

**AN EXPLORATORY STUDY OF RECOVERY
ACTIVITY PROFILES: ASSOCIATIONS WITH WORK
ENGAGEMENT AND BURNOUT**



DİCLE TONTU

**ÖZYEĞİN UNIVERSITY
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ENGAGEMENT AND BURNOUT**

**by
Dicle Tontu**

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Advisor: Prof. Gül Canan Ergin

Graduate School of Social Sciences
Özyeğin University
İstanbul

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Approved by:

Prof. Gül Canan Ergin, Advisor
Department of Psychology
Özyeğin University

Prof. Hayriye Canan Sümer
Department of Psychology
Özyeğin University

Assoc. Prof. Nevra Ersoy
Department of Psychology
İzmir University of Economics

Approval Date: December 25, 2025

To the weary souls seeking recovery.



DECLARATION OF ORIGINALITY

I hereby declare that I am the sole author of this thesis and that this is the true copy of my thesis, including the final revisions, approved by my thesis committee. All data and information have been obtained, produced, and presented in accordance with the rules of research ethics and principles of academic honesty. As required by these rules, to the best of my knowledge I have acknowledged ideas, thoughts, and any copyrighted material in accordance with the standard referencing rules. I certify that any part of this thesis has not been submitted for a degree or diploma in another educational institution.

Dicle Tontu

ABSTRACT

This study explores the recovery process, which involves replenishing energy and renewing resources drained by the demands of work. It takes a person-centered approach, emphasizing the specific characteristics of activities that contribute to this recovery. The research seeks to uncover how different dimensions (physical, social, creative, mental, spiritual, virtual, and outdoor) interact and combine. By examining these various aspects, the study aims to identify distinct patterns in how employees experience recovery. The study further investigated how job demands predict these profiles and whether they differ in terms of well-being outcomes, namely work engagement and burnout. The sample consisted of 860 employees working in distinct positions. Latent profile analysis was used to derive profiles with a person-centered approach. Four recovery profiles were identified: “Comprehensive Activity Engagement,” “Mental–Virtual Activity Engagement,” “Low to Moderate Activity Engagement,” and “Low Activity Engagement.” Job demands and demographic variables were tested as predictors. Job demands significantly influenced profile membership, with higher demands increasing the likelihood of belonging to the “Comprehensive Activity Engagement” profile. In terms of outcomes, burnout did not differ significantly among profiles; however, work engagement was highest among employees in the “Comprehensive Activity Engagement” group. These findings suggest that high job demands may drive employees toward engaging in more comprehensive recovery behaviors, highlighting that recovery is more than just passive resting; it is an active process that supports work engagement.

Keywords: Recovery activity, job demands, burnout, work engagement, latent profile analysis

ÖZET

Çalışanların yoğun iş talepleri nedeniyle harcadıkları enerjiyi geri kazanmaları ve tüketilen zihinsel-fiziksel kaynaklarını yenilemeleri anlamına gelen toparlanma süreci, bu çalışmada iş dışı aktivite özelliklerine odaklanan birey merkezli bir yaklaşımla ele alınmıştır. Araştırma; aktivitelerin fiziksel, sosyal, yaratıcı, zihinsel, spiritüel, sanal ve doğa boyutlarının, çalışanların deneyimlerinde nasıl özgün örüntüler oluşturduğunu ortaya koymayı amaçlamaktadır. Çalışmada ayrıca, iş taleplerinin bu profilleri nasıl yordadığı ve profillerin iyilik hâli çıktılarından işe bağlılık ve tükenmişlik açısından farklılaşıp farklılaşmadıkları araştırılmıştır. Örneklem, farklı pozisyonlarda çalışan 860 çalışandan oluşmuştur. Birey merkezli bir yaklaşım benimsenerek, profillerin oluşturulmasında örtük profil analizinden yararlanılmış ve dört toparlanma profili tanımlanmıştır: “Kapsamlı Aktivite Yönelimi”, “Zihinsel–Sanal Aktivite Yönelimi”, “Düşük ila Orta Aktivite Yönelimi” ve “Düşük Aktivite Yönelimi”. İş talepleri ve demografik değişkenler yordayıcı olarak test edilmiştir. İş talepleri profil üyeliğini anlamlı şekilde etkilemiş; yüksek talepler “Kapsamlı Aktivite Yönelimi” profiline ait olma olasılığını artırmıştır. Çıktılar açısından, tükenmişlik profiller arasında anlamlı bir farklılık göstermese de, işe bağlılık skorlarının “Kapsamlı Aktivite Katılımı” grubundaki çalışanlar arasında en yüksek olduğu belirlenmiştir. Bu bulgular, yüksek iş taleplerinin çalışanları daha kapsamlı toparlanma davranışları sergilemeye sevk edebileceğini göstermekte ve toparlanmanın pasif dinlenmenin ötesine geçen, işe bağlılığı destekleyen aktif bir süreç olduğunun altını çizmektedir.

Anahtar Kelimeler: Toparlanma aktiviteleri, iş talepleri, tükenmişlik, işe bağlılık, örtük profil analizi

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LIST OF ACRONYMS AND ABBREVIATIONS

AIC:	Akaike Information Criterion
BCH:	Bolck–Croon–Hagenaars Method
BIC:	Bayesian Information Criterion
CFA:	Confirmatory Factor Analysis
CFI:	Comparative Fit Index
COPSOQ-3:	Copenhagen Psychosocial Questionnaire – Version 3
COR:	Conversation of Resources
ERM:	Effort–Recovery Model
JD-R:	Job Demands–Resources Model
LPA:	Latent Profile Analysis
LRT:	Likelihood Ratio Test (Lo–Mendell–Rubin)
MBI:	Maslach Burnout Inventory
Mplus:	Statistical Software for Structural Equation and Mixture Modeling
OLBI:	Oldenburg Burnout Inventory
R3STEP:	Three-Step Auxiliary Variable Method
RAC:	Recovery Activity Characteristics
RMSEA:	Root Mean Square Error of Approximation
SABIC:	Sample-Size Adjusted Bayesian Information Criterion
SMBM:	Shirom–Melamed Burnout Measure
SPSS:	Statistical Package for the Social Sciences
SRMR:	Standardized Root Mean Square Residual
TLI:	Tucker–Lewis Index
UWES:	Utrecht Work Engagement Scale

LIST OF SYMBOLS

β : Regression coefficient

χ^2 : Chi-square statistic

CI [LL, UL]: Confidence interval [Lower limit, Upper limit]

df: Degrees of freedom

M: Mean

N: Sample size

OR: Odds ratio

p: Probability value (significance level)

SD: Standard deviation

SE: Standard error

1. INTRODUCTION

1.1 Overview of the Study

Throughout history, well-being has always been a fundamental pursuit in human life. Not only at the individual level but also at the organizational level, this pursuit is increasingly gaining importance. Both scientists and practitioners have focused more on the topic of workplace well-being over time (Bakker, 2015; Wijngaards et al., 2021; Zheng et al., 2015). This growing interest stems from the recognition that how employees feel at work has implications for their health, quality of life, organizational behavior, and performance (Nielsen et al., 2017; Sonnentag, 2015). For instance, employees are constantly exposed to various job demands that require physical and psychological effort, and if the strain resulting from these demands is not adequately relieved, it may accumulate over time, leading to stress, reduced motivation, and burnout. Within this dynamic, effective recovery processes that enable employees to regain their depleted resources play a critical role in maintaining and enhancing well-being (Bakker & Demerouti, 2017; Meijman & Mulder, 1998).

One of the main factors in maintaining and enhancing employee well-being is recovery from work-related stress. Therefore, what people do during off-job time, when recovery typically takes place, has been a research subject of recovery literature (Sonnentag et al., 2017). Spending time with family and friends, doing physical activities, and in general having a hobby, are examined as recovery activities (Sonnentag et al., 2022). However, recovery activities are more than having hobbies; they help to recover from stress caused by work (De Bloom et al., 2018). Therefore, work-related, household, and childcare activities were not examined in the previous studies, and recovery activities

were categorized into physical, social, and low-effort activities (Eschleman et al., 2017; ten Brummelhuis & Bakker, 2012; Volman et al., 2013).

Although previous literature has provided insights into the importance of recovery activities, it has typically adopted a variable-centered approach, which examines average relationships among variables (Laursen & Hoff, 2006). However, this approach might not fully reflect the complexity and multidimensionality of employees' actual recovery experiences. In detail, its limitations are the assignment of recovery activities to predetermined broad activity categories (e.g., physical activity, social activity, etc.), the focus on a limited number of recovery activity types, and the consideration of these activities as unidimensional, without sufficient attention to the specific qualities or dimensions that make these activities restorative (Alameer et al., 2023; Bakker et al., 2012; Cho & Park, 2018; De Bloom et al., 2018; Rook & Zijlstra, 2006; Sonnentag et al., 2022). Therefore, upon Alameer et al.'s (2023) recommendation, the current study adopts a person-centered approach, which focuses on identifying individual patterns of recovery activities, to address gaps caused by the variable-centered approach in the literature (Laursen & Hoff, 2006). Building on this, this study allowed participants to indicate which activity characteristic dimensions (physical, social, creative, mental, virtual, spiritual, and outdoor) their activities had included and to what extent. Additionally, acknowledging that a single activity can encompass multiple dimensions, the study examined profiles that represent different combinations of these dimensions, as suggested by prior research (Alameer et al., 2023; Bakker et al., 2012; Cho & Park, 2018; De Bloom et al., 2018; Rook & Zijlstra, 2006; Sonnentag et al., 2022).

Beyond recognizing these multidimensional profiles, it is critical to understand what factors predict employees' choices and engagement in recovery activities. Among

these influencing factors, job demands play a significant role. In today's rapidly changing work environments, performance pressure and other job demands threatening well-being exert substantial strain on employees' physical and mental resources (Lee & Jo, 2023; Zhu et al., 2022). In this context, job demands are defined as physical, social, cognitive, or organizational job aspects that create a physiological or psychological burden because they require sustained mental and/or physical effort from employees (Demerouti et al., 2001). Prolonged exposure to high demands leads to employees' increased need for recovery (Meijman & Mulder, 1998; Sonnentag & Zijlstra, 2006). Additionally, job demands increase the need for recovery and affect how much time employees have for recovery activities and what types of activities they prefer in their off-job time (Sonnentag & Fritz, 2007; Sonnentag & Zijlstra, 2006). For instance, among the reasons employees lack time for leisure activities are high job demands, including excessive working hours, engaging in work-related activities after work, etc (Sonnentag & Fritz, 2007). In terms of activity choice, for instance, the study conducted by Sonnentag and Zijlstra (2006) showed that employees who were exposed to high job demands spent less time on social and physical activities.

