe, 2013), turnover intentions (Huynh et al., 2014), burnout (Bakker et al., 2005), and low performance (Gillet et al., 2020). Specifically, work stressors are workplace characteristics that place demands on employees' resources to meet those demands or that otherwise jeopardize people's ability to meet their needs (Abramis, 1994).

When people are exposed to chronic stressful periods and the resulting prolonged resource expenditure, a disruption of well-being may take place, and burnout and its dimensions (i.e., emotional exhaustion, depersonalization, personal accomplishment) are more likely to occur (Maslach, 1982), which in turn leads to work disengagement and decreased productivity (Bakker et al., 2008; González-Romá et al., 2006; Lemonaki et al., 2021). The experience of pleasurable and positive feelings in a workplace, as well as a sense of self-development and growth, is referred to as employee well-being (Montano et al., 2017). Work strain—the polar opposite of well-being—on the other hand, is defined as a state in which employees are subjected to high psychological demands while having limited decision-making authority (Stansfeld & Candy, 2006), or more broadly as any possible adverse consequences (e.g., job dissatisfaction, workplace anxiety, cynism, headaches, stomach ulcers) of a stressful workplace (Barsky et al., 2004). Employees who are stressed at work are more likely to

engage in self-defeating behaviors, which leads to increased job demands and even more work strain symptoms (Bakker & Demerouti, 2017). The terms "stress" and "strain" are intimately intertwined by scholars (Summers et al., 2020).

The JD-R theory (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001) is founded on the notion that stress arises as a result of difficult circumstances that can be alleviated by employees' resources. The JD-R theory identifies two classifications of working conditions associated with employee well-being and work strain: job demands and job resources. Job demands subsume aspects of the job that require sustained effort or skills, like emotional demands (Huynh et al., 2014), cognitive demands (Fernet et al., 2004), work overload (Dlouhy & Casper, 2021), time pressure (Harju et al., 2021), role conflict (Dawson et al., 2016), role ambiguity (Vandenberghe et al., 2011), job insecurity (Too et al., 2021), job pressure (Strazdins et al., 2004), and job stress (Evans & Steptoe, 2002). Although job demands are not always negative, the emotional and physiological associated expenses involved with them can transform them into work stressors, leading to energy depletion—the health-impairment process—and strain reactions such as emotional exhaustion (Clauss et al., 2021; Peltokorpi, 2020), disturbed sleep, and poor health (Firoozabadi et al., 2018), job dissatisfaction (Barsky et al., 2004), absenteeism (Steel & Rentsch, 1995), turnover intentions (Schaubroeck et al., 1989), and burnout (Fernet et al., 2004; Peeters & Rutte, 2005; Y. Rafferty et al., 2001).

In particular, when employees are unable to recuperate from the effort needed to address extreme job demands (e.g., work overload, work-family conflict, and workplace anxiety), those job demands evolve into work stressors, diminishing employees' work well-being (Harju et al., 2021; Rogelberg et al., 2006; Tims et al., 2013) and job performance (Chirumbolo & Areni, 2010; Gillet et al., 2020; Griep et al., 2021). The current study focuses on two job demands as potential work stressors for employees in most workplace environments: work-family conflict and workplace anxiety (Allen et al., 2020; B. H. Cheng & McCarthy, 2018). These two job demands have been overlooked in the leadership literature.

3.3.1 Work stressors, emotional exhaustion and job performance

Issues about balancing work and family life, combined with a world economy that operates around the clock, have heightened research interest in work-family concerns (Allen et al., 2020). Increased changes in workplace demographics, such as working mothers and employees in the "sandwich generation" who are responsible for both childcare and eldercare, combined with technological advancements that allow (or perhaps oblige) employees to work beyond the traditional work environment and timeframe, have made it more difficult for employees to balance work and family obligations (Li et al., 2017). Work-family issues have been largely conceived and investigated as a bi-directional phenomenon, in which work interferes with family (i.e., work-family conflict) or family interferes with work (i.e., family-work conflict) (Netemeyer et al., 1996). This research focuses on one path, work-to-family, also known as work-family conflict (WFC). WFC is an “interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respects” (Greenhaus & Beutell, 1985, p. 77), including time, strain, and behavior conflicts (Hammond et al., 2015). Likewise, Netemeyer and colleagues (1996) defined WFC as a type of interrole conflict wherein the work's overall demands, time commitment, and strain interfere with accomplishing family-related roles and responsibilities. Simply put, when employees face contradictory demands from their job and their family, they are compelled to use personal resources to meet these demands (Kloutsiniotis & Mihail, 2020).

WFC, according to Bakker and colleagues (2005), is a risk factor for burnout, particularly in terms of emotional exhaustion and cynicism. Indeed, recent empirical research has found a correlation between WFC and emotional exhaustion, both directly and indirectly (Bande et al., 2019; Kloutsiniotis & Mihail, 2020; Peltokorpi, 2020; I.-A. Wang et al., 2021). The importance of emotional exhaustion, both for the employee and for the organization, rests in its links to critical outcomes such as decreased productivity and effectiveness at work (Maslach et al., 2001). Furthermore, WFC has been linked to several negative employee outcomes such as diminished well-being (Wood, Daniels, et al., 2020), lower affective commitment (D. S. Carlson et al., 2019), higher job-related depression (Huynh et al., 2014; Wood, Daniels, et al., 2020), higher job stress (Mansour

& Tremblay, 2018), higher turnover intention (Huynh et al., 2014; Mansour & Tremblay, 2018; Pan & Yeh, 2019), higher absenteeism (D. S. Carlson et al., 2019; Jacobsen & Fjeldbraaten, 2018), lower workplace happiness (Huynh et al., 2014), lower job embeddedness (Karatepe, 2013), lower job satisfaction (D. S. Carlson et al., 2019; Lapierre et al., 2008; Pan & Yeh, 2019; K. Zhao et al., 2019), and lower work engagement (Huynh et al., 2014). Drawing from JD-R theory (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001) and the health-impairment process, employees who are unable to manage the conflict between work and family roles face extreme job demands (i.e., WFC), which are then converted to work stressors, causing energy depletion and increasing work strain. As a result, such employees suffer from increased emotional exhaustion (Bande et al., 2019; Huynh et al., 2014; Karatepe, 2013; Kloutsiniotis & Mihail, 2020; Peltokorpi, 2020; I.-A. Wang et al., 2021) and burnout (Bakker et al., 2005; Demerouti, Bakker, Nachreiner, et al., 2001; Mansour & Tremblay, 2018), resulting in poor job performance (D. S. Carlson et al., 2019; Karatepe, 2013; I.-A. Wang et al., 2021). Given the foregoing, we hypothesize the following:

Hypothesis 3a. Work-family conflict will be positively related to employees' emotional exhaustion.

Hypothesis 3b. Work-family conflict will be negatively related to employees' job performance.

Concerning workplace anxiety (WPA), it is more prevalent today than ever before in the workplace and has severe repercussions for employees and organizations (B. H. Cheng & McCarthy, 2018). Even though employees' proclivity to experience WPA varies, there is an indication that it is on the increase (Ford et al., 2014; Harvey et al., 2017; Jones et al., 2016; Stansfeld & Candy, 2006; Too et al., 2021; Twenge, 2000). At this point, it is critical to differentiate between workplace anxiety and job stress. Job stress is a response to disruptive circumstances that cause work strain and can be alleviated by job resources (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001). Anxiety is regarded as a strain symptom in this context as a reaction to a work stressor (Jex, 1998). However, work strains could also be regarded as work stressors if they tax or exceed people's capacity or resources for coping with them, or if they

threaten people's ability to meet their needs (Abramis, 1994). As such, workplace anxiety is defined as the sense of distress, discomfort, and tension about job performance (McCarthy et al., 2016), which is affected by both personal characteristics and external conditions (Motowidlo et al., 1986). Based on the literature, WPA has revealed potentially negative influences on employee attitudes, behaviors, and organizational outcomes. In particular, WPA has been related to low self-efficacy (Holman & Wall, 2002), low vigor (Cangiano et al., 2019), high turnover intention (Jensen et al., 2013), high absenteeism (Jones et al., 2016; Wood et al., 2012; Wood, Michaelides, et al., 2020), low organizational commitment (Parr et al., 2013), low organizational citizenship behavior (Welsh et al., 2020), low organizational effectiveness (Boyd et al., 2009), and low organizational performance (Ho & Kuvaas, 2020).

Using the JD-R theory (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001) as a theoretical foundation, when levels of WPA exceed the employees' ability to cope with job demands, energy depletion arises (health-impairment process). As a consequence of the depletion of energy and excessive stress caused by responding to dealing with anxiety in the workplace (i.e., work stressors), anxious employees feel emotionally exhausted and demotivated (B. H. Cheng & McCarthy, 2018; McCarthy et al., 2016; Welsh et al., 2020), less eager to learn new job duties and deal with challenging situations, burned out (Kloutsiniotis et al., 2022), less productive, and discouraged about achieving their goals and meeting high standards of job performance (B. H. Cheng & McCarthy, 2018; Jones et al., 2016; McCarthy et al., 2016; Welsh et al., 2020; Wood et al., 2012). Despite a large number of empirical articles on anxiety, research into the relationship of WPA with emotional exhaustion and job performance has been limited and inconclusive, with some studies finding no evidence of a correlation between WPA and job performance (Parr et al., 2013), a gap that the current study attempts to fill. As a result, we propose the following hypotheses:

Hypothesis 4a. Workplace anxiety will be positively related to employees' emotional exhaustion.

Hypothesis 4b. Workplace anxiety will be negatively related to employees' job performance.

3.3.2 Transformational leadership behavior, work stressors and mediation mechanisms

As a remedy to (extreme) job demands (i.e., work stressors), the JD-R theory (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001) proposes job resources, such as supervisory support (Dlouhy & Casper, 2021; L.-B. Fan et al., 2013), performance feedback (Marescaux et al., 2019), decision-making participation (Schaubroeck et al., 1989), supervisor-subordinate relationship quality (Bakker et al., 2005), supportive management (Wood, Michaelides, et al., 2020), developmental opportunities (Breevaart et al., 2015), supervisory mentoring (Jyoti & Rani, 2019), work-life quality (Kara et al., 2013), employee autonomy (Tang & Vandenberghe, 2020), work meaningfulness (Grobelna, 2019), organizational justice (Ferreira et al., 2019), and work-life balance (Syrek et al., 2013), that can stimulate employees' personal growth and self-efficacy, and assist in achieving goals. The JD-R theory suggests that job resources have a tripartite function: they elicit employees' motivation (i.e., the motivational process) that results in positive attitudes and behaviors such as job satisfaction, organizational commitment, work engagement, and, as a corollary, increased productivity and high job performance (Crawford et al., 2010); they alleviate the negative effects of job demands (i.e., the buffering effect), thus, employees with larger resource pools are better equipped to meet job demands and protect themselves from resource depletion strains (Bakker et al., 2005); and, when job demands are extreme, job resources have a greater impact on motivation and work engagement (the boosting effect), hence, employees are more engaged and productive on days when they have adequate resources to deal with stressful job demands (Breevaart & Bakker, 2018).

According to transformational leadership theory (Bass, 1985a, 1985b; Burns, 1978; Carless et al., 2000), leaders who employ transformational leadership behavior (TLB), foster followers' personal growth, job satisfaction, organizational commitment (Avolio & Bass, 1995), and a trust climate (Patiar & Wang, 2016), and motivate them to chase common goals and to embrace and attain challenging and difficult objectives that they would not have sought normally (Montano et al., 2017). The followers regard the leader with respect, devotion, trust, and admiration, and they are motivated to consider their long-term needs for self-development rather than their immediate needs (Bass &

Bass, 2008) and to go above and beyond what they had planned to do (Yukl, 1999). The fundamental impact mechanism concerning employee motivation is outlined as seeking to make them more conscious of the importance of work outcomes; concentrating on their abilities to aid personal development; enhancing their cognitive abilities to approach problems in novel ways by challenging preconceived notions; paying attention to their individual needs and concerns; and motivating them to put the interests of the organization ahead of their own (Tse et al., 2018).

Consequently, in terms of the JD-R theory's definition of job resources (Demerouti, Bakker, Nachreiner, et al., 2001), TLB may be conceptualized as a job resource for employees (Breevaart & Bakker, 2018; Hildenbrand et al., 2018; Kloutsiniotis et al., 2022; Molines et al., 2022); and thus, to be fruitful in promoting personal development, accomplishing performance objectives, and increasing work engagement by motivating employees (Ehrnrooth et al., 2021; Klaic et al., 2018; Rahmadani & Schaufeli, 2022; Tepper et al., 2018). Likewise, TLB can also boost employee engagement, especially when job demands are high (Breevaart & Bakker, 2018; Katou et al., 2020; Morgan et al., 2018; Syrek et al., 2013). Moreover, regarding job resources' buffering effect on job demands, leaders who exhibit TLB can mitigate the negative effect of job demands by providing a plethora of job resources to employees to better cope with their job demands, resulting in an abundance of job resources and fewer job demands (Fernet et al., 2015; Hetland et al., 2018). In this manner, TLB is expected to buffer the impact of both work stressors under investigation, that is, work-family conflict (WFC) and workplace anxiety (WPA).

Leadership behavior has the potency to have a significant positive (Klaic et al., 2018; Tepper et al., 2018) or negative (Cangiano et al., 2019; Chiang et al., 2021) impact on employee experiences at work, while its influence extends beyond the workplace (Hammer et al., 2011; Kara et al., 2013; Li et al., 2017). In particular, regarding transformational leadership theory (Bass, 1985a, 1985b; Burns, 1978; Carless et al., 2000), Kara and colleagues (2013) have demonstrated that leaders who engage in TLB have a significant impact on predicting the quality of work-life, which diminishes employee burnout and improves overall life satisfaction. However, the relationship between leadership and employee work-family outcomes has been largely ignored in the past (Li et al., 2017). The fact that most research focuses on the role of leadership

behavior in shaping outcomes like employee job performance, organizational effectiveness, and productivity could be one reason for this. Although indeed, the leader's aim is not to influence how his or her followers handle work-family interaction, these kinds of implications do take place. Currently, research findings on the relationship between TLB and WFC are mixed, with some indicating that TLB lowers WFC (Breevaart & Bakker, 2018; Hammond et al., 2015) and others being ambiguous (Kailasapathy & Jayakody, 2018) or finding no association at all (Morgan et al., 2018).

While TLB incorporates taking employees' needs, values, and goals into account and thus supports employees, this leadership behavior also includes setting high-performance expectations and challenging employees (Avolio & Bass, 1995; Bass, 1985a). TLB empowers employees' personal development and encourages them to expand their skills, think critically and innovatively, emboldens them to face challenges and improve, and motivates them to go above and beyond what they were initially anticipated to do (Avolio & Bass, 1995; Bass & Bass, 2008; Bass & Riggio, 2006), which has an impact not just on the workplace outcomes but further on personal life traits such as self-esteem (Matzler et al., 2015), creativity (Tse et al., 2018), self-efficacy (Ehrnrooth et al., 2021), work-life balance (Syrek et al., 2013), and life satisfaction (Kara et al., 2013). Once all factors are considered, TLB is expected to reduce WFC. WFC is also thought to mediate the link between TLB and both job performance and emotional exhaustion. Thus, we offer the following hypotheses:

Hypothesis 5a. Transformational leadership behavior will be negatively related to work-family conflict.

Hypothesis 5b. Work-family conflict will mediate the relationship between transformational leadership behavior and employees' emotional exhaustion.

Hypothesis 5c. Work-family conflict will mediate the relationship between transformational leadership behavior and employees' job performance.