Finally, exploring the outcomes of these recovery profiles can further enrich our understanding of their role in employee well-being. For a long time, some indicators of well-being, including burnout and work engagement, have been used as outcome variables in studies (Bakker, 2015). In particular, the relevance of these outcomes has increased recently, as burnout has become a pressing issue worldwide. For example, Schaufeli (2018) reported that Türkiye has the highest employee burnout rate among 35 countries.

While constructs such as burnout and negative affectivity are considered indicators of impaired well-being, others, such as work engagement and job satisfaction, represent positive aspects of well-being (Wijngaards et al., 2021). Moreover, work engagement and burnout are similarly considered work-related outcomes, but they are different constructs in terms of motivation and health (Bakker et al., 2014). While work engagement is associated with motivational outcomes at work, burnout is linked to stress-related consequences (Bakker et al., 2014). In regard to this, they reflect distinct experiences, and they warrant separate attention in academic studies and organizational settings (Bakker et al., 2014). Additionally, since high work engagement and low burnout are two distinct constructs indicating well-being, Schaufeli et al. (2007) recommended that future research study them together to develop a well-rounded understanding of the well-being concept.

In summary, the purpose of the present study is to identify recovery profiles since recovery activities are not experienced in isolation but rather as combinations (Alameer et al., 2023). Therefore, it is important to examine their relationship with burnout and work engagement. This helps to understand how different patterns of recovery activities are linked to employee well-being. Additionally, the study investigates whether job demand levels predict recovery profiles, aiming to explore the association between job demands and recovery patterns.

The next section presents the theoretical background and literature review of the related variables: recovery activities, job demands, burnout (physical fatigue, cognitive weariness, and emotional exhaustion), and work engagement.

1.2 Theoretical Background

Research on employee well-being has evolved from solely focusing on how stress affects individuals' health and functioning to understanding how energy is replenished and the critical role of recovery in this dynamic.

Firstly, the Conservation of Resources (COR) Theory (Hobfoll, 1989) posits that individuals are fundamentally motivated to obtain, retain, and protect resources. According to this theory, stress occurs when these valued resources are threatened, lost, or when individuals fail to gain resources after investing effort. In this context, recovery is defined as the essential process of protecting these threatened resources and restoring those that have been depleted. Following this, the Allostatic Load Model (McEwen, 1998) suggested that being exposed to stressors leads to physiological load accumulation. Concurrently, the Effort–Recovery Model (Meijman & Mulder, 1998) proposed that recovery from work is necessary to prevent load accumulation and the adverse effects of prolonged effort and strain such as burnout.

Building on this foundation, later research began to highlight recovery not merely as the absence of strain but as an active process of resource restoration and growth. In this regard, Sonnentag's work in the 2000s conceptualized recovery as a multidimensional process encompassing psychological, physical, and emotional renewal (Sonnentag & Fritz, 2007). Within the same period, the Broaden-and-Build Theory (Fredrickson, 2001) emerged and also emphasized that positive emotions broaden individuals' personal resources and support recovery.

Subsequently, the Job Demands–Resources Model (Bakker & Demerouti, 2007, 2017) integrated this broader perspective into the framework of employee well-being, positioning recovery as a process that both buffers the negative effects of job demands

and sustains motivation and work engagement through the replenishment of personal resources.

Among these perspectives, the Effort–Recovery Model and the Job Demands–Resources Model constitute the primary theoretical framework of the present study. The Effort–Recovery Model guides this research by explaining how the load generated by job demands creates a need for recovery and how incomplete recovery leads to load accumulation. Complementarily, the JD-R Model frames recovery activities as personal resources that not only buffer against strain (burnout) but also actively fuel motivation (work engagement). Thus, these two models collectively underpin the study’s examination of how recovery profiles relate to both demands and well-being outcomes.

1.3 Literature Review

1.3.1 Recovery Activities and the Rationale for a Profile-Based Approach

Recovery is defined as “unwinding and restoration processes during which a person’s strain level that has increased as a reaction to a stressor or any other demand returns to its prestressor level” (Sonnentag et al., 2017, p. 366). The psychological inner experiences that help individuals regain their psychological and physiological energy after a stressful workday, and off-job activities that support restoring oneself physically, mentally, and emotionally, are core components of recovery processes (Sonnentag et al., 2022).

It is essential to consider how recovery activities have been traditionally classified in literature. The types of activities employees engage in their off-job time have long been categorized in the recovery literature. The first categorization was presented in Sonnentag's study (2001). The activities were categorized as physical, social, low-effort,

work-related, and household and childcare activities. In Sonnentag's (2001) study, she indicated that work-related, household, and childcare activities are harmful to the recovery process. Therefore, later studies addressed only physical, social, and passive activities as recovery activities (e.g., Brummelhuis & Trougakos, 2013; de Bloom et al., 2013). Over time, the types of activities studied were varied. For instance, volunteer, outdoor, creative, virtual, cognitive, and cultural activities were also investigated. In line with this, De Bloom et al. (2018) and Sonnentag et al. (2022) argued that the range of activity types examined in the literature should be expanded. They especially called for the inclusion of spiritual activities.

Even though the mentioned studies have highlighted the increasingly diverse understanding of recovery activities, another gap in the literature is that they usually evaluate only a limited number of activity types simultaneously (e.g., Cho & Park, 2018; Tuisku et al., 2016). As a result, this approach fails to fully reflect the variety and interactive nature of recovery processes as experienced in employees' real lives (Alameer et al., 2023). In addition to focusing on a limited number of recovery activity types, another limitation in the literature is how these activities are categorized and operationalized.

Although there are studies that have attempted to use categorization to cover all leisure activities (e.g., Sonnentag, 2001; Tinsley & Eldredge, 1995), some methodological and conceptual challenges have still remained. Different activity categories have been used inconsistently across studies, and the activity engagement in these categories has generally been measured as the length of time devoted to this activity type or its frequency (Alameer et al., 2023; Aziz et al., 2023; De Bloom et al., 2018). These measurements have typically been conducted by presenting participants with

broad, predefined top-down categories and asking them to evaluate their activities under these categories (e.g., Aziz et al., 2023; Garrick et al., 2017; Wang et al., 2022). This approach may lead to some problems. Alameer et al. (2023) criticized this approach in their study. This approach may neglect activities that individuals engage in but cannot report because they are not included among the predefined categories. Another possibility is that people forcibly select activities then cannot place their own activities into any of categories presented to them. Both of these possibilities can lead to errors in the evaluation of categories. Moreover, the same type of activities can be assigned to different categories by different individuals. For example, basketball can be a physical activity for one person while it can be a social activity for another person. Similarly, a person can include basketball and yoga in physical activities. This situation results in the misconception that all activities in the categories used in the studies will lead to the same type of experience. Therefore, studies in the literature that measured the same type of activities have reached inconsistent results (e.g., De Vries & Bakker, 2021; Naczenski et al., 2017). Moreover, as mentioned before, studies have attempted to measure the frequency or duration of activities (e.g., Sonnentag, 2001), but this understanding also lacks the inclusion of personal experiences. For example, even if a person spends five hours socializing, this should not predict how restorative that person finds this activity. In short, frequency or duration may not accurately reflect the subjective experience of recovery (Alameer et al., 2023).

These limitations reflect the need for an approach that considers recovery activities from a subjective and experiential perspective (Alameer et al., 2023; Daniel & Zhan, 2023; Sonnentag et al., 2022). These limitations point out two complementary

directions: addressing employees' activity patterns with a person-centered approach, and defining activities based on their dimensions with a bottom-up approach.

To the best of the author's knowledge, the only study that has conducted a person-centered analysis is the one by De Bloom et al. (2018). Although most studies in the literature have examined recovery in different settings, such as work breaks, vacations, and off-job periods (e.g., evenings of the working day or weekends) (Alameer et al., 2023; Sonnentag et al., 2022), they have typically adopted variable-centered approaches.

Notably, De Bloom et al. (2018) investigated the effect of recovery activities on recovery experiences and employee performance by clustering participants according to their weekend activities through a profile analysis approach. This study included activity categories such as intensive physical activities, physical activities in natural surroundings, and cultural activities. However, similar to the previous literature (e.g., Korpela & Kinnunen, 2010), De Bloom et al. (2018) also gave participants some example activities that could fall under specific categories. However, the same activity may be assigned to different categories depending on participants' different experiences and perspectives. This type of evaluation, based on participants' subjective classifications, may not adequately reflect the multidimensionality of recovery experiences and may limit the validity of analyses built upon the recovery activity categories.

In light of these criticisms, Alameer et al. (2023) have emphasized the necessity of going beyond the predetermined top-down activity categories. Instead, a bottom-up approach that considers how individuals personally experience and make sense of the ingredients of activities, such as their physical, social, or creative aspects, is needed.

1.3.1.1 Recovery Activity Dimensions

In the study conducted by Alameer et al. (2023), recovery activities were first examined through a dimensional approach that highlights the characteristics and components of these activities. These dimensions are described in detail in the subsequent sections.

The physical dimension means how much an activity involves physicality (Alameer et al., 2023). Physical activity (rather than a single event) is described as all bodily actions that involve energy expenditure resulting from muscle movement (Caspersen et al., 1985). This activity causes some biological changes in the brain and body, and also leads to changes in how individuals perceive and experience their surroundings, which in turn supports improved psychological functioning (Trajković et al., 2023). Even though the dimensional approach had not yet been introduced, the category-based approach claimed that physical activities such as doing sports, walking, cycling, etc., contribute to the employee's well-being (e.g., Bakker et al., 2012; Calderwood et al., 2015; Cho & Park, 2018; Rook & Zijlstra, 2006; Roswag et al., 2023; Sonnentag & Natter, 2004; Van Hooff et al., 2018).