Even though workplace anxiety (WPA) has been studied as an employee well-being indicator (Evans & Steptoe, 2002; Horan et al., 2021; Okay-Somerville &

Scholarios, 2019; Rogelberg et al., 2006; Vandenberghe et al., 2011; Zheng et al., 2016), work strain symptom (Dawson et al., 2016; Fernet et al., 2015; Ford et al., 2014; Holman & Wall, 2002), or work stressor (Abramis, 1994; Cangiano et al., 2019; B. H. Cheng & McCarthy, 2018; L.-B. Fan et al., 2013; Jensen et al., 2013; Kloutsiniotis et al., 2022; McCarthy et al., 2016) in a significant number of empirical articles, the relationship between WPA and TLB has been largely ignored. This could be partly because transformational leadership theory was primarily developed with employee performance under consideration rather than well-being (Bass, 1985a, 1999; Bass & Riggio, 2006), and partly because WPA is not part of the typical scope of employee and organizational outcomes that leadership research looks at, such as employee job performance and organizational effectiveness (Clarkson et al., 2020; Judge & Piccolo, 2004; Ng, 2017; G. Wang et al., 2011).

WPA is defined "as feelings of nervousness and apprehension about the accomplishment of job tasks" (McCarthy et al., 2016, p. 280). When employees understand the rationale for the existence of a work stressor, the adverse effect of the work stressor is lowered (Bakker & Demerouti, 2007). TLB-enabled leaders redefine stressful circumstances as issues to be addressed (Avolio et al., 1999; Judge & Piccolo, 2004). Thus, TLB could mitigate WPA's negative effects (the buffering effect) by communicating a feeling of purpose, which helps employees understand how stressful situations form, and by empowering employees to view job tasks as a challenge that can be met and to go above and beyond what they had planned to do (Bass, 1999; Yukl, 1999). Furthermore, TLB inculcates confidence in employees that they will be capable of completing their work duties and meeting the objectives (Bass, 1990; Bass & Bass, 2008). According to research, TLB is especially successful in highly stressful conditions (Breevaart & Bakker, 2018; Kammerhoff et al., 2019; Kloutsiniotis et al., 2022). Additionally, TLB constantly develops and motivates employees by focusing on their areas of improvement (Bass & Riggio, 2006; Carless et al., 2000). Hence, employees learn new competencies and skills to complete their job tasks and thereby deal with work stressors (e.g., workplace anxiety), which become more manageable for the employee and might result in less emotional exhaustion (Kensbock & Boehm, 2016), more work engagement (Buil et al., 2019), more trust (Katou, 2015), and thus, higher job performance (Christian et al., 2011).

Finally, TLB leaders provide constructive feedback rather than relaying their apprehensions about uncompleted projects (Bass & Riggio, 2006; Pan & Lin, 2015) while also being conscientious of employees' needs for appreciation (Avolio & Bass, 1995), which incentivizes employees to pursue common goals and preserves high motivation and work engagement (the boosting effect). As a result, TLB assists employees in improving their coping behaviors and allocating more resources to those behaviors (Bakker & Demerouti, 2017; Breevaart & Bakker, 2018). With the assistance and guidance of TLB, employees' personal development (Katou et al., 2020; Sosik & Godshalk, 2000), extra effort (Carless et al., 2000; Quintana et al., 2015; Stein et al., 2021), and self-determination (Schermuly & Meyer, 2020) will facilitate them to cope with WPA, leading to goal achievement and job task accomplishment, and, as a result, to reduced "feelings of nervousness and apprehension" (McCarthy et al., 2016, p. 280). When all of the preceding discussion is considered, TLB is expected to lower WPA. WPA may also play a role in mediating the relationship between TLB and both job performance and emotional exhaustion. Accordingly, we formulate the following hypotheses:

Hypothesis 6a. Transformational leadership behavior will be negatively related to workplace anxiety.

Hypothesis 6b. Workplace anxiety will mediate the relationship between transformational leadership behavior and employees' emotional exhaustion.

Hypothesis 6c. Workplace anxiety will mediate the relationship between transformational leadership behavior and employees' job performance.

3.4 The hypothesized model

Before proceeding to the next section, we will summarize and present the hypothesized model under investigation (Figure 1), which is based on the previously stated proposed relationship.

Building on the leadership literature, transformational leadership theory (Bass, 1985a, 1985b; Burns, 1978; Carless et al., 2000), and job demands-resources theory

(Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001), we conceptualized a dual-influence leadership model in which transformational leadership behavior (TLB) enhances employees' productivity by boosting work motivation and engagement while also facilitating work well-being by protecting employees from work-strain reactions. In particular, we proposed that TLB has a direct positive effect on employees' job performance (Hypothesis 1) while simultaneously reducing their emotional exhaustion (Hypothesis 2).

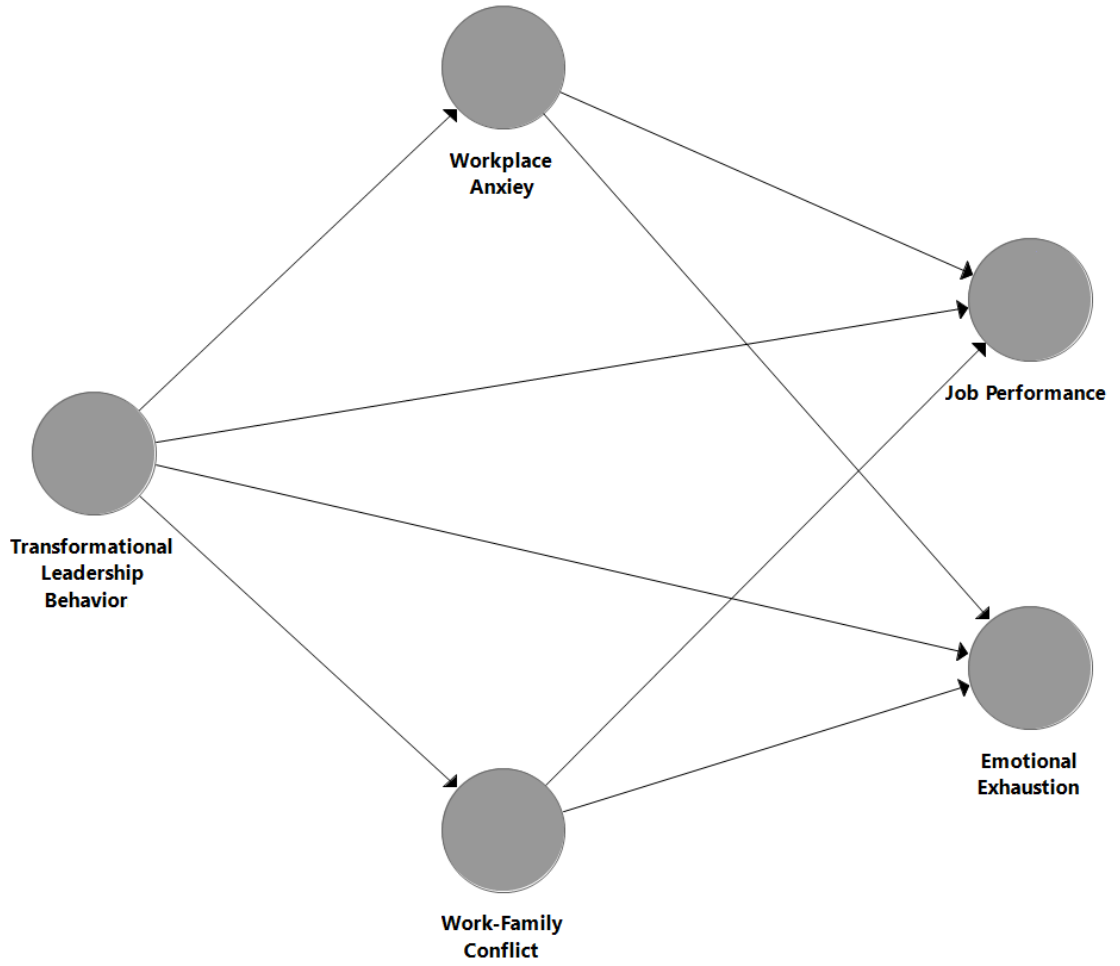

Figure 1. *The hypothesized "dual-influence leadership" model.*

Moreover, drawing from the literature, we identified two potential work stressors (i.e., work-life conflict and workplace anxiety) that we believe will affect an increasing number of employees in most workplaces in the future (Allen et al., 2020; B. H. Cheng & McCarthy, 2018). We hypothesized that both work-family conflict (WFC) and workplace anxiety (WPA) contribute to emotional exhaustion and poor job performance in employees (Hypotheses 3a, 3b, 4a, and 4b, respectively). According to our

hypothesized model, TLB enables employees to handle WFC and WPA more effectively, decreasing the level of both work stressors on employees (Hypothesis 5a and 6a, respectively). Finally, both work stressors are assumed to mediate the relationship between TLB and job performance as well as emotional exhaustion (Hypotheses 5b, 5c, 6b, and 6c, respectively).

"Higher-order changes are also possible and may involve larger shifts in attitudes, beliefs, values, and needs." (Bass, 1985b, p. 27)

4 Methodology Overview

4.1 Procedure

We put our hypotheses to the test in the context of the healthcare industry. The information was gathered over an eight-week period, from February 2nd to March 30th, 2022, using a "snowball sampling" approach (see Bruk-Lee et al., 2013; Landay et al., 2022) by contacting employees of both public and private healthcare organizations (e.g., hospitals, clinics, medical nursing homes, and clinical laboratories) in Greece. Participants were invited to respond to our survey via e-mail and social networking channels (see Vu et al., 2022), and they were asked to forward the invitation to employees both within and outside their organizations, despite the fact that there was no inducement to do so (see Tepper et al., 2018). The online invitation contained a link to the electronic survey, which includes details about the nature of the study. Participants were guaranteed anonymity and confidentiality, and they were advised to answer each question in relation to their current job (Podsakoff et al., 2003). Participants filled out demographic information in the questionnaire's sign-up section before moving on to the next. Furthermore, because of self-reporting, to reduce the common method bias, some items were separated or put together randomly to eliminate similarity effects; respondents were assured that no answer was correct or incorrect and that they should answer questions honestly; reverse items were included in the questionnaire; and the predictor and outcome variables were psychologically separated (Podsakoff et al., 2003, 2012).

This resulted in 577 healthcare workers completing the survey's metrics of interest. Nevertheless, screening across the research variables for possible missing values, outliers (using IBM SPSS Statistics 22.0) and unengaged responses (using standard deviation; Microsoft Excel 2013 15.0) outlined three unengaged respondents (Gaskin, 2016). Therefore, we decided to exempt them from the data before analyzing it, reducing the total sample size to 574 informants.

4.2 Sample

The final sample of 574 healthcare workers consists of 41.8 percent frontline employees (patient care and customer service), 28.9 percent frontline supervisory or scientific/technical personnel, 24.0 percent administrative personnel, and 5.2 percent warehouse or logistics positions. The profile of the respondents is shown in Table 1.

Table 1. *Sample characteristics (N = 574).*

Industry	**Healthcare**		
Sample size (N)	**574**	Highest education (%)	
		High school diploma	11.3
		Vocational school diploma	11.5
Gender (%)		**University degree**	41.6
Female	83.8	**Postgraduate Degree (MS, PhD)**	35.5
Male	16.2		
		Employment status (%)	
Age (%)			
		Fixed-term contract	35.2
18 – 29 years	23.2	**Infinite-term contract**	64.8
30 – 44 years	49.0		
> 44 years	27.9	Position in the organization (%)	
		Warehouse, logistics	5.2
Marital status (%)		**Patient care, customer service**	41.8
Unmarried	37.8	**Scientific/technical staff, front-line supervisor**	28.9
Married / civil partner	52.8	**Administration**	24.0
Divorced / widow-er	9.4		
		Work experience (%)	
Childcare responsibility (%)		**1 – 7 years**	44.8
Yes	44.8	**8 – 20 years**	36.2
No	55.2	**> 20 years**	19.0

Despite having a disproportionately high percentage of women (83.8%), the sample is representative of the workforce questioned (Kilroy et al., 2016; Landay et al., 2022). 52.8 percent of those surveyed were married or in civil partnerships, and the vast bulk of them (55.2 %) did not have childcare responsibilities. For 41.6 percent of the participants, the highest completed level of education was a bachelor's degree or

equivalent; for 35.5 percent, a postgraduate degree (master's or doctoral); for 11.5 percent, vocational qualifications; and for 11.3 percent, high school. 49.0 percent of the 574 employees were between the ages of 30 and 44, 27.9 percent were over 44, and 23.2 percent were between the ages of 18 and 29. Lastly, most of the participants (64.8%) had a permanent job, while the majority (55.2%) had work experience of eight years or more.

4.3 Measures

Participants were asked to rate their level of agreement with statements about leadership behavior, work-family conflict, workplace anxiety, job performance, and emotional exhaustion in their current workplace. All constructs were assessed using well-established measurement instruments that have successfully been validated in the existing literature. Since the scales were established in English, all scale items were translated from English to Greek following the commonly applied (Pan & Yeh, 2019; Stein et al., 2021) "back-translation" procedure (Brislin, 1970) to ensure linguistic compatibility with the original items. Ambivalent terms were debated and adjusted until agreement was reached.

4.3.1 Demographics

Data was collected on the participants' gender (1 = male, 2 = female); age (1 = 18–29 years, 2 = 30–44 years, 3 = over 44 years); marital status (1 = unmarried, 2 = married/civil partner, 3 = divorced/widow-er); childcare responsibility (1 = yes, 2 = no); highest education level (1 = high school diploma, 2 = vocational school diploma, 3 = university degree, 4 = postgraduate degree); employment status (1 = fixed-term contract, 2 = infinite-term contract); work experience (1 = 1–7 years, 2 = 8–20 years, 3 = over 20 years); and job position in the organization (1 = warehouse or logistics, 2 = patient care or customer service. 3 = front-line supervisory or scientific/technical staff, 4 = administration).

4.3.2 Transformational leadership behavior

Transformational leadership behavior (TLB) was assessed using the global transformational leadership scale (GTL; Carless et al., 2000), which treats transformational leadership as a single construct. As previously stated (see "2.3 Conceptual approach summary"), TLB in this study is operationalized as a whole (Carless et al., 2000) rather than as the four sub-factors of idealized influence, inspirational motivation, intellectual stimulation, and individual consideration (Bass, 1990; Bass & Avolio, 1995). This is legitimate because, as previously explained (see "2.2.3.1 Multifactor leadership questionnaire and intercorrelation issues"), the four dimensions of transformational leadership as conceived by Bass and colleagues (Antonakis et al., 2003; Avolio & Bass, 2002; Bass, 1990; Bass & Avolio, 1995) and illustrated through the scale they developed—the multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995)—have been found to be highly inter-correlated (Avolio et al., 1999; Bass & Bass, 2008; Carless, 1998; Howell & Hall-Merenda, 1999; Judge & Piccolo, 2004; van Knippenberg & Sitkin, 2013). Hence, a global index can effectively portray TLB (Carless, 1998; Lowe et al., 1996).

The GTL scale is comprised of seven items that describe seven transformational leadership behaviors: charisma, vision, supportive leadership, leading by example, innovative thinking, staff development, and empowerment (Carless et al., 2000). These items were reported to have a high degree of convergent validity when compared to more established and longer measurement instruments (Carless et al., 2000), including the multifactor leadership questionnaire (MLQ; Bass & Avolio, 1995). Since then, the GTL has been used in a variety of contexts, including by Canadian nurses (a = 0.93; Fernet et al., 2015), Swedish municipality workers (α = 0.97; Tafvelin et al., 2019), and Greek hotel customer-contact employees (α = 0.91; Kloutsiniotis et al., 2022). Every item on the GTL scale is scored on a 5-point Likert scale ranging from 1 (never) to 5 (always), with higher scores denoting higher levels of transformational leadership behavior perceived by employees. "How often does your supervisor instill pride and respect in others and inspire you by being highly competent?" is one example of an item. The internal consistency (Cronbach's a coefficient; Cronbach & Meehl, 1955) of the GTL scale in the current study was 0.95.