The social dimension is defined as the extent to which an activity includes individuals' communication (Alameer et al., 2023). Socializing affects well-being positively because it regulates the reward mechanisms in the subcortical part of the brain and the activation of other brain regions (Kim & Sul, 2023). Category-based previous literature found that social activities such as chatting, taking phone calls, religious, and non-religious gatherings are positively related to work engagement and negatively to burnout (Garrrick et al., 2017; Jeong et al., 2020; Rook & Zijlstra, 2006; Sonnentag, 2001).

Creativity refers to the ability of an individual or a group to produce novel and outcomes or ideas toward a goal by working on it (Amabile, 1988). Inferring from the words, the 'creative' dimension refers to the degree to which an activity involves producing new things or being creative (Alameer et al., 2023). Especially, engaging in creative arts activates the nervous system involved in emotional regulation, and this shows existing common nervous mechanisms for creative expressions and emotional processing (Barnett & Vasiu, 2024). Engaging in activities such as painting and sculpture increases positive emotions and renews personal resources by allowing individuals to express themselves (Berkemeyer et al., 2024). In addition, participating in these kinds of activities supports mental health owing to the contribution to the beginning of the workday in terms of motivation and vigor (Eschleman et al., 2014; Syrek et al., 2021).

The "mental" dimension represents how much individuals use their cognitive resources while doing an activity (Alameer et al., 2023). Activities high on this dimension typically involve executive functions such as attention, memory, problem-solving, and mental flexibility. Playing chess, developing a strategy, solving puzzles, or reading books require deep thinking and are within the scope of those activities. Some studies whose focus is on recovery-related activities during work breaks indicated that highly compelling mental activities support employees in detaching from work psychologically. Moreover, they increase positive emotions and decrease cognitive weariness (e.g., Kim et al., 2016; Sonnentag & Fritz, 2007; Zhu et al., 2018). In summary, it can be claimed that activities including the mental dimension help employees to start the workday better prepared and reduce their burnout levels by contributing significantly to the recovery process.

The "spiritual" dimension is defined as the extent to which an activity involves religious, spiritual practices, or actions (Alameer et al., 2023). According to the American Psychological Association (n.d.), spirituality is described as sensitivity to or interest in spiritual matters. Spirituality not only fosters awareness of the self, others, and the physical environment in which a person exists but also refers to personal meaning creation by improving individuals' goal-setting skills in physical and mental experiences (King & DeCicco, 2009). The "spiritual" dimension, which is identified with activities such as prayer and meditation, affects employee well-being in various ways, including gratitude, finding purpose at work, emotional resilience, and improved task performance (Baysal, 2022; Sargeant & Yoxall, 2023; Syahir et al., 2025). All in all, the recent literature emphasizes the importance of spirituality in enhancing employee well-being, job satisfaction, and decreasing stress caused by work.

The "virtual" dimension is described as how much an activity takes place in front of a screen, a phone, a computer, etc., or uses the Internet (Alameer et al., 2023). This dimension facilitates recovery by making psychological detachment from work stress easier. Specifically, using the Internet and social media during work hours or breaks offers employees short-term cognitive and emotional detachment and accelerated psychological recovery (Cheng & Cho, 2021). Furthermore, virtual activities contribute to psychological well-being since they offer individuals the opportunity to choose the content freely (Kuykendall et al., 2020). Time spent in virtual settings helps employees regain their cognitive resources and deal with stress. Especially, interactive digital games improve recovery experiences more by fostering employees' sense of control, relaxation, and feelings of achievement (Collins & Cox, 2014).

The "outdoor" dimension is related to the level of activity that takes place in nature or outdoors (Alameer et al., 2023). Being able to connect with nature helps relieve stress and renew cognitive resources, which are a source for executive functions and emotional regulation (Hyvönen et al., 2018). Engaging in outdoor activities such as walking outdoors after stressful work hours fosters recovery by supporting recovery experiences listed as relaxation, psychological detachment, and more (Korpela & Kinnunen, 2010). Exposure to nature and the time spent in natural environments reduce employees' burnout levels and elevate work engagement (Hyvönen et al., 2018). In addition, it has been found that time spent in nature contributes to decreased cognitive weariness and increased positive emotions (Klotz et al., 2022).

However, these dimensions do not always exist in a “stand-alone” fashion (Alameer et al., 2023). For example, a person who goes to the gym with his/her friends may describe his/her activity as both physical and social. For this reason, rather than the name of an activity, the time spent on it, or the frequency of engaging in it, the combinations of recovery activity dimensions experienced by employees should be prioritized in understanding recovery processes (Alameer et al., 2023). In this context, although their scale development study has already presented a different perspective on recovery activities in the literature by introducing the dimensional approach, to make fruitful contributions, they recommended that future studies should examine the combinations of recovery dimensions and conduct direct person-centered analyses.

The current study classifies employees according to the recovery activity dimensions they experienced in their off-job activities during the past week (both weekday evenings and weekends), considering the extent to which these activities involved such dimensions.

1.3.2 The Role of Job Demands in Predicting Recovery Activity Profiles

To better understand how different recovery activity profiles are formed and why they are needed in the context of job demands, it is essential to clarify what job demands are and explain how they trigger the need for recovery.

1.3.2.1 Job Demands: Definition, Measurement, and Correlates

Organizational, interpersonal, physical, or psychological job aspects that require continuous effort by employees are considered job demands (Demerouti et al., 2001). Thus, they can cause negative physical and/or mental consequences if no buffer/recovery source exists. The quantity of work done in a certain period of time, the requirements about how fast tasks need to be completed, the situation in which employees use their cognitive capacity, and the necessity of dealing with others' emotions or suppressing one's own emotions are aspects considered in the scope of job demands (Burr et al., 2019). According to Burr et al. (2019), those demands can be considered in five different dimensions: quantitative demands, work pace, cognitive demands, emotional demands, and demands for hiding emotions. Burr et al.'s (2019) five-dimensional approach can be evaluated as a result of the long-standing theoretical development of the concept of job demands.

Historically, the concept of job demands was first addressed as stress factors existing in the workplace in Karasek's (1979) Job Demands-Control (JDC) Model. Subsequently, in the Effort-Reward Imbalance (ERI) Model developed by Siegrist (1996), the concept was explained within the balance of exchange with the claim that if effort is not reciprocated, employees' stress levels increase. Building on these earlier frameworks, the conceptual development of job demands has evolved into a more flexible and multidimensional structure with the introduction of the Job Demands-Resources (JD-R)

Model (Demerouti et al., 2001). Initially introduced to explain job strain and burnout, the model was later extended to include motivational processes, offering a comprehensive framework by addressing both job stress and motivational processes, and is applicable across various occupational settings and sectors (Bakker & Demerouti, 2007).

In the latest version of the JD-R Model (Bakker & Demerouti, 2017), job and personal resources are given greater emphasis in addition to job demands. Job resources buffer negative consequences of job demands by providing employees with social support, autonomy, feedback, etc. Besides its mitigating effect, these resources also help increase work engagement. Personal resources that carry a similar effect can be exemplified as self-efficacy, optimism, etc (Xanthopoulou et al., 2007). In other words, while job demands create strain and impair employees' health, job and personal resources contribute to well-being by weakening the impact of job demands on burnout, conceptualized as a negative outcome in the model and by playing a motivational role in promoting work engagement (Bakker et al., 2014; Bakker et al., 2022; Demerouti et al., 2001). Even though the JD-R Model (Bakker & Demerouti, 2017) does not mention the recovery process directly, it still indicates that job demands bring loads to employees and need to be balanced with job and personal resources.

At this point, the Effort-Recovery Model (ERM) (Meijman & Mulder, 1998), which forms the main theoretical framework in the current study, presents a more focused explanation. This model posits that when an employee makes an effort to meet the demands, his/her physical and/or psychological resources are depleted, and this situation can cause load accumulation if no recovery mechanisms exist. From this perspective, job demands are not only related to negative work consequences, but at the same time, it is associated with the emergence of the recovery need that predicts off-job behavior.

1.3.2.2 Linking Job Demands to Recovery Activity Profiles

Maintaining employees' well-being and protecting their health depends on whether they are able to recover from load reactions caused by job demands during their off-job time (Zijlstra et al., 2014). This need for recovery emerges as a consequence of the effort employees exert to deal with demands at work (Meijman & Mulder, 1998; Sonnentag & Zijlstra, 2006). While the fatigue begins to accumulate, individuals' intense desire to disengage from job demands describes the need for recovery (Sonnentag & Zijlstra, 2006). Not only cross-sectional studies (e.g., Jansen et al., 2003), but also longitudinal studies (e.g., De Croon et al., 2004; De Raeye et al., 2007) and daily studies (e.g., Sonnentag & Zijlstra, 2006) show that high job demands are correlated with high need for recovery (as cited in Kinnunen et al., 2011). In other words, the employees who are exposed to highly demanding work conditions, compared to those who are not, are assumed to experience a greater need for recovery (Sonnentag & Zijlstra, 2006). However, in a paradoxical way, employees with a consistently high need for recovery indicate that the time they spent on recovery is not enough to regain their resources (Sonnentag & Fritz, 2007).

Exposure to job stressors increases employees' need for recovery. However, empirical findings suggest that despite high job demands, the likelihood of individuals engaging in recovery-supporting behaviors decreases (Sonnentag & Zijlstra, 2006). For example, employees who are under high job demands have a hard time detaching from work in their off-job time, engage less in physical activities, and have poorer sleep quality (Wendsche & Lohmann-Haislah, 2017; Bennett et al., 2018; Stults-Kolehmainen & Sinha, 2014; Litwiller et al., 2017; Nixon et al., 2011, as cited in Sonnentag & Zijlstra, 2006). One possible explanation for this is that, to recover from work, employees should

not only have the desire but also the time and opportunity to get away from work demands (Kinnunen & Mäkikangas, 2023; Sonnentag & Fritz, 2007). This contradictory situation reflects that the individuals who most need recovery may be the least likely to engage in recovery activities among others, and this is described as the "recovery paradox" in the literature (Sonnentag & Zijlstra, 2006).

Beyond the effect of job demands on the extent to which recovery activities can be engaged in, it is also important to consider which types of leisure activities employees engage in when recovery behavior occurs. Some researchers have indicated that the need for recovery is not only a reaction to job demands but also predicts employees' preferences regarding the characteristics of recovery activities and how employees experience these activities (e.g., Sonnentag & Zijlstra, 2006). For example, individuals exposed to high levels of job demands are less likely to engage in physical, mental, and social activities of greater frequency, intensity, or duration in their leisure time (Smith et al., 2023; Sonnentag & Zijlstra, 2006; Van As et al., 2021). This reflects that at the end of both physically and psychologically demanding working days, individuals tend to choose low-effort activities more (Sonnentag & Zijlstra, 2006). For this reason, in addition to the presence of recovery behavior, characteristics of recovery behavior should be considered in understanding the recovery process.

The present study aims to investigate how job demands are related to the ways in which individuals experience different recovery activity dimensions. To examine the relationship between job demands and recovery activity profiles, job demands were measured based on the same time frame as recovery activities. Participants were instructed to respond based on their experiences during the past seven days.

1.3.3 The Role of Recovery Activity Profiles in Predicting Employee Well-Being

In examining how recovery activities relate to employee well-being, two key constructs are frequently emphasized in the literature: work engagement and burnout. Even though they seem to be opposite ends of the same continuum due to their contrasting valences, they are considered distinct variables representing different psychological processes (Demerouti et al., 2010; González-Romá et al., 2005). Burnout is related to stress, while work engagement is associated with motivation. Both of them are part of the JD-R Model as outcome variables (Bakker & Demerouti, 2017) and have been frequently examined together in the recovery literature (e.g., Ragsdale & Beehr, 2016).

1.3.3.1 Burnout: Definition, Measurement, and Correlates

In Canu et al.'s (2020) review study, they evaluated 88 different definitions of burnout and offered a definition approved and reached consensus by researchers and health care professionals from 29 different countries. Within this agreement among researchers, burnout is described as a state of physical and psychological exhaustion caused by long-standing work stress. Even though occupational burnout is a long-term consequence, it is stated that burnout can fluctuate day-to-day or weekly, especially emotional exhaustion, which can be affected by short-term effects (e.g., Demerouti et al., 2009; Ragsdale et al., 2016).

With respect to causing noteworthy costs for employees themselves and the organizations they work for, burnout has been known as one of the most significant results of psychosocial risks in contemporary occupational settings (Epstein et al., 2020; Grow et al., 2019; Han et al., 2019; Simionato et al., 2019, as cited in Edú-Valsania et al., 2022). Absenteeism from work, higher employee turnover rates, and performance declines are among the organizational consequences of burnout (Bakker et al., 2022). Regarding its

individual implications, while cardiac disorders, headache, and premature death, etc., are health-related issues, problems such as depressive symptoms and sleep disturbances are considered mental health problems caused by burnout (Demerouti, 2024).

In relation to the history of the burnout concept and its measurements, the most systematic approach up to that time was the development of the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981, as cited in Demerouti, 2024). This inventory measures three dimensions of burnout: emotional exhaustion, cynicism, and reduced professional fulfillment. Subsequently, the scope was expanded with the Oldenburg Burnout Inventory (OLBI) to target all occupational groups rather than just human services employees (Demerouti & Nachreiner, 1998, as cited in Demerouti, 2024). In this scale, exhaustion and disengagement refer to the job itself rather than attitudes toward people. Alternatively, the Shirom-Melamed Burnout Measure (SMBM) includes physical fatigue, cognitive weariness, and emotional exhaustion (Shirom & Melamed, 2006). The primary difference between the SMBM and the MBI lies in their conceptualization. While the MBI focuses on cynicism and professional fulfillment, the SMBM draws on the Conservation of Resources (COR) theory (Hobfoll, 1989), defining burnout as the depletion of physical, cognitive, and emotional energy. Consequently, the SMBM is frequently used in recovery research because it frames burnout as resource loss (e.g., Ginoux et al., 2021; Ragsdale & Beehr, 2016). Thus, the SMBM was selected for the current study as its focus on energy depletion aligns with the recovery framework.

In Shirom and Melamed's (2006) framework, burnout includes three interrelated dimensions. Physical fatigue corresponds to a feeling of low levels of bodily energy and exhaustion when an employee performs routine tasks at work (Melamed et al., 2006). For example, individuals may feel exhausted even in the early hours of a workday and have

difficulty sustaining their physical energy throughout their daily job-related duties. Cognitive weariness is marked by feelings of reduced mental agility and delayed thought processes (Melamed et al., 2006). This situation may appear as struggling to make decisions, focus during meetings, and/or process information in an efficient way. Emotional exhaustion means the attrition of emotional resources, and it is a core dimension of burnout characterized by feeling emotionally overwhelmed (Maslach et al., 2001). For instance, employees who are exhausted emotionally may feel detached from work, experience anger, and/or break off interaction with people encountered in the course of work.

It is essential to consider the causes of this multidimensional concept in order to better address its potential negative consequences. In their review, Bakker et al. (2023) divided the antecedents of burnout into two categories: individual and situational factors. Individual factors are defined as personal traits, psychological characteristics, job attitudes, and demographic variables that affect burnout. These include age, educational level, marital status, high expectations (e.g., wanting to be very successful in a short time), low hardiness, locus of control, coping styles, self-esteem, neuroticism, Type A behavior, and emotional intelligence (Maslach et al., 2001; Taylor et al., 2024). However, the weaker relationship between individual factors and burnout, compared to situational factors, supports the notion that burnout is a social rather than an individual phenomenon (Maslach et al., 2001). Situational factors refer to the contextual or environmental factors. Physical work conditions (e.g., a crowded and noisy work environment), high job demands (e.g., long working hours, high emotional labor), low job resources (e.g., low social support, low autonomy), and negative organizational dynamics (e.g., organizational injustice, role conflicts, and a competitive instead of cooperative climate)

are some examples of situational factors (Green et al., 2014; Maslach et al., 2001; Roza et al., 2017).

This comprehensive framework related to the antecedents of burnout highlights the importance of considering protective factors. In line with this, the current study aims to understand short-term recovery patterns that can support well-being by examining the relationship between recovery activity profiles and burnout levels.

1.3.3.2 Burnout Across Recovery Activity Profiles

A considerable number of studies in the literature have examined distinct activity types, exploring their separate relationships with burnout. For example, studies focusing on the relationship between physical activities and burnout across different time periods have found that such activities are negatively associated with all sub-dimensions of burnout (e.g., Naczenski et al., 2017; Roswag et al., 2023). Similarly, other activity types, such as spiritual and outdoor activities, have been shown to serve a protective function against burnout, as demonstrated by Ho et al. (2015) and Hyvönen et al. (2018).

Although some studies in the literature have investigated multiple activity types together, the associations with burnout have generally been examined using variable-centered approaches and isolated effects (Garrick et al., 2017; Ginoux et al., 2021; Oerlemans & Bakker, 2014; Ragsdale & Beehr, 2016). Research examining multiple activity types has predominantly focused on physical and social activities and has found that these activities are negatively and significantly associated with burnout. Moreover, these findings have been consistently observed across daily, weekly, and cross-sectional designs. However, even though the number of activity types considered in studies has increased, such variable-centered approaches often overlook the fact that individuals may

simultaneously engage in multiple activity types. This has resulted in a significant gap in the literature.

In light of the literature, the current study aims to examine how the profiles are related to sub-dimensions of burnout, namely emotional exhaustion, cognitive weariness, and physical fatigue.

1.3.3.3 Work Engagement: Definition, Measurement, and Correlates

A positive and satisfactory work-related psychological condition, resulting from the combination of three related dimensions called vigor, dedication, and absorption, is defined as work engagement in the literature (Schaufeli & Bakker, 2004). Because many studies consider work engagement a positive indicator of employees' well-being, antecedents of this variable have been examined for a long time (Bakker, 2015; Mazzetti et al., 2021). The latest studies have claimed that one of the important antecedents is the recovery activities engaged in during off-job time (Brummelhuis & Bakker, 2012; Ragsdale & Beehr, 2016).

In terms of the consequences, previous research has shown that employees who are highly work-engaged also exhibit higher levels of job performance and are enthusiastic to engage in behaviors beyond their job description (i.e., organizational citizenship behavior; Bakker et al., 2014; Mazzetti et al., 2021). Additionally, they exhibit more entrepreneurial behavior and motivation to learn. Work engagement is also related to showing proactive behaviors such as personal initiative and job crafting. While it increases job satisfaction, life satisfaction, and general well-being, it decreases psychological problems and intent to quit the job. Moreover, employees with high levels of work engagement also have better physical health indicators, such as cardiovascular health. In summary, work engagement is associated with many positive outcomes related

to motivation, job performance, and well-being at both individual and organizational levels (Bakker et al., 2014; Mazzetti et al., 2021).

To measure this variable, Schaufeli et al. (2006) developed a scale named the Utrecht Work Engagement Scale (UWES - short version). This scale has been commonly used in recovery studies that included work engagement as a variable (e.g., Brummelhuis & Bakker, 2012; Garrick et al., 2017; Ragsdale & Beehr, 2016). Thus, in the current study investigating the relationship between recovery activity profiles and work engagement, this scale was utilized.

This scale describes work engagement in three dimensions: vigor, dedication, and absorption (Schaufeli et al., 2006). Vigor refers to working with high energy and psychological resilience, being keen to deal with obstacles, and sustaining effort (Bakker et al., 2022). For example, despite a busy work schedule, an employee may still have high energy at the end of the day and volunteer to complete a work project. Dedication reflects a strong emotional and mental commitment to one's job, involving a sense of meaning, excitement, and willingness to face challenges (Bakker et al., 2022). For instance, to be more motivated by thinking that the job contributes to society. Absorption refers to being fully immersed and fully focused while working and working in a joyful way without realizing how fast time goes by (Bakker et al., 2022). For example, while preparing a presentation document, one can become absorbed and lose track of time.

Research shows that there are various antecedents of work engagement. Among these are job control, psychological climate, management support, and recovery. Additionally, psychological safety, availability, and meaningfulness are also found to increase work engagement (Kühnel et al., 2011; Mauno et al., 2006; Olivier & Rothmann, 2007; Zahari & Kaliannan, 2022).