4.3.3 Work-family conflict

The scale developed by Netemeyer and colleagues (1996) was used to assess work–family conflict (WFC). This instrument is widely used in the literature for measuring WFC (Ferreira et al., 2019; Jacobsen & Fjeldbraaten, 2018; Karaeminogullari et al., 2018; Pan & Yeh, 2019; Piszczek & Pimputkar, 2021; K. Zhao et al., 2019), with a strong internal consistency evaluated by Cronbach's α coefficients of 0.90 in Spain (Bande et al., 2019), 0.96 in the United States (Clark et al., 2020), and 0.90 in Greece (Kloutsiniotis & Mihail, 2020), among other empirical studies where it was utilized. The scale consists of five items, with “Things I want to do at home do not get done because of the demands my job puts on me” being a sample item (Netemeyer et al., 1996). Respondents indicated their agreement with each statement on a 5-point Likert scale (1 = totally disagree to 5 = totally agree). The Cronbach's a reliability coefficient for this measure in our sample was 0.92.

4.3.4 Workplace anxiety

Workplace anxiety was measured employing three items from Warr's (1990) job-related affective well-being scale that measured negative emotional reactions: "Thinking of the past few weeks, how much of the time has your job made you feel tense?"; "Thinking of the past few weeks, how much of the time has your job made you feel uneasy?"; and "Thinking of the past few weeks, how much of the time has your job made you feel worried?" (Warr, 1990). These three items have been used to assess workplace anxiety across cultures, including the United Kingdom (α = 0.94; Ho & Kuvaas, 2020), the United States (α = 0.85; Dawson et al., 2016) and Greece (α = 0.88; Kloutsiniotis et al., 2022). Participants were asked to rate the items using a 5-point frequency scale from 1 (never) to 5 (always). In the present study, Warr's (1990) scale had an internal consistency (Cronbach's a coefficient) of 0.83.

4.3.5 Emotional exhaustion

Emotional exhaustion was assessed using the related subscale of the Oldenburg burnout inventory (OLBI; Demerouti, Mostert, & Bakker, 2010). OLBI provides a comprehensive measure of burnout that can also be used to measure the opposite phenomenon (engagement) and provides a more expansive conceptualization of burnout's emotional exhaustion constituent (Halbesleben & Demerouti, 2005). The exhaustion subscale reflects the extent to which employee's affective, physical, and mental resources have been sapped (Demerouti et al., 2010). It's an eight-item questionnaire wherein the participants rate how much they agree with exhaustion-related statements for each item on a five-point scale from 1 (totally disagree) to 5 (totally agree). However, after conducting exploratory factor analysis, the positively worded items were excluded, reducing the scale to four items, that is, "There are days when I feel tired before I arrive at work." "After my work, I usually feel worn out and weary." "After work, I tend to need more time than in the past in order to relax and feel better." "During my work, I often feel emotionally drained." This is consistent with Qiao and Schaufeli's (2011) proposition. In particular, the researchers argue that positively phrased items should be removed from burnout assessment instruments because they are a distinct factor that is considered an artifact (Qiao & Schaufeli, 2011). Empirical studies in several countries have assessed the exhaustion dimension of burnout by utilizing the homonym subscale of OLBI, including Ireland ($\alpha = 0.78$; Cullinane et al., 2014), Iran ($\alpha = 0.81$; Firoozabadi et al., 2018), and Greece ($\alpha = 0.84$; Kloutsiniotis & Mihail, 2020). In our survey, the Cronbach's alpha internal reliability coefficient for this scale was 0.85.

4.3.6 Job performance

The scale used to measure self-reported job performance was developed by Abramis (1994). This seven-item assessment instrument is composed of two subscales, that is, technical performance and social performance. Technical performance, which encompasses four items, measures how well participants perform without errors, handle responsibilities and requirements, and complete tasks on time (Abramis, 1994). "In the last month you worked, how well were you making the right decisions?" is an

example item. Cronbach's a coefficient (Cronbach & Meehl, 1955) was 0.87 for the technical performance sub-factor. The remaining three indicators comprise social performance, which quantifies how well participants get along with their peers and superiors, negotiate in good faith, and avoid arguing at work (e.g., "In the last month you worked, how well did you get along with others at work?") (Abramis, 1994). The Cronbach's a coefficient for the social performance dimension was 0.85. Respondents were asked to evaluate each item on a 5-point Likert scale ranging from 1 (very poorly) to 5 (exceptionally well). The Abramis's scale (1994) has been used in several empirical studies across cultures (e.g., Italy; Chirumbolo & Areni, 2010), demonstrating solid internal consistency. Cronbach's a, for example, determined the instrument's overall internal consistency to be 0.79 in Spain (Latorre et al., 2016) and 0.88 in Belgium (Delanoeije & Verbruggen, 2020). The overall a coefficient in the current study was 0.86.

4.3.6.1 Debate over self-reported job performance

According to existing literature, assessing employee job performance is difficult due to its multidimensionality (Venkatraman & Ramanujam, 1987). Further to that, some researchers have called into question the use of self-reported performance and subjective performance indicators (Janssen & van der Vegt, 2011). Although employees' self-reports may produce skewed results, which is why other methods such as supervisory assessments, objective metrics, or guest evaluation are suggested (Podsakoff & Organ, 1986; Venkatraman & Ramanujam, 1987), it has been demonstrated that self-reported indicators of performance do not produce significantly different outcomes than other more "unbiased" metrics (Churchill et al., 1985). Furthermore, some researchers claim that employees are the best people to articulate their perceptions of their job and workplace (Spector, 1994), whereas others believe that anonymously gathered information can assist legitimate performance appraisals given by employees' self-reports (Dess & Robinson, 1984).

We clearly do not claim that self-reporting job performance evaluations are superior to objective evaluations based on quantitative indicators, nor do we claim that self-reporting can replace appraisals of a set of measurably performance goals. However, given the complexity of the process of evaluating job performance, the reluctance of organizations to share such data for research purposes, and finally, the

existing literature claiming that there is no substantial difference between self-reporting and a superior's rating of employees' performances (Patiar & Mia, 2008), as well as no discernible difference between subjective and objective evaluation methods (Dess & Robinson, 1984), we posit that the employee self-rating procedure is a trustworthy substitute for objective job performance measurement. Finally, TLB, according to leadership literature, influences performance regardless of whether performance is assessed subjectively or objectively (Bass & Bass, 2008). The foregoing led to the decision to measure performance through the aforementioned job performance self-rating scale.

4.4 Control variables—statistical control discussion

In research studies, superfluous factors under statistical control (i.e., control variables) are a frequently used analytic tool to provide more precise predictions of relationships among the variables, more conservative tests of hypotheses, or to rule out additional interpretations of empirical results (T. E. Becker et al., 2016; Breaugh, 2006). Furthermore, in ground leadership research, control variables are frequently used as a methodological approach (Bernerth et al., 2018). The concept of using control variables is that a researcher can statistically eliminate any errors caused by incidental indicators, whether valid or otherwise, consequently purifying outcomes—the purification principle (Spector & Brannick, 2011)—and revealing genuine correlations (Atinc et al., 2012). However, a growing body of research is calling into question whether control variables should be included in statistical analyses of studies immediately, blindly, or at all, as well as the existing explanations for their inclusion and function (Atinc et al., 2012; T. E. Becker, 2005; T. E. Becker et al., 2016; Bernerth & Aguinis, 2016; Breaugh, 2008; K. D. Carlson & Wu, 2012; Spector & Brannick, 2011).

The vast majority of literature focuses on the same basic demographic factors, such as gender, age, tenure, and education, with almost no effort made to clarify why and how control factors are associated with the focal variables under study (Bernerth & Aguinis, 2016). Nonetheless, researchers warn against the use of demographic criteria in statistical control (T. E. Becker, 2005; Bernerth et al., 2018; Spector & Brannick, 2011). Carlson and Wu (2012) posit that control variables are rarely used to interpret the

findings since they are commonly poorly associated with focal variables. Hence, this prevalent approach gives the impression of statistical control when none exists, with some scholars even suggesting that it is rooted in a "methodological urban legend" (Spector & Brannick, 2011, p. 1). Furthermore, using control variables can result in skewed estimated coefficients and inferential discrepancies (Breaugh, 2008; Spector & Brannick, 2011), as well as a reduction in purchasable degrees of freedom and effect size (T. E. Becker, 2005). It can also reduce the level of explainable variance in results attributed to focal variables (K. D. Carlson & Wu, 2012) or, in rare instances, explain so much variance in factors that a focal variable appears completely irrelevant to research findings (T. E. Becker, 2005; Breaugh, 2006). Indeed, a recent meta-analysis of the relationships between commonly used control variables and leadership models reveals nearly universally small impact sizes, implying that many empirical studies are not only sacrificing valuable degrees of freedom but also inferring conclusions based on skewed estimated coefficients (for full review, see Bernerth et al., 2018). Regarding the transformational leadership construct, according to the literature, it has a weak relationship with some of the most commonly used control variables, such as gender, age, education, and followers' work experience; it has a moderate correlation with followers' employment status and organizational level; and there is no documentation about the relationship between it and family-related indicators (Bernerth et al., 2018).

In line with the aforementioned, in the current study, employees' employment status, job position in the organization, marital status, and childcare responsibility were chosen as potential control variables. To begin with, each of the control variables was considered as a single latent construct during assessment. We performed the analyses with and without control variables to counterpoint the outcomes, considering statistical control guidelines (T. E. Becker et al., 2016; Breaugh, 2008). The two family-related indicators (i.e., marital status and childcare responsibility) have no significant impact on the transformational leadership behavior factor or the rest of the focal variables, according to the findings (Appendix I), so they were screened out from the rest of the procedure. Then, for each of the remaining controls, we ran a partial least squares multi-group analysis parametric test to see if there were any significant differences between the pre-defined data groups parametric indicators (Hair et al., 2017; Ringle et al., 2015). According to the findings, only the employees' organizational positions may have a

significant impact on the analysis outcomes (Appendix II). The results are presented in detail in the following chapter, along with an attempt to interpret them.

4.5 Data Analysis Strategy

This section will go over each step involved in completing the statistical analysis for the current empirical study. The Smart Partial Least Squares software version 3.2 (SmartPLS 3.2), the Statistical Package for Social Science software version 22.0 (IBM SPSS Statistics 22.0), and the Analysis of Moment Structure software version 21.0 (IBM SPSS AMOS 21.0) were used to analyze the data. The data screening procedure, descriptive statistical analysis, exploratory factor analysis, and the Harman's single-factor test (a technique for assessing method bias) were all performed by IBM SPSS Statistics 22.0 (IBM Corp., 2013). The unmeasured latent method factor test (a technique for assessing method bias) and the goodness-of-fit test were executed via IBM SPSS AMOS 21.0 (IBM Corp., 2018). Lastly, the SmartPLS 3.2 (Ringle et al., 2015) was used to conduct full collinearity-testing (a technique for assessing method bias), partial least-squares confirmatory factor analysis (measurement model assessment), and partial least-squares structural equation modeling hypotheses testing.

4.5.1 Exploratory factor analysis

An exploratory factor analysis (EFA) is one in which the number of factors is not specified in advance (Anderson & Gerbing, 1988). Hence, the EFA procedure is used when the researcher has no clear expectations or only partial assumptions about the underlying mechanism of correlations (Fabrigar & Wegener, 2012). The EFA only identifies potential relations in the broadest sense before allowing the multivariate procedure to unveil them (Hair et al., 2014). On the other hand, confirmatory factor analysis (CFA) or restricted factor analysis (Anderson & Gerbing, 1988) is used when a researcher has clear prognostications about the number of common factors and the precise measures that each common factor will impact (Fabrigar et al., 1999). It is worth noting that in the EFA, the researcher does not seek to confirm any pre-specified correlations, but rather allows the technique and data to define the correlations (Hair et

al., 2014). As such, the first step was to conduct an EFA with IBM SPSS Statistics 22.0 (IBM Corp., 2013) to identify the factors that corresponded to the measures used in the current study, using the maximum likelihood extraction method and promax with the Kaiser Normalization rotation method.

Table 2. *Exploratory factor analysis: results summary*

Construct			Loading
Transformational leadership behavior (TLB) (Carless et al., 2000)	**Cronbach's α**	***0.95***	
"How often does your supervisor communicate a clear and positive vision of the future?"			0.796
"How often does your supervisor treat staff as individuals, support and encourage their development?"			0.891
"How often does your supervisor give encouragement and recognition to staff?"			0.897
"How often does your supervisor foster trust, involvement, and cooperation among team members?"			0.886
"How often does your supervisor encourage thinking about problems in new ways and question assumptions?"			0.871
"How often is your supervisor clear about his/her values and practices what he/she preaches?"			0.800
"How often does your supervisor instill pride and respect in others and inspire you by being highly competent?"			0.845
Work-family conflict (WFC) (Netemeyer et al., 1996)	**Cronbach's α**	***0.92***	
"The amount of time my job takes up makes it difficult to fulfill family responsibilities."			0.905
"Things I want to do at home do not get done because of the demands my job puts on me."			0.945
"The demands of my work interfere with my home and family life."			0.854
"My job produces strain that makes it difficult to fulfill family duties."			0.751
"Due to work-related duties, I have to make changes to my plans for family activities."			0.679
Workplace anxiety (WPA) (Warr, 1990)	**Cronbach's α**	***0.83***	
"Thinking of the past few weeks, how much of the time has your job made you feel tense?"			0.641
"Thinking of the past few weeks, how much of the time has your job made you feel uneasy?"			0.848
"Thinking of the past few weeks, how much of the time has your job made you feel worried?"			0.857
Emotional exhaustion (EE) (Demerouti et al., 2010)	**Cronbach's α**	***0.85***	
"There are days when I feel tired before I arrive at work."			0.771
"After work, I tend to need more time than in the past in order to relax and feel better."			0.791
"During my work, I often feel emotionally drained."			0.689
"After my work, I usually feel worn out and weary."			0.724
Job performance *(a = 0.86)*			
Technical performance dimension (TP) *(Abramis, 1994)*	**Cronbach's α**	***0.87***	
"In the last month you worked, how well did you handle the responsibilities and daily demands of your work?"			0.877
"In the last month you worked, how well did you make the right decisions?"			0.801
"In the last month you worked, how well did you perform without mistakes?"			0.753
"In the last month you worked, how well did you get things done on time?"			0.731
Social performance dimension (SP) *(Abramis, 1994)*	**Cronbach's α**	***0.85***	
"In the last month you worked, how well did you get along with others at work?"			0.635
"In the last month you worked, how well did you avoid arguing with others? "			0.892
"In the last month you worked, how well did you handle disagreements by compromising and meeting other people half-way?"			0.857

Kaiser-Meyer-Olkin (KMO)	*0.91*
Bartlett's Test of Sphericity (χ^2)	*10276.354****

Notes. *(1) N = 574. (2) Extraction method: maximum likelihood; Rotation method: promax with Kaiser normalization. (3) Factor loading cutoff value = 0.50. (4) Construct internal reliability coefficient: Cronbach's alpha (a > 0.70). (5) Measure of sampling adequacy: Kaiser-Meyer-Olkin (KMO > 0.70). (6) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant.*

When evaluating indicator factor loadings, a common rule of thumb is that the factor loadings should outweigh 0.500, implying that less than half of the indicator's variance is subject to error (Hair et al., 2014). An even stricter rule of thumb states that the cut-off criterion should be 0.700 (Fornell & Larcker, 1981). Table 2 summarizes the EFA outcomes. Six factors have emerged. The emotional exhaustion scale has been reduced to four items. All factor loadings were greater than 0.500, and the great majority of indicators had factor loadings greater than 0.700. In addition, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.91 (cut-off criterion < 0.70), and Bartlett's test of sphericity was significant ($\chi2 = 10276.35$; $p < 0.001$), suggesting that factor analysis was appropriate for the data (Hair et al., 2014). The total variance explained by all the constructs was above 60% (Table 3), whereas the largest construct explained 28.7 percent, which is below the threshold of 50 percent recommended by Fornell and Larcker (1981), inferring that the common method variance may not be a problem (Podsakoff et al., 2003). Finally, for each construct, Cronbach's alpha coefficient was calculated to determine its internal consistency (Cronbach & Meehl, 1955). As shown in Table 2, all constructs demonstrated high internal consistency when measured using the 0.70 cut-off criterion (Nunnally, 1967).

4.5.2 Assessment of common method bias

In spite of the widespread consideration of possible method biases and the prevalence of study designs with the potential to generate them, there is little agreement on the factuality and severity of its influence on behavioral research (Richardson et al., 2009; Spector, 2006). For instance, Spector (2006) claims that the issue has become an "urban legend" due to overstatement, misrepresentation, and oversimplification of the real situation. Most scholars, in any case, concur that correlations among variables measured by the same method, typically self-reported

questionnaires, are inflated due to the impact of common method variance (Bagozzi & Yi, 1991; Kock, 2015; Lindell & Whitney, 2001; Podsakoff et al., 2003). Common method variance (CMV) is defined as "the variance that is attributable to the measurement method rather than to the construct of interest" (Bagozzi & Yi, 1991, p. 1). Podsakoff and colleagues (2003), providing a similar definition, described the CMV as "the variance that is attributable to the measurement method rather than to the constructs the measures represent" (p. 1.). In other words, CMV denotes the overlap of two variables caused by a common bias instead of an association between the latent constructs (Bass & Bass, 2008). Method biases are an issue because they are a major factor of measurement error in empirical studies (Bagozzi & Yi, 1991; Lindell & Whitney, 2001). Measurement error jeopardizes the validity of findings about the relationships among indicators (Podsakoff et al., 2012) and can be classified as random or systematic, like method variance (Bagozzi & Yi, 1991). A degree of correlation between two measurements, say, may be owed to the fact that they were acquired by the same method, at the same period, or by the same appraiser (Bass & Bass, 2008). That is to say, the research outcomes are compromised because the measurement error may be too substantial for the relationships to be legitimate, resulting in misleading results about the hypothesized model's relationships (Lindell & Whitney, 2001; Podsakoff et al., 2003). When two sets of data are collected at the same time, from the same participant, on the same measurement instrument, by the same method, and about the same behavioral characteristic, common or same-source measurement error is significantly greater (Bass & Bass, 2008).

Because the current study's data was all self-reported, came from a single source of information (i.e., employees), and was a one-time survey, common method variance bias could have been an issue that needed to be effectively assessed (Podsakoff et al., 2003, 2012). To reduce the risk of common method bias, we used both ex-ante research design and post-hoc statistical remedies suggested by Podsakoff and colleagues (2003, 2012). In keeping with the research design remedies, we assured participants that the information they provided would be kept confidential and anonymous, and they were guided to answer each question with regard to their current workplace. Aside from that, participants were assured that there were no right or wrong answers and that they should answer the questions honestly. These contributed to the reduction of

participants responding in a non-natural or untruthful manner (Podsakoff et al., 2003, 2012). Furthermore, the questionnaire design adopted proximal separation; negative and positive phrased items were combined; and items were randomly placed together to minimize resemblance effects and deter respondents from making an assumption of cause-and-effect (Podsakoff et al., 2003, 2012).

Regarding the statistical remedies, Table 3 summarizes the results. First, an exploratory factor analysis was conducted using IBM SPSS Statistics 22.0 (IBM Corp., 2013), from which six factors emerged to explain 67.7 percent of the total variance, whereas the largest construct explained 28.7 percent (Table 3), which is below the threshold of 50 percent recommended by Fornell and Larcker (1981). A Harman's single-factor test (Podsakoff et al., 2003, 2012), which is based on exploratory factor analysis with the maximum likelihood extraction method and no rotation, was also performed employing IBM SPSS Statistics 22.0. The key postulation of this technique is that if there is a significant percentage of common method variance, either a single factor or one overall factor will arise from the factor analysis, accounting for the greater part of the covariance among the variables. The results show that the total variance explained by a single factor was 25 percent, which is half of the 50 percent cut-off threshold (Fornell & Larcker, 1981), indicating that the common method bias in the data was quite narrow.

Following that, the SmartPLS 3.2 (Ringle et al., 2015) was used to implement full collinearity (Kock, 2015; Kock & Gaskins, 2014; Latan & Noonan, 2017), which is based on variance inflation factors (VIFs). The full collinearity test evaluates both vertical and lateral collinearity. Vertical collinearity is a predictor-predictor phenomenon that occurs when two or more predictors estimate the same latent factor or a component of such a factor (Kock, 2015). On the other hand, lateral collinearity is a predictor-criterion phenomenon in which a predictor variable estimates the same latent factor, or a component of such a factor, “as the variable to which it points in a model” (Kock, 2015, p. 6). This procedure generates VIFs for all latent factors in a model (Gaskin, 2017c). If all VIFs from a full collinearity test were equivalent to or less than 3.300 (Cenfetelli & Bassellier, 2009; Diamantopoulos & Siguaw, 2006), the model would be free of common method variance (Kock, 2015; Kock & Gaskins, 2014; Latan & Noonan, 2017). Based on a full collinearity test, the VIFs obtained for all the latent variables of the under-investigation model ranged from 1.039 to 2.363 (lower than the threshold of 3.300),

indicating that the hypothesized model could not be contaminated by common method bias.

Table 3. *Techniques for assessing method bias: results summary.*

Exploratory factor analysis *(using the IBM SPSS Statistics 22.0)*

Number of factors emerged	6
Total variance explained	67.7%
Total variance explained by the largest factor	28.7%

Harman's single-factor test *(using the IBM SPSS Statistics 22.0)*

Total variance explained by a single factor	25.0%

Full collinearity test *(using the SmartPLS 3.2)*

Inner variance inflation factors (VIF) values

Construct	EE	SP	TLB	TP	WFC	WPA
EE	_	2.361	2.268	2.363	1.785	1.866
SP	1.509	_	1.433	1.121	1.511	1.500
TLB	1.227	1.212	_	1.278	1.273	1.254
TP	1.401	1.039	1.400	_	1.400	1.397
WFC	1.286	1.703	1.696	1.702	_	1.682
WPA	1.437	1.807	1.785	1.815	1.797	_

Unmeasured latent method factor test *(using the IBM SPSS AMOS 21.0)*

1. Unmeasured latent method factor value square

ULMF Value	0.37
Square Of ULMF Value	0.137
Total Variance Explained	13.7%

2.Chi-square (χ^2) change with and without unmeasured latent method factor

χ^2 with ULMF	596.726***
χ^2 without ULMF	608.487***
χ^2 Percentage Change	2%

3. Standardized factor loading absolute change with and without ULMF****

Minimum absolute change	0.046
Maximum absolute change	0.163

*****for additional information: Appendix III.*

Notes. *(1) N = 574. (2) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant. (3) Abbreviations: WPA = Workplace Anxiety; WFC = Work-Family Conflict; TLB = Transformational Leadership Behavior; EE = Emotional Exhaustion; TP = Technical Performance; SP = Social Performance; ULMF = Unmeasured Latent Method Factor. (4) Exploratory factor analysis: Maximum likelihood extraction method; Promax with Kaiser normalization rotation method. (5) Harman's single-factor test: maximum likelihood extraction method; no rotation. (6) ULMF test: maximum likelihood discrepancy method. (7) Total variance explained by a single factor threshold ≤ 50%. (8) Standardized Factor loading absolute change threshold with and without the ULMF ≤ 0.200. (9) Full collinearity test: Inner VIF values threshold ≤ 3.3.*

Finally, an unmeasured latent method factor test (Podsakoff et al., 2003, 2012) was performed utilizing IBM SPSS AMOS 21.0 (IBM Corp., 2018). This method involves the addition of an unmeasured first-order factor that is linked to all of the hypothesized model's factors (Podsakoff et al., 2003). These corresponding paths must be equal, and the variance of the common factor must be one. Items may load on both their theoretical constructs and the unmeasured latent method factor, and via confirmatory factor analysis (maximum likelihood discrepancy method), the significance of the structural parameters is investigated both with and without the unmeasured latent

method factor in the model. With this test, the CMV can be assessed using two different criteria. First, before standardization, the CMV can be calculated as the square of the common factor of each path. The most prevalent approach is to set the threshold at 50 percent (Fornell & Larcker, 1981). The comparison of factor loadings with and without the unmeasured latent method factor is a second CMV criterion. If the difference was equal to or less than 0.200, the common method bias would not be a significant issue (Gaskin, 2017c; Serrano Archimi et al., 2018). According to the findings, as can be seen in Table 3, the CMV was 13.7 percent, which is less than half of the suggested method variance threshold (50%). Furthermore, the difference in factor loading with and without the unmeasured latent method factor varied from 0.046 to 0.163, which was less than the 0.200 threshold.

Consequently, all tests indicate that common method variance is not a major area of concern in the current study. But nevertheless, the existence of CMV cannot be ruled out because all available post-hoc statistical remedies for its identification have been critiqued (Podsakoff et al., 2003, 2012; Richardson et al., 2009). As a result, while considering the consequences of its potential presence in this survey is important, it is not a main consideration. This topic is revisited in the section "Limitations and Future Research".

4.5.3 Assessment of the model fit

Model estimation provides empirical measures of the correlations between the indicators and the constructs (i.e., measurement model) and between the constructs (i.e., structural model). Empirical measures facilitate the comparison of hypothetically developed measurement models and structural models with reality as reflected by sample data from a study (Hair et al., 2017). Prior to actually verifying the structural model (i.e., testing of the hypotheses), the measurement model should be evaluated and adjusted, taking indicator loading and model fitness into account (Anderson & Gerbing, 1988). As such, testing the hypothesized model entails following Anderson and Gerbing's (1988) two-step approach procedure of structural equation modelling (SEM), wherein the measurement model is first assessed, revisited, and confirmed employing confirmatory factor analysis before any structural analysis of the

hypothesized model is implemented. Confirmatory factor analysis (CFA), the inverse of exploratory factor analysis, is a multivariate statistical technique that evaluates (confirms) a previously defined relationship (Hair et al., 2014). Hence, the first action was to perform a CFA on the sample total covariance matrix to determine the measurement model's fit indexes (Anderson & Gerbing, 1988). In particular, during CFA in IBM SPSS AMOS 21.0 (IBM Corp., 2018), a goodness-of-fit test was performed, which illustrates how well a predefined model reproduces the covariance matrix between all indicator variables (Hair et al., 2014).

Table 4. *Evaluation of the measurement model and model fit: results summary*

Construct reliability & validity, discriminant validity, and goodness-of-fit; Values of Cronbach's alphas, composite reliability, average variance extracted, heterotrait-monotrait ratio coefficients, goodness-of-fit index, comparative fit index, Tucker-Lewis index, incremental fit index, and root mean square error of approximation.

Construct	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)	Emotional Exhaustion	Social Performance	Transformational Leadership Behavior	Technical Performance	Work-Family Conflict	Goodness-of-fit (GOF) Indices	
									χ^2 = 608.487***	
Emotional Exhaustion	0.846	0.896	0.684	**Heterotrait-Monotrait Ratio (HTMT)**					***χ^2/df***	2.143
Social Performance	0.853	0.911	0.773	0.133	_				***GFI***	0.922
Transformational Leadership Behavior	0.950	0.959	0.768	0.363	0.303	_			***CFI***	0.968
Technical Performance	0.872	0.912	0.723	0.087	0.528	0.162	_		***TLI***	0.963
Work-Family Conflict	0.920	0.940	0.758	0.634	0.071	0.192	0.055	_	***IFI***	0.968
Workplace Anxiety	0.834	0.900	0.750	0.641	0.212	0.357	0.154	0.457	***RMSEA***	0.045

Notes. *(1) N = 574. (2) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant. (3) Construct reliability & validity criteria thresholds: a > 0.700; CR > 0.700; AVE > 0.500. (4) Discriminant validity criterion threshold: HTMT < 0.850. (5) GOF Indices abbreviations: GFI = Goodness-of-fit Index; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; IFI = Incremental Fit Index; RMSEA = Root Mean Square Error of Approximation. (6) GOF Indices thresholds: χ^2/df < 5.000, GFI > 0.900; CFI > 0.900; TLI > 0.900; IFI > 0.900; RMSEA < 0.050. (7) The values of GOF Indices are based on the results of confirmatory factor analysis.*

The goodness-of-fit test evaluated some of the most widely used fit indices, including the Chi-square (χ^2), the Chi-square difference statistic (df), the goodness-of-fit index (GFI), the comparative fit index (CFI), the Tucker–Lewis index (TLI), the incremental

fit index (IFI), and the root mean square error of approximation (RMSEA). The RMSEA is a measure of the model-data discrepancy for each degree of freedom in the model (Hair et al., 2017). It has been proposed that RMSEA values of less than 0.050 are good fit, values between 0.050 and 0.080 are acceptable fit, values between 0.080 and 0.100 are modest fit, and values higher than 0.100 are poor fit (Fabrigar et al., 1999). As a rule of thumb, values higher than 0.900 denote a good fit for the remaining indices (Hair et al., 2014). As shown in Table 4, the measurement model overall displayed a high level of good fit to the data (χ^2 = 608.487, $p < 0.001$; χ^2/df = 2.143; RMSEA = 0.045; CFI = 0.968; IFI = 0.968; TLI = 0.963; and GFI = 0.922). However, the subsection "Assessment of the measurement model" goes into detail about the more specific indicators that reflect construct reliability and validity, as well as discriminant validity of the measurement model.

4.5.4 Method of analysis

The current study's hypotheses were tested using SmartPLS 3.2 (Ringle et al., 2015) and a structural equation modeling (SEM) procedure known as partial least squares (PLS; Wold, 1985). PLS-SEM (or PLS path) is being used by an increasing number of researchers in organizational behavior, particularly in leadership literature (Avolio et al., 1999; Bass et al., 2003; Buil et al., 2019; House et al., 1991; Howell & Hall-Merenda, 1999; Klaic et al., 2018; Kloutsiniotis et al., 2022; Matzler et al., 2015; Quintana et al., 2015; Sosik & Godshalk, 2000).

SEM is a multivariate technique that combines facets of factor analysis and multiple regression to examine a set of interrelated dependence relationships between measured variables and latent constructs, as well as several latent constructs at the same time (Hair et al., 2017). Complex models with latent factors, formative factors, mediations, and multiple group evaluations of these more complex relationships can be created using SEM (Lowry & Gaskin, 2014). One of the two forms of SEM is the abovementioned PLS-SEM procedure (Wold, 1985). The second form is covariance-based SEM, also known as CB-SEM (Hair et al., 2011). CB-SEM is commonly used to confirm or reject theories by identifying how well a suggested conceptual model estimates the covariance matrix for a given set of data (Hair et al., 2017). PLS-SEM, on

the other hand, is predominantly used in exploratory research in developing theories by focusing on explaining variance in the dependent variables when assessing the model (Fornell & Bookstein, 1982).

PLS-SEM is a method that is recommended when the theoretical model is complex and involves several indicators and latent variables (Hair et al., 2011). PLS-SEM, unlike CB-SEM, makes no assumptions about data distributions when estimating model parameters, observation independence, or variable metrics (J.-M. Becker et al., 2012). Because of its less restrictive assumptions, PLS-SEM is thought to be more suitable for assessing hypothesized models with a smaller sample size (Wold, 1985). A PLS structural model's path coefficients are standardized regression coefficients (Wold, 1985). The loadings of items on factors are referred to as factor loadings. As a result, the findings can be interpreted using regression and principal-components analysis (Howell & Hall-Merenda, 1999).