To enhance the positive outcomes of work engagement, it is necessary to understand contributing patterns. Therefore, this study focuses on the relationship between recovery activity profiles and work engagement.

1.3.3.4 Work Engagement Across Recovery Activity Profiles

In literature, work engagement is regarded as an important and positive indicator of employee well-being. Studies that examine work engagement and types of activities in a straightforward manner demonstrate that, for example, outdoor activities increase employees' emotional, physical, and cognitive engagement related to work (Brossoit et al., 2024). However, the positive effects observed for outdoor activities are not consistently reported for all activity types; for instance, studies have found mixed results regarding the effects of physical activities on work engagement. For instance, Amatori et al. (2024) found that physical activity, even in engaging more than the recommended level for employees, increases work engagement. On the other hand, Van Berkel et al. (2013) did not find any significant relationship. Furthermore, studies that investigate more than one type of activity (yet still examine their effects in isolation) suggest that social activities consistently have a positive impact on work engagement across all studies, whereas physical exercise has shown significant effects in some studies but has been found ineffective in others (Garrick et al., 2017; Ragsdale & Beehr, 2016; Sonnentag, 2001; ten Brummelhuis & Bakker, 2012). Alameer et al. (2023) claimed that these contradictory results stem from not examining the nature of the recovery activities.

Therefore, the study investigates the relationship between these recovery activity profiles and work engagement.

1.4 The Present Study

Although the growing body of evidence highlights the importance of recovery activities for employee well-being, the literature has largely relied on variable-centered approaches that examine activities in isolation (e.g., Cho & Park, 2018; Kuykendall et al., 2020). Consequently, these studies have neglected the overall patterns of recovery activities that individuals naturally engage in. In other words, previous research examining the link between job demands, recovery and employee well-being has also typically adopted this perspective, failing to capture how individuals combine different levels of various activities to form subjective recovery patterns (Alameer et al., 2023). Responding to calls from prominent review and scale development studies (e.g., Alameer et al., 2023; Sonnentag et al., 2021), the present study moves beyond these limitations by adopting a person-centered design.

To address this gap, this study utilizes Latent Profile Analysis (LPA) to identify distinct profiles based on the combinations of seven activity dimensions: physical, social, creative, mental, spiritual, virtual, and outdoor. This approach not only identifies activities according to their labels but also takes into account the extent to which these activities include specific characteristics (Alameer et al., 2023). By capturing multidimensional and person-specific patterns of recovery behaviors, an aspect that variable-centered approaches have not adequately addressed, this study aims to provide a more comprehensive understanding of the recovery process.

Furthermore, the study intends to provide a holistic understanding of how job demands predict combinations of recovery activity dimensions. Therefore, one of the aims is to examine whether employees exposed to different levels of job demands differ in terms of the likelihood of belonging to a specific recovery activity profile. Additionally,

the study investigates the outcomes of these profiles. To examine the relationship between recovery activity profiles and employee well-being, burnout and work engagement were included as key outcome variables. Specifically, the study seeks to explore how these profiles relate to sub-dimensions of burnout (emotional exhaustion, cognitive weariness, and physical fatigue) while also investigating their relationship with work engagement to offer a novel perspective to the current literature.

The framework of this study is grounded in the Effort-Recovery Model (ERM) (Meijman & Mulder, 1998). This model suggests that load reactions caused by work accumulate and lead to negative consequences such as burnout if sufficient recovery is not achieved. However, the recovery process not only prevents burnout but can also support positive work outcomes such as work engagement. In a similar way, although the JD-R Model (Bakker & Demerouti, 2017) does not explicitly categorize recovery activities as personal resources, these activities can be viewed as strategies supporting personal resources due to their energy-restoring effects. Grounded in these theoretical foundations and aiming to address the identified gaps, the present study addresses the following research questions:

Research Question 1: Can individuals be grouped into distinct recovery activity profiles based on combinations of social, physical, mental, virtual, outdoor, creative, and spiritual activity dimensions?

Research Question 2: To what extent are job demands associated with individuals' likelihood of membership in distinct recovery activity profiles?

Research Question 3A: Do recovery activity profiles, based on combinations of recovery activity dimensions, differ in levels of physical fatigue?

Research Question 3B: Do recovery activity profiles, based on combinations of recovery activity dimensions, differ in levels of cognitive weariness?

Research Question 3C: Do recovery activity profiles, based on combinations of recovery activity dimensions, differ in levels of emotional exhaustion?

Research Question 4: Do recovery activity profiles, based on combinations of recovery activity dimensions, differ in levels of work engagement?



2. METHOD

2.1 Participants

The original sample of the current study comprises a total of 1,130 participants. Due to reasons such as not completing the survey, being trainees/interns, not being employed, and inconsistent demographic information, 270 participants' data were excluded from the final analysis. In total, 860 participants who were actively employed were included in the final sample. The demographic characteristics of the sample are presented in Table 2.1.

According to participants' reports, their ages varied between 18 and 72, with a mean of 34.14 years ($SD = 9.81$). Of the participants, 55.1% were women. In terms of educational level, 2.4% had completed primary or secondary education, 12.3% were high school graduates, 64.3% were either pursuing or had completed undergraduate education, and 20.9% were either pursuing or had completed postgraduate education. The sectors in which the participants were employed were quite diverse and included fields such as education, healthcare, public services, and information technology. Within these sectors, participants occupied various positions such as teachers, engineers, human resources specialists, healthcare professionals, psychologists, and lawyers. In terms of work arrangement, 73.7%, 21.2%, and 5.1% of the participants worked on-site, in a hybrid arrangement, and remotely, respectively. The average number of days participants worked per week was 5.16 ($SD = 0.74$), and participants reported an average of 8.41 daily working hours ($SD = 2.68$), considering variations throughout the week. Lastly, most of the participants were single (58%), and while 66.5% did not have any children, 15%, 14%, 4.11%, and .5% of the participants had 1, 2, 3, and 4 or more children, respectively.

Due to the exploratory nature of the study, directly relevant literature is limited. Additionally, conducting a power analysis for latent profile analysis is complex (Spurk et al., 2020). For these reasons, the sample sizes of previous studies that used LPA and investigated different topics were taken into account when determining the number of participants in the present study. Additionally, in the review study conducted by Spurk et al. (2020), the median value of the sample size of studies applying LPA was reported as 494. They reported that this finding suggests that reaching about 500 participants is sufficient in LPA studies (Spurk et al., 2020). Additionally, De Bloom et al. (2018), who studied leisure activity profiles, recruited 831 participants in their study. In light of this, by considering both the finding of the review study on LPA by Spurk et al. (2020), and the sample size of De Bloom et al.'s (2018) study, given its relevance to the topic, the aim was to reach at least 800 participants who were working actively in a variety of sectors and positions.

Table 2.1 *Demographic Characteristics of Participants*

Demographic variables	Full Sample	
	<i>n</i>	%
Sex		
Female	473	55.1
Male	385	49.1
Education level		
Primary or secondary	21	2.4
High school	106	12.3
Undergraduate	553	64.3
Postgraduate	180	20.9
Work arrangement		
On-site	634	73.7
Hybrid	182	21.2
Remote	44	5.1

Demographic variables	Full Sample	
	<i>n</i>	%
Marital status		
Single	506	58.8
Married	354	41.2
Number of children		
0	572	66.5
1	129	15.0
2	120	14.0
3	35	4.1
4 or more	4	.5

Note. N = 860. The average age of the participants was 34.14 years (SD = 9.81).

2.2 Procedure

Before starting data collection, ethical approval was obtained from Ozyegin University Research Ethics Committee (Approval Code: 2025/01/05). To recruit participants, social media platforms such as LinkedIn, Instagram, and the researcher's personal network were leveraged. Calls for participation, including a poster (see Appendix A) and the study link, were shared through these platforms. Individuals interested in participating were able to follow this pathway to access the study.

Upon accessing the study via the Qualtrics link, the consent form (See Appendix B) was presented to the participants. The consent form outlining the study and participants' rights emphasized that participation is voluntary, and they may withdraw at any time without consequences.

Participants then completed the survey based on their experiences over the past seven days. The study employed a cross-sectional design, and data were collected at a single time point. Completing the survey took employees approximately five to ten minutes.

2.3 Materials

2.3.1 Demographic Information Form

Participants filled out the demographic information form (See Appendix C), including questions about age, sex, education level, sector, occupation, work arrangement, number of working days per week, average working hours in a day, marital status, and number of children.

2.3.2 Recovery Activity Characteristics

The Recovery Activity Characteristics (RAC) Questionnaire to measure the key characteristics of nonwork activities that support recovery developed by Alameer et al. (2023) was used. The scale consists of a total of 28 items, but the recommended short version of the scale, with 14 items, was used in the current study. The scale includes seven dimensions: social (e.g., “Included social interaction”), physical (e.g., “Included vigorous physical activity”), creative (e.g., “Were creative”), virtual (e.g., “Occurred through digital devices (such as smartphone, computer, tablet)”), outdoor (e.g., “Were in the fresh air”), mental (e.g., “Required you to think hard”), and spiritual (e.g., “Involved spirituality”). In the original scale development study, the instruction was “Today after work, to what extent did you engage in activities that...”. The items were rated on a 5-point Likert scale from “Not at All” to “To an Extremely Large Extent” (See Appendix D). The reliability coefficients of dimensions ranged between .75 and .96 (Alameer et al., 2023).

The scale was translated and adapted to Turkish for this study (See Appendix D). Using a translation-back-translation process, one researcher translated the scale into Turkish, and the other researcher back-translated it to the original language. In the current

study, off-job time was not divided into categories such as evenings, weekends, and work breaks, but was considered a whole. Moreover, to ensure that activities engaged in on non-working days were included, participants were instructed to reflect on the past seven days, including the weekend. Thus, instead of the statement ("today after work...") in the scale development study (Alameer et al., 2023), the present study used the statement "within the past week...". Lastly, based on the idea that recovery activities usually involve little responsibility and differ from more demanding off-job tasks like household chores (Sonnetag, 2001; Steed et al., 2019), participants were asked to focus only on activities they personally found restorative. This approach was intended to help filter out activities that were not related to recovery. The reliability coefficients were .48, .76, .76, .79, .80, .82, and .86 for spiritual, outdoor, mental, physical, social, virtual, and creative dimensions, respectively. There were two items for each dimension.