Another key piece of PLS-SEM is the simplicity with which reflective, formative, and high-order component constructs can be included (J.-M. Becker et al., 2012). Even so, presumably the most significant element of PLS-SEM that makes it particularly appealing to a researcher is that it assesses both the structural constituent, which illustrates the association between factors, and the measurement constituent, which reflects the association between factors and their indicators (Fornell & Bookstein, 1982). This is enormously useful because concurrent structural and measurement constituent analysis facilitates construct reliability and validity assessments within the framework of the hypothesized model being evaluated (Hair et al., 2019). As a result, PLS-SEM recognizes that measurement instruments' psychometric qualities derive their essence from the nomological pattern of interactions in which they are employed (Lowry & Gaskin, 2014). To put it another way, looking at PLS-SEM results through the lenses of regression and principal component factor analysis could indeed explain them (Wold, 1985).

Regarding SmartPLS 3.2 (Ringle et al., 2015), in addition to being one of the foremost computer programs for PLS-SEM, it is an insightful and user-friendly software that provides a robust catalog of analyses and reports. In light of the foregoing, PLS-SEM was determined to be the most appropriate analysis technique for the hypothesized

model in this study.

4.5.4.1 Assessment of the measurement model

As indicated earlier, the SEM technique employs the two-step approach procedure (Anderson & Gerbing, 1988). A PLS-SEM model is comprised of two constituents: the structural constituent (or inner model), which reflects the factors and reveals the relationships (paths) between the factors; and the measurement constituent (or outer model), which reveals the correlations between the factors and the indicator variables (J.-M. Becker et al., 2012). Because the goal of PLS-SEM is to ensure maximum explained variance (i.e., the R-square value) of the dependent variables in the PLS-SEM model, the quality of the PLS-SEM measurement and structural models is based on criteria indicating the model's predictive ability. The three crucial PLS-SEM measurement model criteria are reliability, convergent validity, and discriminant validity, while the R-square (explained variance), as well as the quantity and statistical significance of the structural path coefficients, are the most essential assessment criteria for the PLS-SEM structural model (Hair et al., 2017). Hair et al. (2011) define construct validity as the degree to which a series of measured variables accurately represents the conceptual latent construct being measured, whereas construct reliability is defined as the level to which a set of indicators of a latent construct's measurements are internally consistent. In a similar manner, convergent validity is the degree to which an indicator correlates positively with alternative indicators of the same factor, whereas discriminant validity is the degree to which a factor is empirically distinct from other factors (Hair et al., 2017).

Following the two-step approach procedure (Anderson & Gerbing, 1988), the PLS-SEM model assessment begins with the measurement model, which facilitates the estimation of the aforementioned criteria, and continues with the structural model assessment (Hulland, 1999). Nevertheless, because PLS-SEM depends on variances based on bootstrapping and blindfolding rather than covariances, CB goodness-of-fit indices are not fully transferable to the PLS-SEM framework (Hair et al., 2017). Thus, research has proposed alternative criteria for evaluating the PLS-SEM measurement

model, that is: the composite reliability (CR) to estimate internal consistency (Hair et al., 2011); the individual indicator reliability (i.e., factor loading); the average variance extracted (AVE) to estimate convergent validity (J.-M. Becker et al., 2012); and the heterotrait-monotrait (HTMT) ratio of correlations (Henseler et al., 2015) to estimate discriminant validity. Widely accepted rules of thumb for the PLS-SEM measurement model assessment are the HTMT ratio with a cut-off value of less than 0.850 (Henseler et al., 2015), CR with a cut-off value greater than 0.700, and AVE with a cut-off value greater than 0.500 (Fornell & Larcker, 1981). Similarly, the factor loadings must be greater than or equal to 0.708 (Hair et al., 2017).

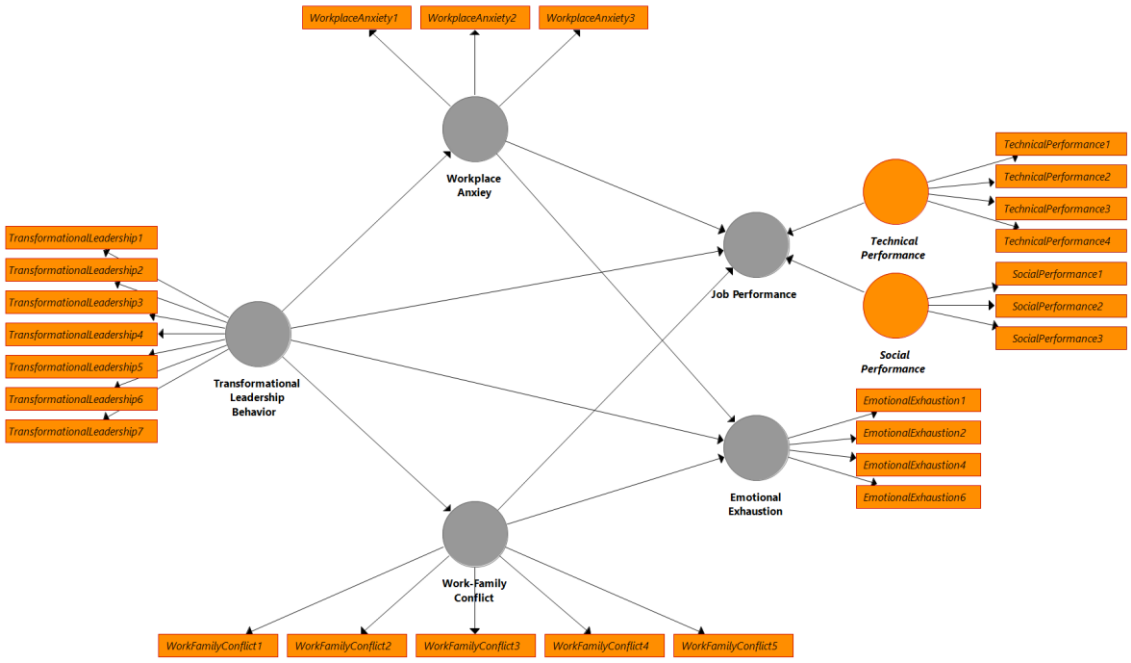

Figure 2. *The measurement model.*

In accordance with the preceding, PLS confirmatory factor analysis was performed employing SmartPLS 3.2 (Gaskin, 2017a; Ringle et al., 2015) to evaluate the construct reliability and validity, as well as discriminant validity, of the current study's measurement model (presented in Figure 2). In addition to the aforementioned criteria, the Cronbach's alpha coefficient (i.e., construct internal consistency) with a cut-off value of 0.700 (Nunnally, 1967) was included in the assessment process.

The results (illustrated in Table 4) confirmed both the EFA (conducted using IBM SPSS Statistics 22.0) and the CFA-goodness-of-fit test (performed via IBM SPSS AMOS 21.0) findings. Specifically, each construct's CR (ranging from 0.896 to 0.959) and

Cronbach's Alpha coefficient (ranging from 0.834 to 0.950) values exceeded the minimum requirement of 0.700, indicating internal consistency for each construct. All constructs' AVE values, ranging from 0.684 to 0.773, outperformed the threshold of 0.500, indicating convergent validity. As a result, the construct's reliability and validity were established. In terms of discriminant validity, the HTMT ratio of correlations ranged from 0.055 to 0.641, which was lower than the upper limit of 0.800, affirming that each construct of the measurement model was empirically distinct from the others. Ultimately, all six variables in the hypothesized model are validated as six distinct constructs.

4.5.4.2 Higher-order constructs in PLS-SEM

In behavioral research areas, PLS-SEM can be quite useful for cause and effect exploration (Lowry & Gaskin, 2014). As indicated earlier, PLS-SEM is a suggested approach for assessing a hypothesized model that includes reflective, formative, and high-order constructs (Sarstedt et al., 2019; Wetzels et al., 2009). Following the two-step approach procedure (Anderson & Gerbing, 1988), model assessment in PLS-SEM is initiated by determining the quality criteria of the measurement model (Wold, 1985). If the reliability and validity, as well as the discriminant validity, of the measurement model's reflective and formative factors are appropriate, the hypothesized model assessment proceeds with the estimation of the structural model results (i.e., the testing of the hypotheses). The path coefficient (cut-off value < 0.700), the t-statistics (t value; cut-off value < 1.960), and the significance level (p value; cut-off > 0.05) are the primary evaluation criteria for the PLS-SEM structural model (Hair et al., 2017). Nonetheless, if the under-investigated model contains one or more high-order components, preparatory operations should be carried out before evaluating the structural model (Sarstedt et al., 2019).

Each factor in a hypothesized model is measured by its indicators, which contain the research's underlying data. These indicators, also termed manifest variables, are the items—questions or statements—of the measurement instrument employed to gather survey sample data. Reflective factors are those in which the manifest variables respond to changes within the factor, indicating that causality flows from the factor to the

manifest variables (Diamantopoulos & Siguaw, 2006). Oppositely, a factor is labeled formative when causality flows from the manifest variables to the factor (Diamantopoulos & Siguaw, 2006). A first-order or lower-order factor is the most basic form of a factor. It is worth noting that researchers interchangeably use the terms "factor," "component," "construct," and "latent variable" (Chin, 1998; Sarstedt et al., 2019; Wetzels et al., 2009). Consequently, a factor comprised of two or more first-order components is referred to as a second-order factor, higher-order factor, hierarchical component, or hierarchical latent variable (J.-M. Becker et al., 2012; Chin, 1998; Sarstedt et al., 2019). Higher-order constructs are models that include one or more higher-order factors (J.-M. Becker et al., 2012). They are also known as hierarchical component models, hierarchical latent variable models, or second-order factor models (Chin, 1998; Wetzels et al., 2009).

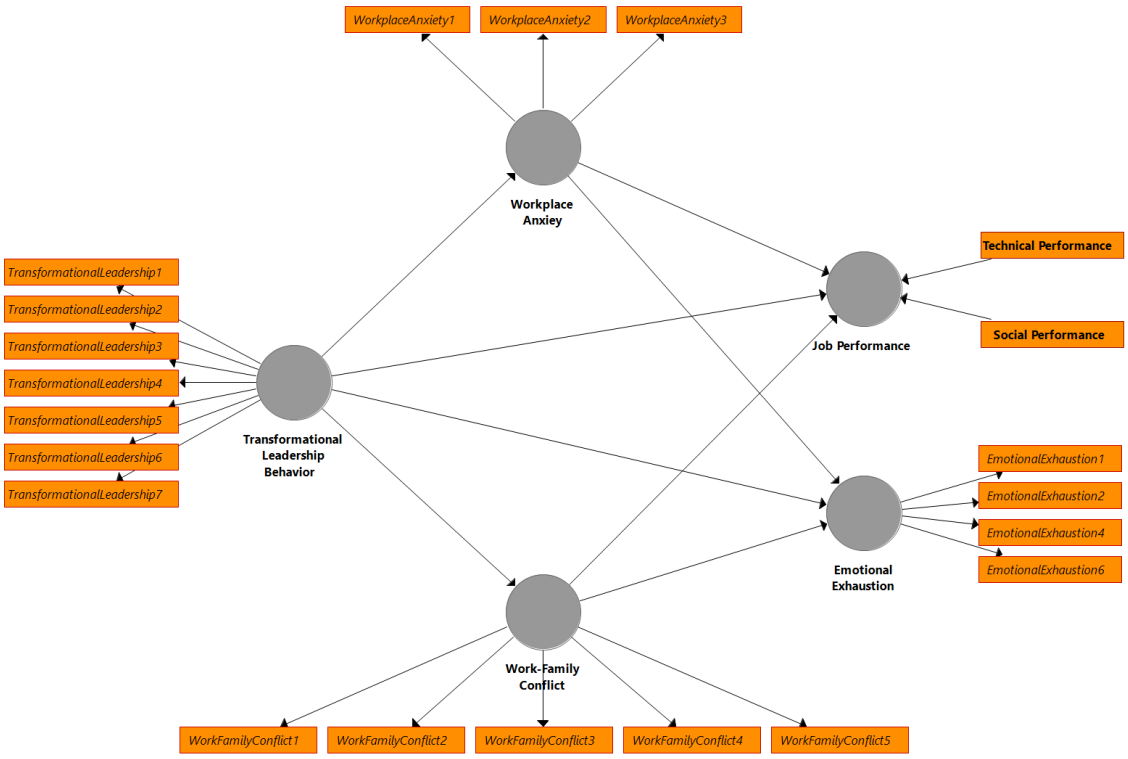

Figure 3. *The final (structural) model, after the "extended repeated indicators" approach and "embedded two-stage" approach procedures.*

According to research, there are four types of higher-order constructs: reflective-reflective, reflective-formative, formative-reflective, and formative-formative (J.-M. Becker et al., 2012). As has been aforementioned (see "3.1 Job performance"), the current study's job performance factor was conceptualized as a reflective-formative

higher-order factor composed of two reflective latent variables (illustrated in Figure 2). Therefore, the proposed model can be described as a reflective-formative higher-order construct. The “extended repeated indicators” approach (J.-M. Becker et al., 2012; Wold, 1985) and the “two-stage” approach (Wetzels et al., 2009) are the two most popular methods for clarifying and evaluating higher-order constructs in PLS-SEM. Literature has suggested two variants of the “two-stage” approach in particular: the “embedded two-stage” approach (Ringle et al., 2012) and the “disjoint two-stage” approach (J.-M. Becker et al., 2012), which vary slightly in their model standards in both stages. The "extended repeated indicators" approach (J.-M. Becker et al., 2012; Wold, 1985) and the “embedded two-stage” approach (Ringle et al., 2012; Wetzels et al., 2009) were used in this study (for more information on the procedures, see Gaskin, 2017; Sarstedt et al., 2019, pp. 3–6), and the final (structural) model is presented in Figure 3.

"Transformational leadership can be learned, and it can-and should-be the subject of management training and development. Research has shown that leaders at all levels can be trained to be charismatic . . ." (Bass, 1990, p. 27)

5 Results and conclusions

Building on the transformational leadership theory (Bass, 1985a, 1985b; Burns, 1978; Carless et al., 2000), and the job demands-resources theory (Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001), we theorized a dual-influence leadership model (illustrated in Figure 1) which posits that transformational leadership behavior (TLB) has a direct positive effect on employees' job performance (Hypothesis 1) while simultaneously reducing their emotional exhaustion (Hypothesis 2). In addition, we postulated that two work stressors—work-family conflict (WFC) and workplace anxiety (WPA)—add to emotional exhaustion and poor job performance in employees (Hypotheses 3a, 3b, 4a, and 4b, respectively). According to our hypothesized model, TLB has a negative impact on both WFC and WPA, decreasing the level of both work stressors on employees (Hypothesis 5a and 6a, respectively). Finally, both work stressors were anticipated to mediate the relationship between TLB and job performance as well as emotional exhaustion (Hypotheses 5b, 5c, 6b, and 6c, respectively).

5.1 Preliminary steps

To evaluate the proposed model, data was collected by means of well-established measurement instruments, yielding a final sample of 574 healthcare workers (see Table 1). The exploratory factor analysis revealed six latent variables and supported the sampling adequacy (for a result summary, see Table 2). To further explore the credibility of the results, three tests (i.e., Harman's single-factor test, full collinearity test, and unmeasured latent method factor test) were undertaken to assess the amount to which the analytical results' variances encapsulate the common method bias (Kock, 2015; Podsakoff et al., 2003, 2012; Podsakoff & Organ, 1986). According to the findings, common method bias should not be deemed an issue in the present research (see Table 3). Concerning all four variables included as controls (employees' employment status, job position in the organization, marital status, and childcare responsibility), only the employees' organizational positions were found to have a moderate impact on the analysis outcomes (see Appendix I and Appendix II). The descriptive statistics, construct

internal consistency, and bivariate correlations between the research variables are shown in Table 5.

Table 5. Descriptive statistics, construct reliabilities, and bivariate correlations among study variables.

Variable	Mean	Standard deviation	*Marital status*	*Childcare responsibility*	*Position in the organization*	*Employment status*	TLB	WFC	WPA	EE	JP
Marital status	1.89	.93	–								
Childcare responsibility	1.55	.50	-.390**	–							
Position in the organization	2.72	.89	.061ns	-.152**	–						
Employment status	3.39	.86	.126**	-.125**	.190**	–					
TLB	3.54	1.11	-.044ns	.047ns	.063ns	.068ns	**(.95)**				
WFC	3.84	0.89	-.023ns	-.006ns	-.027ns	.068ns	-.179**	**(.92)**			
WPA	2.70	1.28	-.090*	.055ns	.005ns	-.023ns	-.317**	.396**	**(.83)**		
EE	3.20	1.21	-.066ns	.027ns	-.108**	-.031ns	-.222**	.447**	.388**	**(.85)**	
JP	3.31	1.03	.029ns	-.010ns	.038ns	.162**	.243**	-.053ns	-.182**	.049ns	**(.86)**

Notes. *(1) N = 574. (2) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant. (3) Abbreviations: WPA = Workplace Anxiety; WFC = Work-Family Conflict; TLB = Transformational Leadership Behavior; EE = Emotional Exhaustion; JP = Job Performance. (4) Coefficient alpha (construct internal consistency) is provided along the diagonal; off-diagonal elements are the constructs' intercorrelations; (5) Italicized variables are used as controls.*

The hypothesized relationships connecting the study's latent variables were investigated by dint of a structural equation modeling technique known as partial least squares (PLS; Wold, 1985), via the software SmartPLS 3.2 (Ringle et al., 2015). Based on Anderson and Gerbing's (1988) recommendations for SEM analysis, the two-step

approach procedure was applied. Accordingly, the measurement model's goodness-of-fit and quality criteria were initially assessed by conducting confirmatory factor analyses. The results provided in Table 4 exhibited that the measurement model had a good fit to the data (χ^2 = 608.487, $p < 0.001$; χ^2/df = 2.143; RMSEA = 0.045; CFI = 0.968; IFI = 0.968; TLI = 0.963; and GFI = 0.922); construct reliability and validity (a > 0.700; CR > 0.700; AVE > 0.500) and discriminant validity (HTMT < 0.800). Lastly, prior to conducting the primary analyses, due to the hypothesized model being a reflective-formative higher-order construct (J.-M. Becker et al., 2012; Chin, 1998; Wetzels et al., 2009), the "extended repeated indicators" approach (J.-M. Becker et al., 2012; Wold, 1985) and the “embedded two-stage” approach (Ringle et al., 2012; Wetzels et al., 2009) processes were employed, resulting in the structural model which is depicted in Figure 3.

5.2 Testing the hypothesized model

For assessing the proposed relationships, the structural model was first subjected to PLS-SEM analysis (Wold, 1985), with a path weighting scheme and 300 maximum iterations, to calculate path coefficients, t-statistics, and R-square values. The bootstrapping procedure was then applied to the structural model. Bootstrapping is a nonparametric procedure to validate “a multivariate model by drawing a large number of subsamples and estimating models for each subsample. This approach does not rely on statistical assumptions about the population to assess statistical significance, but instead makes its assessment based solely on the sample data” (Hair et al., 2014, p. 2). In the bootstrapping process, subsamples are formed with observations picked at random with replacement from the initial data set (Hair et al., 2017). For a baseline examination, the number of subsamples could be reduced to 500, for example. However, to ensure the reliability of the results, a significant number of bootstrap subsamples, such as 5000, should be utilized for the final assessment (Hair et al., 2017).

Hence, in order to evaluate the statistical significance of the previously mentioned PLS-SEM results (i.e., path coefficients, t-statistics, and R-square values), the bootstrapping technique was executed on the structural model based on 5000 bootstrap subsamples. The commonly accepted threshold values for the PLS-SEM structural model assessment are greater than 1.960 for t-statistics (t values), greater than 0.050 for

significance level (p values), and greater than 0.700 for path coefficients (Hair et al., 2017). The control variables (employment status, job position in the organization, marital status, and childcare responsibility) were discarded from the primary analysis due to research recommendations (see Atinc et al., 2012; T. E. Becker et al., 2016; Bernerth et al., 2018; K. D. Carlson & Wu, 2012; Spector & Brannick, 2011) as well as their little effect on the analysis findings (see Appendix I). Instead, PLS multi-group analyses were performed separately (see Appendix II).

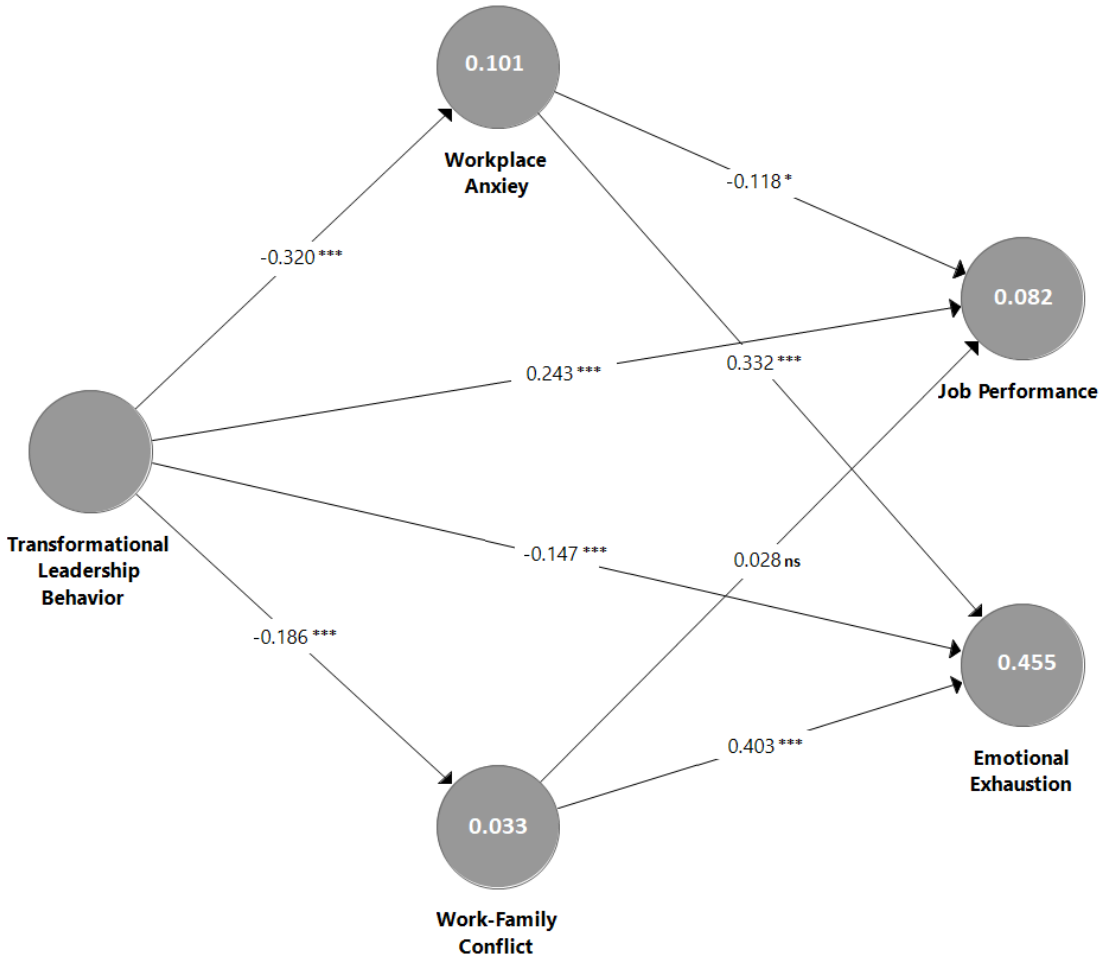

Figure 4. *A summary of the direct effects of the structural model (PLS-SEM outcomes): Path coefficients, significance level (*p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant), and R-square adjusted values (white numbers inside constructs) are depicted.*

Figure 4 depicts the estimations of the structural model's main direct effects involving the latent variables determined from the PLS-SEM analysis and bootstrapping technique (i.e., path coefficients, significance level, and R-square adjusted values). The

proposed model explains 10.1 percent of workplace anxiety, 3.3 percent of work-family conflict, 8.2 percent of job performance and 45.5 percent of emotional exhaustion. Table 6 (i.e., proposed direct relations) and Table 7 (i.e., proposed mediation mechanisms) present an overview of the results (i.e., path coefficients, t-values, p-values, and R-square adjusted values).

5.2.1 Proposed direct relationships

Along with Hypothesis 1, transformational leadership behavior (TLB) should be positively associated with employees' job performance. Indeed, the findings (see Table 6) revealed a positive and statistically significant relationship between TLB and job performance (path coefficient = 0.275, t = 7.130, p < 0.001). Therefore, Hypothesis 1 was supported. In terms of Hypothesis 2, it was expected that TLB would be negatively correlated to employees' emotional exhaustion, which was also supported by the analysis results. As shown in Table 6, TLB, in particular, was found to be adversely linked to emotional exhaustion (path coefficient = –0.337, t = 8.224, p < 0.001).

Table 6. Results of PLS-SEM analysis (Bootstrapping: 5000 subsamples): Proposed direct relations

Summary of direct effects evaluation: path coefficients, t-statistics values, R-square adjusted values, and significance level.

Corresponding Path	Path Coefficient	T-Statistics	R^2 Adjusted	Hypothesis Test Outcome
TLB → EE (without mediators)	-0.337***	8.224***	0.112	**H2:** supported
TLB → EE (with mediators)	-0.147***	4.169***	0.455	_
WFC → EE	0.403***	12.078***	_	**H3a:** supported
WPA → EE	0.332***	9.067***	_	**H4a:** supported
TLB → JP (without mediators)	0.275***	7.130***	0.074	**H1:** supported
TLB → JP (with mediators)	0.243***	5.553***	0.082	_
WFC → JP	*0.028ns*	*0.566ns*	_	**H3b:** *not supported*
WPA → JP	-0.118*	2.209*	_	**H4b:** supported
TLB → WFC	-0.186***	4.376***	0.033	**H5a:** supported
TLB → WPA	-0.320***	7.714***	0.101	**H6a:** supported

Notes. *(1) N = 574. (2) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant. (3) Abbreviations: WPA = Workplace Anxiety; WFC = Work-Family Conflict; TLB = Transformational Leadership Behavior; EE = Emotional Exhaustion; JP = Job Performance; H = hypothesis; PLS-SEM = Partial least squares structural equation modeling.*

Work-family conflict (WFC) was predicted to be positively associated with employees' emotional exhaustion in Hypothesis 3a but negatively tied to employees' job performance in Hypothesis 3b. While Hypothesis 3a was validated since the evidence suggested a significant and positive link between WFC and emotional exhaustion (path coefficient = 0.403, t = 12.078, p < 0.001), Hypothesis 3b was not supported since WFC was not significantly negatively related to job performance (path coefficient = 0.028, t = 0.566, p > 0.05). In keeping with Hypothesis 4a, workplace anxiety (WPA) would be favorably connected with employees' emotional exhaustion, whereas Hypothesis 4b contends that WPA would be adversely correlated to employees' job performance. The findings confirmed both these hypotheses. Specifically, as indicated in Table 6, there was a strong and positive link between WPA and emotional exhaustion (path coefficient = 0.332, t = 9.067, p < 0.001) as well as a negatively significant correlation between WPA and job performance (path coefficient = –0.118, t = 2.209, p < 0.05).

Finally, in Hypothesis 5a, TLB was anticipated to be negatively related to WFC and similarly negatively linked to WPA in Hypothesis 6a. Both hypotheses were supported because the results revealed a negative and statistically significant association between TLB and both WFC (path coefficient = –0.186, t = 4.376, p < 0.001) and WPA (path coefficient = –0.320, t = 7.714, p < 0.001).

5.2.2 Proposed mediation mechanisms

The suggested mediation pathways were assessed considering current research recommendations (see Hair et al., 2017; Hayes, 2009; Hayes & Preacher, 2010; Zhao et al., 2010). Therefore, the bootstrapping approach (5000 subsamples) was used to determine whether the postulated indirect effects were significant (Hair et al., 2017; Hayes, 2009; X. Zhao et al., 2010), and accordingly, each mediation was labeled using Zhao and colleagues (2010) as well as Baron and Kenny (1986) mediation classification types. Specifically, mediation can be partial or full (Baron & Kenny, 1986), as well as direct-only nonmediation, no-effect nonmediation, complementary, competitive, or indirect-only mediation (X. Zhao et al., 2010). Table 7 summarizes the findings.

In line with Hypothesis 5b, WFC would mediate the interaction between TLB and employees' emotional exhaustion. The results supported the hypotheses (path coefficient = –0.075, t = 4.188, p < 0.001). Thus, WFC mediated the association between TLB and emotional exhaustion, and the mediation was classified as partial (Baron & Kenny, 1986) and complementary (X. Zhao et al., 2010). Contrary to Hypothesis 5c, WFC was not observed to mediate the connection between TLB and employees' job performance (nonmediation; path coefficient = –0.005, t = 0.551, p > 0.05).

Table 7. Results of PLS-SEM analysis (Bootstrapping: 5000 Subsamples): Proposed mediation relations

Summary of indirect effects evaluation: path coefficients, t-statistics values, mediation type, and significance level.

Corresponding Path	Path Coefficient	T-Statistics	Mediation Type	Hypothesis Test Outcome
TLB → WFC → JP	*-0.005ns*	*0.551ns*	*Nonmediation*	**H5c:** *not supported*
TLB → WPA → JP	0.038*	2.181*	Partial-Complementary	**H6c:** supported
TLB → WFC → EE	-0.075***	4.188***	Partial-Complementary	**H5b:** supported
TLB → WPA → EE	-0.106***	5.676***	Partial-Complementary	**H6b:** supported

Notes. *(1) N = 574. (2) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant. (3) Abbreviations: WPA = Workplace Anxiety; WFC = Work-Family Conflict; TLB = Transformational Leadership Behavior; EE = Emotional Exhaustion; JP = Job Performance; H = hypothesis; PLS-SEM = Partial least squares structural equation modeling.*

Lastly, on the basis of Hypothesis 6b and Hypothesis 6c, WPA would be part of the cause in mediating the relationship between TLB and both employees' emotional exhaustion and job performance, respectively. The findings corroborated the hypotheses, showing WPA mediated the connection between TLB and emotional exhaustion (path coefficient = –0.106, t = 5.676, p < 0.001) as well as TLB and job performance (path coefficient = 0.038, t = 2.181, p < 0.05). Both mediations were classified as partial and complementary.

5.2.3 Partial least squares multi-group analysis

The partial least squares multi-group analysis (PLS-MGA) determines whether or not pre-defined data groups exhibit significant differences in group-specific parameter estimations (e.g., path coefficients, t-values, and p-values) (Gaskin, 2017b; Ringle et al., 2015).

Following the research recommendations on statistical control (see Atinc et al., 2012; T. E. Becker et al., 2016; Breaugh, 2008; K. D. Carlson & Wu, 2012; Spector & Brannick, 2011), the hypothesized model was evaluated with and without control variables to compare the results. Based on the findings (see Appendix I), two of the four controls (marital status and childcare responsibility) were dropped since they had no statistically significant effect on the analysis outcomes. Accordingly, PLS-MGA was implemented with the final control variables, namely "employment status" and "job position in the organization," to explore potential alternative causes for the study results. As per the outcomes of the PLS-MGA parametric tests, only "job position in the organization" had a statistically significant but fairly limited influence on WFC. According to the data (for further information, see Appendix II), TLB had a considerably negative influence on the WFC of frontline personnel while having a negative but not significant impact on the WFC of administrative executives.