The scores gathered from these seven dimensions were used to identify the participants' recovery activity profiles through Latent Profile Analysis (LPA).

2.3.3 Job Demands

Copenhagen Psychosocial Questionnaire-3 (COPSOQ-3) was developed by Burr et al. (2019). In this study, the Turkish short version (COPSOQ-TR Short) adapted by Şahan (2020) was used to assess job demands. The short version includes the mandatory COPSOQ core items, and the "job demands" dimension consists of six items. The "demands" dimension comprises three subdimensions: Quantitative demands (e.g., "How often do you not have time to complete all your work tasks?"), work pace (e.g., "Do you work at a high pace throughout the day?"), and emotional demands (e.g., "Do you have to deal with other people's personal problems as part of your work?"). A 5-point Likert scale (1 - "Not at All" to 5 - "To an Extremely Large Extent") was used (See Appendix

E). Participants were instructed to respond to the items based on their experiences within the past week. In this study, the scale was treated as unidimensional to obtain a general measure of job demands. The Cronbach alpha value was .80 in Şahan's (2020) Turkish translation and validation study. In the current study, the Cronbach's alpha coefficient was .82.

2.3.4 Burnout

In order to measure burnout, the Shirom-Melamed Burnout Measure (SMBM) (Shirom & Melamed, 2006), adapted to Turkish by Ülbeği and İplik (2017), was used. The scale has 14 items across three dimensions that are physical fatigue (e.g., “I feel physically drained”), cognitive weariness (e.g., “My thinking process is slow”), and emotional exhaustion (e.g., “I feel I am unable to be sensitive to the needs of coworkers and customers”). In the study, the phrase “coworkers and customers” within the emotional exhaustion dimension was changed to “people I interact with as part of my job” to be considered a more inclusive expression. The employees assessed their current burnout level on a 5-point Likert scale (1 – “Never” to 5 – “Always”) (See Appendix F) (Cronbach’s alpha = .81, .95, .92 in the same order). The present study found reliability coefficients of .93 for physical fatigue, .86 for cognitive weariness, and .73 for emotional exhaustion.

2.3.5 Work Engagement

The Utrecht Work Engagement Scale (UWES - short version), developed by Schaufeli et al. (2006) and adapted to Turkish by Özkalp and Meydan (2015), was used in the current study to measure work engagement. The scale includes nine items across three dimensions: vigor, dedication, and absorption. As examples of the scale items, the

item “At my job, I feel strong and vigorous” reflects vigor, the item “I am proud of the work that I do” represents dedication, and the item “I feel happy when I am working intensely” reflects absorption. Instead of a 7-point Likert scale used in Özkalp and Meydan’s (2015) study, this study utilized a 5-point Likert scale from “never” to “always” (See Appendix G), as with the Shirom-Melamed Burnout Measure, to assess participants’ current levels of work engagement. The use of 5-point Likert scale format is supported by the methodological literature that showed that while it is providing comparable measurement quality compared to longer measurement formats, also decreases participant burden (Dawes, 2008; Revilla et al., 2013). Building on these resources and drawing on Vallières et al.’s (2017) study, which used the scale as 5-point, this study decided to adopt 5-point Likert scale format to measure work engagement. Moreover, the present study treated the scale as unidimensional to obtain a composite score following Schaufeli et al.’s (2006) recommendation. In numerous studies, the scale was used to get an overall measure of work engagement (Chawla et al., 2019; Garrick et al., 2017; Tuisku et al., 2016). Its Cronbach’s alpha value was reported as .83 in Özkalp and Meydan’s (2015) study. In this study, Cronbach’s alpha value was .91.

3. RESULTS

3.1 Analytical Strategy

Data analysis was composed of seven different steps to reach the results of the research questions. In the first step, data cleaning was performed; examining missing values, data accuracy, outliers, normality, and multicollinearity. The problematic parts of the data were screened and cleaned. In the second step, descriptive statistics (means, standard deviations, skewness, and kurtosis) were computed and examined bivariate correlations. In the third step, a Confirmatory Factor Analysis (CFA) was conducted to validate the seven-factor structure of the RAC Questionnaire, newly translated into Turkish.

Subsequently, Latent Profile Analysis (LPA) was used to reveal recovery activity profiles, which were based on the participants' scores on the recovery activity dimensions. LPA is a statistical analysis method that aims to uncover hidden subgroups within a population using a set of observed variables (Spurk et al., 2020). The first step of the analysis was to determine the number of profiles that best fit the data and help distinguish participants based on their activity engagement (Bauer, 2022). Derived from comparison of statistical indices, Lo–Mendell–Rubin likelihood ratio test (LRT), Akaike's Information Criteria (AIC), and Sample-Size Adjusted Bayesian Information Criteria (SABIC) for all possible profile models, the best-fitting model was identified (Nylund et al., 2007).

Additionally, the 3-step (R3STEP) method was used to examine whether job demands could predict profile membership (Asparouhov & Muthén, 2014). This approach enables the assessment of predictors without influencing the estimation of the latent profiles.

In the last step of the analysis, the associations between the recovery activity profiles and work engagement, emotional exhaustion, cognitive weariness, and physical fatigue were examined through the Bolck–Croon–Hagenaars (BCH) method (Bolck et al., 2004). This method allows for comparing the profiles' means on outcome variables using BCH weights that account for classification error in the LPA. Furthermore, by examining relations with auxiliary variables without intervening in the model, it is considered a reliable approach (Asparouhov & Muthén, 2014).

3.2 Preliminary Analyses

3.2.1 Data Screening

Prior to analysis; age, sex, education level, sector, occupation, work arrangement, number of working days per week, average working hours in a day, marital status, number of children, job demands, recovery activity characteristics (physical, social, creative, mental, spiritual, virtual, outdoor), work engagement, and burnout (physical fatigue, cognitive weariness, and emotional exhaustion) were examined through the SPSS 27 Package Program (IBM Corp., 2020) for accuracy of data entry, missing values, outliers and fit between their distributions and the assumptions of multivariate analysis.

During the data screening process, firstly, whether missing values exist or not was checked, and no missing values were found in the data. Subsequently, data accuracy was examined. Unrealistic age and daily work hours entries, and the 'other' responses in the sex variable, which had low representation, were detected and recoded as missing. No imputation techniques were applied. Instead, missing data were limited to demographic variables, which were left as missing, and analyses were conducted using all available data. After that, outliers were checked despite a prior decision to retain them, if found.

The univariate outliers were identified by calculating z-scores. For a score to be a potential outlier, it must exceed the limits of 3.29 ($p < .001$, two-tailed) (Tabachnick & Fidell, 2007). A total of 33 univariate outliers in the variables of age, number of working days per week, average working hours in a day, and emotional exhaustion were found. However, detected univariate outliers in variables were not removed from the analysis by considering that they are contextually significant. For instance, extended daily working hours and the extreme values in the number of workdays per week were found to be consistent with the conditions of participants working in sectors such as healthcare, gendarmerie, and maritime. Additionally, because the emotional exhaustion dimension is composed of three items, and the possibility that some participants may experience higher levels of burnout, extreme values (i.e., $z = 3.46$) were retained in the analysis.

In the following step, skewness and kurtosis were tested to assess the normality assumption. Skewness and kurtosis are the components of the assumptions of normality, and their criteria are considered to be between -3 and +3 (Kline, 2010). Even though most of the variables appeared to be normally distributed, the number of working days per week and the average working hours in a day variables' kurtosis (4.01 and 16.21, respectively) exceeded the ± 3 range, deviating from the normality assumption (see Table 3.1). However, these variables are demographics indicators. Notably, all focal variables of the current study were within the acceptable range, satisfying the assumption of normality.

Lastly, to evaluate multicollinearity among the variables in the model, a bivariate correlation study was performed. All values were lower than the widely accepted multicollinearity criterion of 0.90 (Hair et al., 2010).

3.2.2 Descriptive Statistics and Bivariate Correlations

In the subsequent step of data screening and cleaning, descriptive statistics for all study variables were obtained by using SPSS (IBM Corp., 2020) for the final sample of 860 participants. The means, standard deviations, skewness, and kurtosis of the variables are presented in Table 3.1.

Firstly, all items of the scales were rated on a 5-point Likert scale. In the burnout dimensions, physical fatigue had the highest mean ($M = 2,83$) and emotional exhaustion had the lowest mean ($M = 2,10$). While the mean of work engagement was 3.23, the mean of job demands was 2.85, which is close to the median value of the scale.

Among the recovery activity dimensions, the highest mean was found in the social dimension ($M = 3,40$), the lowest mean was found in the outdoor dimension ($M = 2,12$). The means of other dimensions ranged between 2.38 and 3.10. This indicates that, over the past seven days, participants' activities were characterized most by socializing and least by outdoor experiences.

Table 3.1 Means, Standard Deviations, Minimum and Maximum Scores, Skewness, and Kurtosis Values of Study Variables

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Min.	Max.	Skewness	Kurtosis
Physical fatigue ^a	860	2.83	0.97	1.00	5.00	0.28	-0.65
Cognitive weariness ^a	860	2.44	0.81	1.00	5.00	0.50	0.19
Emotional exhaustion ^a	860	2.11	0.83	1.00	5.00	0.82	0.66
Work engagement	860	3.23	0.86	1.00	5.00	-0.17	-0.35
Job demands	860	2.85	0.85	1.00	5.00	0.13	-0.50
Physical ^b	860	2.68	1.03	1.00	5.00	0.27	-0.52
Social ^b	860	3.41	1.00	1.00	5.00	-0.21	-0.55
Creative ^b	860	2.65	1.03	1.00	5.00	0.28	-0.50
Mental ^b	860	3.11	1.03	1.00	5.00	0.03	-0.69

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	Min.	Max.	Skewness	Kurtosis
Spiritual ^b	860	2.38	0.95	1.00	5.00	0.63	0.19
Virtual ^b	860	2.70	1.22	1.00	5.00	0.30	-0.91
Outdoor ^b	860	2.13	1.00	1.00	5.00	0.76	0.00
Age	859	34.14	9.81	18.00	72.00	0.78	-0.03
Number of working days per week	860	5.16	0.75	2.00	7.00	-0.81	4.01
Daily working hours	841	8.41	2.68	1.00	24.00	2.89	16.21

^a *Burnout dimensions*

^b *Recovery Activity Dimensions.*

Afterward, bivariate correlations, which included demographic variables (age, sex, education level, number of working days per week, average working hours per day, work arrangement (on-site, hybrid, and remote), marital status, number of children) and other study variables, were conducted (see Table 3.2).