5.3 Discussion

Despite their theoretical disputes (Hannah et al., 2014; Siangchokyoo et al., 2020; van Knippenberg & Sitkin, 2013; Yukl, 1999), the bulk of scholars agree on one point: leadership is not a fabrication of the mind; it is “a universal phenomenon” (Bass & Bass, 2008, p. 52). Avolio and Bass (2002) may have stated it more clearly and eloquently when they indicated that “even when no leader is appointed, someone must begin to take initiatives and soon comes to be seen as a leader” (p. 17).

From an organizational standpoint, a leader is an integral part in shaping the work climate (C. Cheng et al., 2016; Kara et al., 2013; Mullen & Kelloway, 2009) and attaining the desired results (Conger & Kanungo, 1994; Montano et al., 2017; Yukl, 2010), since he has the capacity to affect not only how employees perceive their assigned duties but also how they consider the entire organization in which they work (Burns, 1978; House, 1976; Sosik & Godshalk, 2000). The leadership approach that stresses followers’ emotions, values, and individual needs has been stipulated as charismatic (Conger & Kanungo, 1987; House, 1976; Shamir, 1991; Weber, 1947); or transformational (Bass, 1985a; Burns, 1978; Downton, 1973; Tichy & Devanna, 1990). In particular, transformational leadership, as introduced by Burns (1978) and later

conceptualized and formalized by Bass and colleagues (Antonakis et al., 2003; Avolio & Bass, 2002; Bass, 1985a, 1985b; Bass & Avolio, 1995), motivates followers to outperform expectations by transforming their attitudes, beliefs, and values rather than simply obtaining obedience, elevating self-interest for the benefit of the collective good (Bass, 1985a). In a broader sense, Burns (2003) highlighted followers' happiness protection and nourishment as the fundamental priorities of transforming leadership, with the aim of broadening the chance "to pursue happiness to all people" (p.13).

This comprehensive perspective on leadership has inspired us to develop a dual-influence leadership model in which transformational leadership behavior (TLB) not only enhances employees' job performance but also diminishes manifestations of work-related strain (i.e., emotional exhaustion). Although previous empirical research has consistently shown that TLB promotes employee performance (Breevaart et al., 2016; Clarkson et al., 2020; Gao et al., 2020; Kammerhoff et al., 2019; Kensbock & Boehm, 2016; Pan & Lin, 2015; Patiar & Wang, 2016; Seitz & Owens, 2021), in terms of emotional exhaustion, the picture is murkier, with other research findings even suggesting no indication of an association between TLB and emotional exhaustion (see Lin et al., 2019). Furthermore, as far as we know, no empirical or theoretical research has been conducted simultaneously on these two phenomena. However, it should be noted that in an earlier exceptional empirical work, Fernet and colleagues (2015) addressed burnout in conjunction with performance, which was also a theoretical and ethical reinforcement to our approach. Thus, the primary aim of this study was to contribute to leadership theory by addressing the multifaceted and concurrent influence of transformational leadership on employees' productivity by increasing work motivation and engagement as well as employees' work-life quality by safeguarding them from work-strain responses (e.g., emotional exhaustion).

Drawing on the transformational leadership theory (Bass, 1985a, 1985b; Burns, 1978; Carless et al., 2000) and the job demands-resources theory (JD-R; Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001), we proposed that TLB would advance job performance through work engagement, in addition to its by definition beneficial influence on employee performance (see Bass, 1985a, 1985b). In accordance with previous research (Breevaart & Bakker, 2018; Fernet et al., 2015; Hetland et al., 2018) and the JD-R theory, we argued that TLB leads to higher job

resources, which, through a motivational process, promotes work engagement and hence contributes to higher performance. Secondly, we recommended that TLB could be regarded as a job resource for employees consistent with the job resources definition of JD-R theory as well as leadership empirical studies (see Hildenbrand et al., 2018; Kloutsiniotis et al., 2022; Molines et al., 2022; Perko et al., 2016). As a result, TLB would stimulate employee work engagement when job demands are high (JD-R; boosting effect), whilst still shielding employees from the detrimental consequences of extreme job demands (JD-R; buffering effect), resulting in reduced levels of emotional exhaustion. Our findings validated both assumptions and, accordingly, the proposed dual-influence leadership model.

Additionally, motivated by the need to explore the repercussions of two underexplored yet soaring work stressors, namely work-family conflict (see Allen et al., 2020; Bolino & Turnley, 2005; Li et al., 2017), and workplace anxiety (see B. H. Cheng & McCarthy, 2018; Harvey et al., 2017; Twenge, 2000), on employees' well-being and productivity, as well as to find strategies to secure employees from their associated costs in light of exacerbated concerns regarding them (Bande et al., 2019; L.-B. Fan et al., 2013; Jones et al., 2016; Pan & Yeh, 2019), we probed their direct effects on employees' emotional exhaustion and job performance. Likewise, we investigated the impact of TLB on these two workplace stressors, as well as the likelihood of work-family conflict (WFC) and workplace anxiety (WPA) mediating the link between TLB and both job performance and emotional exhaustion. We expected both work stressors to impair job performance and heighten levels of emotional exhaustion, which is consistent with JD-R theory and research literature (McCarthy et al., 2016; Peltokorpi, 2020; I.-A. Wang et al., 2021; Welsh et al., 2020). Similarly, we anticipated that TLB would lower WFC and WPA levels, mitigating their adverse implications on employees (JD-R; buffering effect).

The outcomes on WPA verified all of the hypotheses. Hence, when WPA levels exceed employees' resilience to respond to workplace stress, energy degradation arises (JD-R; health-impairment process), leading to employees feeling emotionally distraught and demoralized, less willing to develop job duties and cope with strenuous circumstances, less productive, and frustrated about attaining their objectives and meeting higher work performance goals. WPA also serves as a mediator between TLB and job performance, as well as emotional exhaustion. TLB encourages employees to

reframe stressful situations as challenges to be handled (Avolio et al., 1999; Judge & Piccolo, 2004), while also supplying them with resources to deal with WPA, making it more bearable for the employees and resulting in less emotional exhaustion (Kensbock & Boehm, 2016), more work engagement (Buil et al., 2019), and thus higher job performance (Christian et al., 2011).

Regarding WFC, the results revealed a very strong positive relationship with emotional exhaustion, yet contrary to our prediction, its association with job performance was neither negative nor significant. This could be attributable to the survey's sample and context. First, the sample consists of healthcare employees who, over years of working long hours and shifts, may have adapted and secured the resources they require to be productive despite the potential strain on their work-life balance (Chen et al., 2017; Ferreira et al., 2019; Glaveli et al., 2013; Jacobsen & Fjeldbraaten, 2018). Furthermore, the research was carried out in Greece, a country that has been overburdened by the debt crisis for more than a decade (Missos, 2021; Russo et al., 2021) and now faces economic ramifications as a result of the COVID-19 pandemic (Davvetas et al., 2022). Employers have usually introduced flexible working hours and overtime throughout the years, and with high rates of unemployment and underemployment (Herod et al., 2021), Greek employees may have become accustomed to working at the expense of family responsibilities (Chatrakul Na Ayudhya et al., 2019; Glaveli et al., 2013). Likewise, according to the data, WFC did not mediate the association between transformational leadership behavior and employee job performance. Finally, TLB was proven to lower WFC, which is consistent with existing research findings that TLB reduces WFC (Arnold, 2017; Breevaart & Bakker, 2018) by improving work-life quality (Kara et al., 2013), enhancing job autonomy (Hammond et al., 2015), being individual-centered, and so taking employees' needs, values, and aspirations into account (Avolio & Bass, 1995; Bass, 1985a), and thus fostering work-life balance (Syrek et al., 2013).

5.3.1 Theoretical contributions

The most significant theoretical contribution that can be gained out of this research is that transformational leadership behavior (TLB), as exemplified by a dual-

influence model, not only adds to employees' job performance but also diminishes emotional exhaustion. Moreover, the hypothesized model has demonstrated that TLB has an indirect effect on job performance and emotional exhaustion in addition to the direct effect. Specifically, TLB appears to have an indirect effect on job performance by reducing workplace anxiety as well as on emotional exhaustion by decreasing both work-life conflict and workplace anxiety.

Workplace anxiety and emotional exhaustion are both manifestations of work strain (Dawson et al., 2016; Ford et al., 2014) and negative indicators of employee well-being (Arnold, 2017; Horan et al., 2021). At the same time, research has shown that work-life conflict reduces employee well-being (Huynh et al., 2014; Wood, Daniels, et al., 2020) and increases levels of burnout (Bakker et al., 2005; Mansour & Tremblay, 2018). Therefore, since the current study found that TLB limits all three of these factors, it strongly suggests that, in addition to its positive effect on performance, it also improves the quality of working life and well-being by utterly protecting employees from work-related stress responses.

In view of that, first, when it comes to the leadership–performance interaction, the current research results are consistent with the transformational leadership theory (Bass, 1985a, 1985b; Burns, 1978); also, the proposed holistic framework extends empirical findings that tie leadership to task (Aryee et al., 2012; Yang et al., 2020) and contextual performance (Cohen et al., 2012; Doucet et al., 2015). Furthermore, given the research context of Greece, additional validation of the cross-cultural effectiveness of transformational leadership's effect is presented, despite recent skepticism about it (Crede et al., 2019).

Second, the study adds to the limited body of literature about the relationship between TLB and burnout as well as work strain, corroborating empirical studies suggesting TLB reduces the levels of both burnout (Tafvelin et al., 2019; Zopiatis & Constanti, 2010) and work strain symptoms (Diebig et al., 2017; Klaic et al., 2018), thereby improving employee well-being (Perko et al., 2016), despite the findings of certain studies that cast doubt on this perspective (see Arnold et al., 2015; Kranabetter & Niessen, 2017; Lin et al., 2019; K. Nielsen & Daniels, 2016; Stein et al., 2021). Likewise, previous research on the dual nature of TLB, indicating that TLB has a positive impact on

both employee productivity and protection against burnout and work strain (Fernet et al., 2015), was solemnly confirmed, broadening the literature's perspective that presents as fundamental priorities of transformational leadership the followers' happiness protection and nourishment to enhance the prospect of seeking happiness for everyone (Burns, 2003).

Third, the study extends the findings of empirical work that contends that leadership is an essential determinant that not only has a decisive influence on employees' experiences at work by helping to reduce workplace anxiety but also affects employees' lives beyond work by limiting work-family conflict (Hammond et al., 2015) and thus cultivating work-life balance (Syrek et al., 2013) or perhaps even life satisfaction (Kara et al., 2013). It should also be noted that our findings, moreover, add to the job demands-resources theory (JD-R; Bakker & Demerouti, 2007, 2017; Demerouti, Bakker, Nachreiner, et al., 2001) and burnout literature, first by revealing that, in addition to the previously-documented positive impact of work-life conflict (Peltokorpi, 2020; I.-A. Wang et al., 2021), workplace anxiety also increases emotional exhaustion; secondly, by indicating that, while TLB can improve job performance and well-being, the framework extends over and above customarily examined job demands; and finally, by suggesting that transformational leadership can have a far broader impact than organizational characteristics via serving as a job resource and thereby mitigating perceived job demands.

In conclusion, our conceptual approach and empirical findings broaden the theoretical and practical applicability of transformational leadership while stressing the value of actively investigating the interaction between work stressors, strain, and managerial resources (i.e., leadership and management practices) to achieve not just high performance but also work well-being.

5.3.2 Practical implications

Many supervisor-employee interactions currently are grounded on an exchange—or transactional—pathway wherein supervisors get work completed by forming and maintaining promises of acknowledgment, wage raises, and promotion for

employees performing well, while employees who perform poorly are disciplined (Bass & Riggio, 2006; Doucet et al., 2015). This transactional mechanism, which includes rewards for good performance and punitive measures for poor performance, may typify effective leadership, but it has limitations (Bass, 1990, 1999), particularly in a world economy that is constantly changing and evolving (Chatrakul Na Ayudhya et al., 2019). Whenever an organization needs to adapt to mirror shifts in technologies, the climate, or even the global economic context and society, leadership is vital in stage-managing this transition (Bass & Bass, 2008; Burns, 2003). Transformational leaders do not passively adjust to external conditions; instead, they aim to influence and instigate them (Avolio & Bass, 2002). When necessary, supervisors who engage in transformational leadership behavior will use transactional practices, but they will also use vision and inspiration to motivate employees and elicit greater effort (Bass, 1985b). The supervisor achieves this through increasing employees' conceptual understanding of the value of desired outcomes; instilling a conviction in overcoming self-interest for the sake of the organization; individually considering each employee's needs; and enlarging these needs (Bass, 1985a).

The current study's findings demonstrate that employing transformational leadership behavior by the immediate supervisor enhances employee productivity, directly improving job performance as proposed by transformational leadership theory. However, our probe did not stop there but rather went a step further. Our results indicate that, in addition to productivity, transformational leadership behavior affects employee burnout, directly altering and reducing its core dimension—emotional exhaustion. Considering the research evidence to suggest that burnout has a negative direct and indirect effect on job performance (Bakker et al., 2008; Lemonaki et al., 2021), it is apparent that reducing emotional exhaustion levels not only benefits employee well-being but also has a positive influence on their productivity. In short, transformational leadership behavior promotes job performance both directly and indirectly by reducing emotional exhaustion. Of course, while the present study did not address such a relationship, it is an issue worth exploring in the future.

Furthermore, the data revealed that when the supervisor/leader exhibits transformational leadership behavior, it limits both workplace anxiety and work-family conflict. Both of these work stressors, as per the literature, are and will be critical future

concerns in terms of employee well-being (Allen et al., 2020; B. H. Cheng & McCarthy, 2018) and productivity (Jones et al., 2016; I.-A. Wang et al., 2021). Indeed, our results reveal that workplace anxiety undermines job performance and that both workplace anxiety and work-family conflict have a cascading influence on increasing levels of emotional exhaustion and, consequently, job burnout. Thus, engaging in transformational leadership behavior by supervisors indirectly contributes to promoting employee productivity and well-being by sheltering employees from workplace anxiety and work-family conflict.

At the same time, the current study raises the alarm about the disastrous effects of the two stressors investigated. The findings warn that if the detrimental impacts of workplace anxiety (path coefficient = 0.332, t = 9.067, p <0.001) and work-family conflict (path coefficient = 0.403, t = 12.078, p < 0.001) on emotional exhaustion—the core manifestation of burnout—are not carefully considered, employees' well-being is endangered, with consequences such as increased depression (Hatch et al., 2019), increased intention to leave (Shaukat & Khurshid, 2021), increased counterproductive work behaviors (Naseer et al., 2021), decreased work engagement (Schaufeli et al., 2008), decreased job performance (Vu et al., 2022), and an increase in health problems (Schaufeli & Bakker, 2004). Therefore, managers and supervisors, as well as human resource practitioners, should be aware of the hazards associated with employee burnout and take steps to keep workplace anxiety and work-family conflict to a minimum.

The current study suggests that all levels of management, especially line managers and supervisors, embrace transformational leadership behavior as an appropriate approach to dealing with work stressors. This leadership style, both by definition and empirical evidence, contributes to a supportive work environment (Kara et al., 2013) and provides employees with resources to manage job stress and anxiety (Hetland et al., 2018; Kloutsiniotis et al., 2022), aiming for their ongoing personal development through mentoring and coaching (Sosik & Godshalk, 2000), but also by handling each employee as a distinct personality with specific needs (Avolio & Bass, 1995; Rahmadani & Schaufeli, 2022). The transformational leader provides his followers with considerable autonomy (Hammond et al., 2015) and shows them trust and dedication, eliciting similar feelings in his followers (Burns, 2003; Katou, 2015). He does

not "stick" to routines and ineffective schemes, but rather challenges the status quo (Tse et al., 2018); inspires and motivates employees by giving meaning and purpose to their job roles (Buil et al., 2019); aligns each employee's personal aspirations with organizational objectives (Ehrnrooth et al., 2021); and, finally, ensures a transparent and meritocratic performance management framework that reimburses continuous employee learning and development rather than imposing sanctions (e.g., salary reduction or laying off) (Dvir et al., 2002; Waldman et al., 1987, 2015). On the one hand, employees will be motivated and engaged in their work as well as organizational goals, always striving to give their best for the greater good (Christian et al., 2011; Gillet et al., 2020; Grobelna, 2019). On the other hand, they will not feel as if they are constantly in danger of being deemed insufficient, with the threat of losing their job, which would significantly increase both workplace anxiety (Dlouhy & Casper, 2021; Strazdins et al., 2004; Too et al., 2021) and work-family conflict (Boxall & Macky, 2014; Chen et al., 2017; Ferreira et al., 2019).