Firstly, job demands were positively correlated with all burnout dimensions and negatively associated with work engagement. In addition, the three burnout dimensions showed strong positive intercorrelations, and work engagement was negatively related to all of them.

Moreover, recovery activities were mostly intercorrelated with each other. Regarding the well-being indicators, the physical and virtual dimensions were positively correlated with burnout, whereas the social, creative, and outdoor dimensions were negatively associated with burnout. Furthermore, most recovery activity dimensions were positively related to work engagement (social, creative, mental, spiritual, and outdoor). Finally, the physical, mental, spiritual, and virtual dimensions were positively correlated with job demands.

Additionally, demographic variables were included in the correlation table, and these variables were treated as control variables in the analyses.

Table 3.2 *Correlations for Study Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Physical fatigue ^a	-												
2. Cognitive weariness ^a	.77**	-											
3. Emotional exhaustion ^a	.46**	.57**	-										
4. Work engagement	-.53**	-.47**	-.29**	-									
5. Job demand	.46**	.42**	.30**	-.17**	-								
6. Physical ^b	.10**	.09**	.06	.03	.19**	-							
7. Social ^b	-.03	-.05	-.10**	.17**	.06	.37**	-						
8. Creative ^b	-.16**	-.14**	-.06	.29**	.03	.32**	.47**	-					
9. Mental ^b	.01	.01	.00	.11**	.17**	.32**	.49**	.58**	-				
10. Spiritual ^b	.01	.03	-.02	.19**	.12**	.19**	.25**	.34**	.33**	-			
11. Virtual ^b	.11**	.11**	.10**	-.02	.17**	-.21**	.02	.12**	.27**	.01	-		
12. Outdoor ^b	-.07*	-.10	.01	.11**	.02	.20**	.14**	.18**	-.02	.17**	-.16**	-	
13. Age	-.20**	-.15**	-.04	.15**	-.06	-.07*	-.19**	-.07*	-.06	.03	-.14**	.04	-
14. Number of working days per week	-.06	-.05	.01	.13**	-.01	.05	-.03	.05	.04	.02	-.06	.01**	.09**
15. Daily working hours	.03	.04	.04	.00	.17**	-.02	-.08*	-.05	-.05	-.01	.04	.07*	-.05
16. Educational level ^c	.12**	.12**	.08*	-.09*	.14**	.03	.07*	.00	.03	-.02	.08*	-.07*	-.13**
17. Sex ^d	.21**	.12**	-.02	-.01	.13**	-.08*	-.05	-.16**	-.09**	.08*	-.01	-.08*	.01
18. On-site vs hybrid ^e	.04	.00	.03	.05	.00	.09**	-.01	-.08*	-.04	.10**	-.20**	.00	.16**
19. Hybrid vs remote ^e	-.02	.01	-.03	-.03	.03	-.06	.02	.08*	.04	-.08*	.18**	.00	-.12**
20. Remote vs on-site ^e	-.04	-.02	.01	-.05	-.07*	-.07	-.01	.01	-.01	-.05	.05	.00	-.09*

a

Variable	14	15	16	17	18	19	20	21	22
14. Number of working days per week	-								
15. Daily working hours	-.06	-							
16. Educational level ^c	-.20**	-.06	-						
17. Sex ^d	-.17**	-.10**	.13**	-					
18. On-site vs hybrid ^e	.11**	.10**	-.14**	.00	-				
19. Hybrid vs remote ^e	-.18**	-.08*	.11**	.01	-.87**	-			
20. Remote vs on-site ^e	-.03	-.06	.06	-.01	-.39**	-.12**	-		
21. Marital status ^f	.02	-.03	-.09*	.07	.15**	-.11**	-.09*	-	
22. Number of children ^g	.09**	-.07	-.20**	-.01	.20**	-.17**	-.09*	.57**	-

Burnout dimensions

^b Recovery Activity Dimensions

^c 1 = Primary or secondary, 2 = High school, 3 = Undergraduate, 4 = Postgraduate

^d 0 = Male, 1 = Female

^e Onsite (1) vs hybrid (0), hybrid (1) vs remote (0), remote (1) vs on-site (0)

^f 0 = Single, 1 = Married

^g 0 = no children, 1 = one child, 2 = two children, 3 = three children, 4 = four or more children

* $p < .05$; ** $p < .01$.

3.3 Confirmatory Factor Analysis of the Recovery Activity Characteristics (RAC) Questionnaire

Following the translation of the Recovery Activity Characteristics (RAC) Questionnaire (Alameer et al., 2023), the Turkish version of the scale was tested in the current study. To show whether the scale had an appropriate factor structure, Mplus 8 Statistical Package (Muthén & Muthén, 1998-2017) was used in the study. The seven dimensions, which were included in the original study, were measured with two items each based on the 14-item short version of the scale: physical (2 items), social (2 items), creative (2 items), mental (2 items), spiritual (2 items), virtual (2 items), and outdoor (2 items). The confirmatory factor analysis (CFA) supported the seven-factor structure of the Recovery Activity Characteristics (RAC) Questionnaire (Alameer et al., 2023). The model demonstrated acceptable to good fit: $\chi^2(55) = 309.40$, $p < .001$, CFI = 0.95, TLI = 0.91, RMSEA = 0.07, and SRMR = 0.04. The model explained 65.2% of the variance in the physical, 67.5% in the social, 75.9% in the creative, 61.1% in the mental, 48.3% in the spiritual, 70.8% in the virtual, and 66.4% in the outdoor dimensions. According to Tabachnick and Fidell (2007), factor loadings of items can be interpreted as .32 (poor), .45 (fair), .55 (good), .63 (very good), and .71 (excellent). Factor loadings across the dimensions were statistically significant, ranging from 0.34 to 0.91. Table 3.3 shows details about the factor loadings of the items.

Table 3.3 *Results From a Factor Analysis of the Recovery Activity Characteristics (RAC) Questionnaire*

RAC Item	Factor Loading
Physical dimension	
1. Included vigorous physical activity.	.84
8. Were physically demanding.	.78

RAC Item	Factor Loading
Social dimension	
2. Included social interaction.	.81
9. Involved communicating with others.	.84
Creative dimension	
3. Allowed you to be creative.	.85
10. Were creative.	.89
Mental dimension	
4. Required you to think hard.	.74
11. Required you to be mentally active.	.82
Spiritual dimension	
5. Involved spirituality.	.91
12. Included spiritual themes such as the meaning of life, death, or religion.	.34
Virtual dimension	
6. Occurred through digital devices (such as smartphone, computer, tablet).	.90
13. Were virtual (using digital technology).	.77
Outdoor dimension	
7. Were in the fresh air.	.91
14. Were performed in a natural environment (e.g., among plants and trees).	.68

Note. $N = 860$.

3.4 Latent Profile Analysis

Latent Profile Analysis (LPA) was used to uncover unobserved profiles derived from different levels of seven recovery activity dimensions, which represent distinct activity characteristics.

3.4.1 Model Selection and Fit Indices

To determine the profiles based on the extent to which people engage in different dimensions of recovery activity, MPlus 8.0 (Muthén & Muthén, 1998–2017) was used for Latent Profile Analysis (LPA). The seven dimensions representing the components of an activity were included in the analysis. The models with two, three, four, and five profiles were tested to find the best-fitting profile number for the existing data. The models were compared based on the Akaike Information Criterion (AIC), Bayesian Information

Criterion (BIC), sample-size adjusted BIC (SABIC), entropy, and the Lo–Mendell–Rubin likelihood ratio test (LRT).

As shown in Table 3.4, AIC, BIC, and SABIC values decreased, showing the improvement of the models from the two-profile model to the five-profile model. Additionally, entropy values increased as approaching the five-profile model. However, the five-profile model was not a better solution compared to the four-profile model ($p = .115$). Among the remaining models, the four-profile model was the best in terms of fit indices.

In line with the statistical indices and interpretability, the four-profile model was found to best represent the data and was retained for further analysis.

Table 3.4 *Fit Statistics for LPA Models*

	2 Profiles	3 Profiles	4 Profiles	5 Profiles
AIC	16827.163	16592.021	16415.803	16332.970
BIC	16931.816	16734.729	16596.567	16551.789
Sample-size adjusted BIC	16861.950	16639.458	16475.889	16405.705
Entropy	0.696	0.728	0.758	0.774
Lo–Mendell–Rubin LRT	2 vs. 1, $p = .000$	3 vs. 2, $p = .008$	4 vs. 3, $p = .003$	5 vs. 4, $p = .115$
N for each profile	P1 = 448, P2 = 412	P1 = 166, P2 = 483, P3 = 211	P1 = 197, P2 = 432, P3 = 101, P4 = 130	P1 = 105, P2 = 184, P3 = 419, P4 = 77, P5 = 75

Note. AIC = Akaike Information Criterion; BIC = Bayesian information criterion; SABIC = sample-size adjusted BIC; LRT = Vuong–Lo–Mendell–Rubin likelihood ratio test.

3.4.2 Profile Labeling and Characterization

According to participants' most likely latent class membership, 197 out of 860 participants (about 22.9%) were included in Profile 1. This profile showed off the score below the average in almost all of the seven dimensions (physical, social, creative, mental,

spiritual, virtual, and outdoor) of recovery activity (median value = 3). This indicates that recovery activity dimensions in question, which are engaged in activities by Profile 1 participants, were at low levels. Therefore, Profile 1 was named "Low Activity Engagement".

Profile 2 represented half of the participants (50.2%) with 432 people included. In this class, average scores were observed in almost all seven dimensions of recovery activity (between 2.3 and 3.5). Even though above-average scores, especially for mental and social dimensions, have been gathered, because this pattern was similar to the other profiles, these dimensions were not distinctive. By considering all Profile 2's features, this profile was named "Low to Moderate Activity Engagement".