It's no coincidence that a body of literature criticizes transformational leadership's ability to motivate and inspire employees to go above and beyond, potentially leading to increased stress and burnout (see Arnold et al., 2015; Kranabetter & Niessen, 2017; Lin et al., 2019; K. Nielsen & Daniels, 2016; Stein et al., 2021). According to them, employees' extra effort comes at the expense of their mental health and well-being as it increases stress and anxiety for optimal performance as well as work-family balance as they devote more hours to their duties than they should, frequently bringing work home. However, Burns (1978, 2003) and Bass and colleagues (Avolio & Bass, 2002; Bass & Steidlmeier, 1999) have clearly alluded to a hazardous type of leadership that they label as inauthentic or pseudo-transformational, citing public leaders like Hitler and Stalin as examples (Avolio & Bass, 2002; Burns, 1978). While these leaders display some transformational leadership behaviors—typically charismatic leadership—they are not individually considerate of their followers, putting their own personal goals and objectives first. In keeping with researchers, the individual consideration component of the transformational leadership framework distinguishes authentic from pseudo-transformational leadership (Avolio & Bass, 2002; Bass & Riggio, 2006; Howell & Avolio, 1993). The authentic transformational leader is genuinely concerned about their followers' wishes and desires, as well as their personal growth. Followers are treated “as

ends not mere means" (Bass & Steidlmeier, 1999, p. 192). In a nutshell, an authentic transformational leader will always consider his followers' needs and desires, will strive to provide them with resources to help shield them from work stressors, and will seek to engage with them to achieve common goals and long-term growth and prosperity (Bass & Riggio, 2006; Burns, 2003).

In light of these considerations, transformational leadership's contribution to enhancing productivity and well-being, as well as limiting burnout levels, should be seriously considered. Moreover, managers and HR practitioners should not overlook the important role that transformational leadership behaviors can play in reducing the level of work stressors like workplace anxiety and work-family conflict.

5.3.3 Limitations and future research directions

Our conclusions should be viewed through the lens of their limitations. First, because the impacts displayed are due to self-data taken at a single point in time (cross-sectional), they should be interpreted cautiously (Lindell & Whitney, 2001). While a cross-sectional design is useful for investigating the constructs' configuration of distinct scales (Demerouti et al., 2010), it does not allow the demonstration of conclusive causal interactions between factors (Karatepe, 2013), and reciprocal or inverse associations (reverse causality) between some of the factors could not be concretely excluded (Fernet et al., 2015). As such, the conclusions given here should be considered correlational rather than causal (Hammond et al., 2015). The postulated model must be validated with longitudinal or quasi-experimental data in order to speak of causal linkages (Fernet et al., 2015; Kammerhoff et al., 2019). Therefore, future research could look at these relations, utilizing longitudinal and experimental techniques for more conclusive results.

Furthermore, only one source of data (followers) was used, and all data was self-reported, which has been blamed for raising the risk of common method bias (Podsakoff & Organ, 1986). Although common method variance is unlikely to invalidate our results because it is hardly significant enough (Spector, 2006), we can't dismiss the possibility that certain connections are skewed by a common method. As a result, we conducted

ex-ante procedural as well as post-hoc statistical remedies as proposed by the literature (Kock, 2015; Kock & Gaskins, 2014; Podsakoff et al., 2003, 2012), demonstrating that common method bias would not be a serious concern for the current study. Furthermore, despite the broad awareness of potential method biases, there is no agreement on the veracity and extent of their impact on behavioral research (see "4.5.2 Assessment of common method bias").

Previous research has shown that there is no difference between subjective and objective self-rated job performance, as well as self and other-rated performance (see "4.3.6.1 Debate over self-reported job performance"). However, extrapolating our findings should be done with caution because a more objective evaluation of performance might yield dissimilar findings than the present research. In addition, we recommend that future studies incorporate data from a variety of sources when evaluating all factors, such as superior or customer ratings, as well as measurable goals. Besides that, performance can be quantified in a more direct manner, such as based on a specific task, which can result in different outcomes.

Second, we based our empirical data solely on employees in the Greek healthcare industry. Despite the fact that the Greek healthcare industry has a diverse range of occupations, it may differ from other sectors as well as the cultural characteristics of other countries. Likewise, discrepancies within regions and populations within a country can be just as significant as discrepancies between countries, and the impact of these factors on leadership effectiveness is not taken into account in this study. Moreover, additional environmental components, such as organizational structure, human resource practices, and the market environment, among others, could have also contributed, and cultural practices and beliefs could have been blended in with them. As a result, these specifics inhibit the generalizability of the results. Hence, while extrapolating the model to a more proper representation should be done with care, performing further examination to generalize the model to other sectors, regions, or countries may be advantageous.

Future research could extend the existing model in many directions, besides addressing the limitations of the present work. Only negative representations of well-being (emotional exhaustion, workplace anxiety, and work-family conflict) and positive

representations of productivity (job performance) were assessed in this research. Positive representations of well-being, such as trust, work engagement, job satisfaction, motivation, and happiness at work, as well as negative representations of productivity, such as turnover intention, absenteeism, presenteeism, and actual turnover, may be considered in future studies. In addition, contrary to predictions, the work-family conflict variable had no significant or negative effect on job performance, which piques curiosity in subsequent research in diverse circumstances to see if the results are similar or different. Finally, other prospective mediators, such as work stressors like work overload (Montani & Dagenais-Desmarais, 2018), time pressure (Syrek et al., 2013), job insecurity (Griep et al., 2021), and downsizing (Dlouhy & Casper, 2021), or job resources like psychological empowerment (Gao et al., 2020), task significance (Grobelna, 2019), self-efficacy (Clauss et al., 2021), and job autonomy (Chen et al., 2017), might be included in future studies.

5.4 Conclusion

Does transformational leadership concurrently influence employee productivity and well-being? Drawing on the leadership literature, transformational leadership theory, and job demands-resources theory, the present study, after proposing and testing a dual-influence leadership model, proves that transformational leadership behavior indeed concurrently enhances employee productivity and well-being. The findings highlight four key findings in particular. First, transformational leadership enhances job performance while also lowering emotional exhaustion. Second, transformational leadership indirectly promotes job performance by lessening workplace anxiety, and it also indirectly diminishes emotional exhaustion by reducing both work-family conflict and workplace anxiety. Third, while both work-family conflict and workplace anxiety negatively impact employee well-being by increasing emotional exhaustion, only workplace anxiety has a significant impact on employee productivity, particularly by lowering job performance. Last but not least, the critical role that transformational leadership can play in advancing productivity and well-being while also limiting stress and burnout factors should not be overlooked by organizations. Future

research should be encouraged by these findings to identify further mediators of transformational leadership's impact on productivity and well-being

Wrapping up as it actually started...

"Even when no leader is appointed, someone must begin to take initiatives and soon comes to be seen as a leader." (Avolio & Bass, 2002, p. 17)

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7 Appendix

7.1 Control variables: Direct Effects on Structural Model

Appendix I. Control variables: direct effects on structural model.

Summary of path coefficients, t-statistics, and statistical significance.

Control Variable	Corresponding paths	Path Coefficient	T-Statistics
Position in the organization (%)	Position → TLB	0.102*	2.276*
(1) Front Line Employee	Position → WPA	*0.035ns*	*0.832ns*
(47%)	Position → WFC	*-0.033ns*	*0.708ns*
(2) Administration Executive	Position → JP	*0.016ns*	*0.343ns*
(53%)	Position → EE	*-0.047ns*	*1.207ns*
Employment status (%)	Employment status → TLB	0.102*	2.276*
(1) Fixed-Term Contract	Employment status → WPA	***0.000***	*0.011ns*
(36%)	Employment status → WFC	*0.077ns*	*1.567ns*
(2) Infinite-term Contract	Employment status → JP	*0.117ns*	*1.712ns*
(64%)	Employment status → EE	*-0.036ns*	*1.153ns*
Childcare responsibility (%)	Childcare responsibility → TLB	***0.004ns***	*0.078ns*
(1) Yes	Childcare responsibility → WPA	*0.059ns*	*1.363ns*
(48%)	Childcare responsibility → WFC	*0.013ns*	*0.261ns*
(2) No	Childcare responsibility → JP	*0.022ns*	*0.445ns*
(52%)	Childcare responsibility → EE	*0.019ns*	*0.528ns*
Marital Status (%)	Marital Status → TLB	*0.020ns*	*0.378ns*
(1) Married/Civil Partner	Marital Status → WPA	*-0.076ns*	*1.561ns*
(53%)	Marital Status → WFC	*-0.043ns*	*0.876ns*
(2) Unmarried/Divorced/Widow-er	Marital Status → JP	*0.029ns*	*0.514ns*
(47%)	Marital Status → EE	*-0.007ns*	*0.199ns*

*Notes. (1) N = 574. (2) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant. (3) Abbreviations: WPA = Workplace Anxiety; WFC = Work-Family Conflict; TLB = Transformational Leadership Behavior; EE = Emotional Exhaustion; JP = Job Performance.*

7.2 Partial Least Squares Multi-group Analysis Results

Appendix II. Partial least squares multi-group analysis: results summary.

Summary of path coefficients, t-statistics, parametric tests, and statistical significance.

Specific Parameter	**Corresponding Paths**	**Path Coefficient**		**T-Statistics**		**Parametric Test**
		Group 1	**Group 2**	**Group 1**	**Group 2**	*Path Coefficients-diff (Gr.1-Gr.2)*
Organizational level (%)		**FLE**	**ADE**	**FLE**	**ADE**	
Group 1; (47%) Front-line Employees (FLE) **Group 2;** (53%) Administration Executives (ADE)	TLB -> EE	-0.193***	-0.110*	4.154	2.191	-0.084
	TLB -> JP	0.185**	0.297***	2.718	5.094	-0.112
	TLB -> WFC	-0.301***	-0.094ns	4.808	1.641	-0.208*
	TLB -> WPA	-0.383***	-0.276***	8.290	4.572	-0.107
	WFC -> EE	0.433***	0.374***	9.674	7.254	0.059
	WFC -> JP	-0.011ns	0.046ns	0.148	0.609	-0.056
	WPA -> EE	0.299***	0.361***	6.484	6.565	-0.062
	WPA -> JP	-0.038ns	-0.174***	0.491	2.442	0.136
	TLB -> WFC -> JP	0.003ns	-0.004ns	0.143	2.191	0.007
	TLB -> WPA -> JP	0.015ns	0.048*	0.479	5.094	-0.033
	TLB -> WFC -> EE	-0.130***	-0.035ns	4.660	1.641	-0.095**
	TLB -> WPA -> EE	-0.114***	-0.100***	4.632	4.572	-0.015
Employment status (%)		**FTC**	**ITC**	**FTC**	**ITC**	
Group 1; (36%) Fixed-Term Contract (FTC) **Group 2;** (64%) Infinite-term Contract (ITC)	TLB -> EE	-0.162**	-0.146**	2.927	3.269	-0.016ns
	TLB -> JP	0.232**	0.249***	2.740	4.572	-0.017ns
	TLB -> WFC	-0.146ns	-0.214***	1.836	4.337	0.069ns
	TLB -> WPA	-0.275***	-0.353***	3.866	7.715	0.077ns
	WFC -> EE	0.402***	0.406***	7.335	9.546	-0.004ns
	WFC -> JP	0.096ns	**0.000*** **	1.026	**0.001**	0.096ns
	WPA -> EE	0.347***	0.317***	5.655	7.168	0.030ns
	WPA -> JP	-0.111ns	-0.138*	1.168	2.247	0.027ns
	TLB -> WFC -> JP	-0.014ns	**0.000*** **	0.813	**0.001**	-0.014ns
	TLB -> WPA -> JP	0.030ns	0.049*	1.044	2.115	-0.018ns
	TLB -> WFC -> EE	-0.059ns	-0.087***	1.819	3.965	0.028ns
	TLB -> WPA -> EE	-0.095**	-0.112***	3.234	5.068	0.016ns

*Notes. (1) N = 574. (2) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant. (3) Abbreviations: WPA = Workplace Anxiety; WFC = Work-Family Conflict; TLB = Transformational Leadership Behavior; EE = Emotional Exhaustion; JP = Job Performance.*

7.3 Unmeasured Latent Method Construct Test

Appendix III. Unmeasured latent method construct test.

Summary of standardized factor loadings, Chi-squares (χ^2), and factor loading differences with and without the ULMF.

Construct	Standardized Factor Loading with ULMF	Standardized Factor Loading without ULMF	Absolute Change	Percentage Change
Transformational Leadership Behavior				
TransformationalLeadership7	*0.732*	*0.784*	*0.052*	*7%*
TransformationalLeadership6	*0.811*	*0.863*	*0.052*	*6%*
TransformationalLeadership5	*0.850*	*0.896*	*0.046*	*5%*
TransformationalLeadership4	*0.844*	*0.894*	*0.050*	*6%*
TransformationalLeadership3	*0.847*	*0.893*	*0.046*	*5%*
TransformationalLeadership2	*0.746*	*0.799*	*0.053*	*7%*
TransformationalLeadership1	*0.798*	*0.845*	*0.047*	*6%*
Workplace Anxiety				
WorkplaceAnxiety3	*0.756*	*0.841*	*0.085*	*11%*
WorkplaceAnxiety2	*0.701*	*0.768*	*0.067*	*10%*
WorkplaceAnxiety1	*0.659*	*0.769*	*0.110*	*17%*
Work-family Conflict				
WorkFamilyConflict5	*0.676*	*0.739*	*0.063*	*9%*
WorkFamilyConflict4	*0.803*	*0.869*	*0.066*	*8%*
WorkFamilyConflict3	*0.816*	*0.871*	*0.055*	*7%*
WorkFamilyConflict2	*0.806*	*0.859*	*0.053*	*7%*
WorkFamilyConflict1	*0.779*	*0.842*	*0.063*	*8%*
Emotional Exhaustion				
EmotionalExhaustion6	*0.643*	*0.718*	*0.075*	*12%*
EmotionalExhaustion4	*0.733*	*0.792*	*0.059*	*8%*
EmotionalExhaustion2	*0.696*	*0.802*	*0.106*	*15%*
EmotionalExhaustion1	*0.649*	*0.729*	*0.080*	*12%*
Job Performance				
Technical Performance Dimension				
TechnicalPerformance4	*0.619*	*0.782*	*0.163*	*26%*
TechnicalPerformance3	*0.598*	*0.760*	*0.162*	*27%*
TechnicalPerformance2	*0.668*	*0.809*	*0.141*	*21%*
TechnicalPerformance1	*0.690*	*0.826*	*0.136*	*20%*
Social Performance Dimension				
SocialPerformance3	*0.745*	*0.830*	*0.085*	*11%*
SocialPerformance2	*0.766*	*0.850*	*0.084*	*11%*

SocialPerformance1	*0.638*	*0.763*	*0.125*	*20%*
χ^2	***596.726****	***608.487****	***11.761***	***2%***

Notes. *(1) N = 574. 2) Significance level: *p-value < 0.05; **p-value < 0.01; ***p-value < 0.001; ns = not significant. (3) ULMF test: maximum likelihood discrepancy method. (4) Standardized Factor Loading cutoff value = 0.50. (4) Standardized factor loading absolute change threshold with and without the ULMF ≤ 0.200.*

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