The third profile consisted of 101 participants, representing 11.7% of the sample. While the recovery activities Profile 3 showed high levels (above 4, with a possible maximum score of 5) in the mental and virtual dimensions, the spiritual and outdoor dimensions were low. However, since these two dimensions were low across all profiles, the profile was named "Mental–Virtual Activity Engagement" by considering its most distinctive dimensions with high levels.

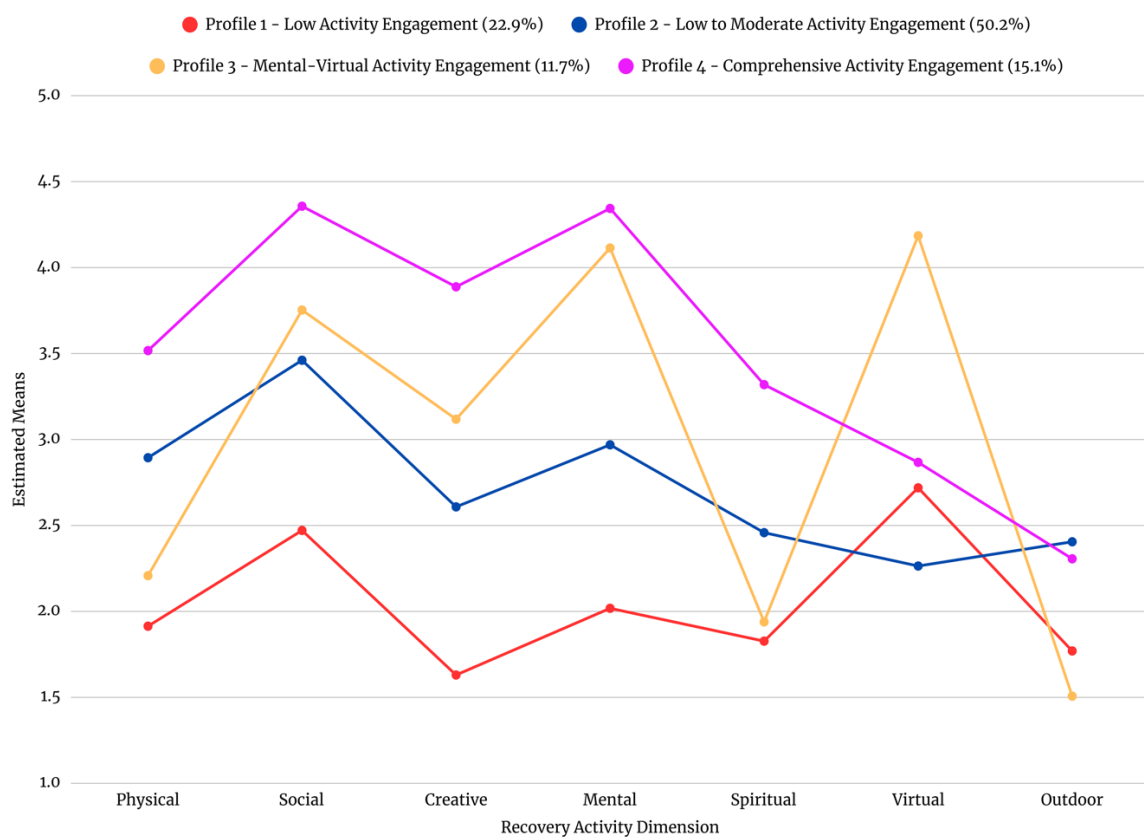
Finally, Profile 4 consisted of 130 participants, accounting for 15.1% of the sample. This profile demonstrated above-average scores in nearly all seven recovery activity dimensions. While its overall pattern resembled that of Profile 2, in both profiles, the spiritual, virtual, and outdoor dimensions were relatively lower compared to the other dimensions. Nevertheless, given that this profile consistently displayed higher scores across most dimensions compared to the others, it was labeled as "Comprehensive Activity Engagement". Table 3.5 and Figure 3.1 shows details about the profiles.

Table 3.5 Item-Response Means Across Recovery Activity Profiles

	Profile 1	Profile 2	Profile 3	Profile 4
Recovery	Low Activity	Low to Moderate	Mental-Virtual	Comprehensive
Activity Dimension	Engagement	Activity	Activity	Activity
		Engagement	Engagement	Engagement
	(n = 197, 22.9%)	(n = 432, 50.2%)	(n = 101, 11.7%)	(n = 130, 15.1%)
Physical	1.914	2.894	2.208	3.517
Social	2.471	3.461	3.753	4.357
Creative	1.630	2.608	3.118	3.888
Mental	2.018	2.969	4.114	4.344
Spiritual	1.827	2.458	1.939	3.319
Virtual	2.719	2.264	4.185	2.867
Outdoor	1.770	2.405	1.507	2.306

Note. Item-response means within each profile, at $p < .05$.

Figure 3.1 Recovery Activity Profiles



3.5 Predictors of Profile Membership

The 3-step (R3STEP) method was used to investigate the factors that predicted the profile membership. In the analysis, the "Comprehensive Activity Engagement" profile (Profile 4) was taken as the reference category. Therefore, regression coefficients show the log-odds of other profiles (the Low Activity Engagement (Profile 1), the Low to Moderate Activity Engagement (Profile 2), and the Mental-Virtual Activity Engagement (Profile 3)) compared to Profile 4. A coefficient was not reported for Profile 4 directly because all other comparisons were made based on it.

One of the research questions of the current study focused on whether job demands predicted profile membership. In addition, the descriptive variables (with the exception of work arrangement) were included in the analysis and briefly examined in an exploratory manner. Table 3.6 summarizes the findings.

Job demands significantly predicted latent profile membership. Higher job demands decreased the likelihood of belonging to Profiles 1, 2, and 3 compared to the reference Profile 4. Specifically, for each one-unit increase in job demands, the odds of being in Profile 1 (vs. Profile 4) decreased by 55% ($\beta = -0.80$, $SE = 0.19$, $OR = 0.45$, 95% CI [0.31, 0.65], $p < .001$). Similarly, higher job demands were related to a 50% decrease in the odds of being in Profile 2 compared to Profile 4 ($\beta = -0.70$, $SE = 0.16$, $OR = 0.50$, 95% CI [0.36, 0.69], $p < .001$). Finally, higher job demands also predicted a 38% decrease in the odds of belonging to Profile 3 relative to Profile 4 ($\beta = -0.47$, $SE = 0.21$, $OR = 0.62$, 95% CI [0.41, 0.95], $p = .026$).

Additionally, the work arrangement variable could not be included in the R3STEP analysis due to its three-category structure. Instead, its relationship with the profiles was examined through a cross-tab analysis. The chi-square test showed that a significant

association exists between recovery activity profiles and work arrangements, $\chi^2 (6, N = 860) = 46.72, p < .001$, *Cramer's V* = .165. The distribution details for this variable are presented in Table 3.7.

Table 3.6 *The Three-Step Procedure Results for Antecedents (R3STEP)*

<i>Variable</i>	Profile 1 vs. 4		Profile 2 vs. 4		Profile 3 vs. 4	
	Estimate (S.E.)	OR	Estimate (S.E.)	OR	Estimate (S.E.)	OR
Demand	-0.796 (.190)**	0.451	-0.700 (.164)**	0.496	-0.474 (.213)*	0.623
Age	0.029 (.018)	1.029	0.018 (.018)	1.019	0.007 (.030)	1.007
Sex ^a	0.880 (.291)**	2.411	0.488 (.269)	1.629	0.198 (.369)	1.219
Daily working hours	0.142 (.068)*	1.152	0.116 (.066)	1.123	0.067 (.072)	1.070
Number of working days per week	-0.277 (.258)	0.758	-0.395 (.247)	0.674	-0.633 (.301)*	0.531
Education level ^b	-0.042 (.227)	0.959	-0.106 (.219)	0.899	0.285 (.335)	1.330
Number of children ^c	-0.242 (.204)	0.785	-0.145 (.206)	0.865	-0.060 (.438)	0.942
Marital status ^d	0.481 (.342)	1.617	0.265 (.320)	1.303	0.084 (.550)	1.088

Note. * $p < 0.05$, ** $p < 0.01$. Profile 4 (Comprehensive Activity Engagement) is a reference profile. Estimate = estimate (β) from the R3STEP multinomial logistic regression analysis; S.E. = Standard Error; OR = Odd Ratio.

^a 0 = Male, 1 = Female

^b 1 = Primary or secondary, 2 = High school, 3 = Undergraduate, 4 = Postgraduate

^c 0 = no children, 1 = one child, 2 = two children, 3 = three children, 4 = four or more children

^d 0 = Single, 1 = Married.

Table 3.7 *Cross-Tabulation Results for Work Arrangement by Recovery Profile*

<i>Variable</i>	Profile 1		Profile 2		Profile 3		Profile 4	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Work arrangement								
On-site	155	78.7	327	75.7	47	46.5	105	80.8
Hybrid	35	17.8	83	19.2	42	41.6	22	16.9
Remote	7	3.6	22	5.1	12	11.9	3	2.3

Note. $\chi^2 (6, N = 860) = 46.72, p < .001$. *Cramer's V* = .165. Percentages represent row percentages.

3.6 Differences Between the Profiles

Through the BCH method, the association between profiles and outcome variables can be analyzed precisely and consistently using BCH weights that account for classification error in Latent Profile Analysis (Bolck et al., 2004). Therefore, to examine whether recovery activity profiles differed in distal outcomes (burnout dimensions (physical fatigue, cognitive weariness, and emotional exhaustion) and work engagement), the BCH method was used in the current study. Table 3.8 shows the findings.

3.6.1 Differences in Burnout Dimensions Across the Four Profiles

The BCH analysis indicated that across the four profiles, there were no significant differences in physical fatigue (Wald's $\chi^2 = 1.87, p = .601$). In terms of mean and standard error, the "Low Activity Engagement" (Profile 1) profile had a mean physical fatigue score of $M = 2.91$ ($SE = 0.09$), the "Low to Moderate Activity Engagement" (Profile 2) profile had $M = 2.79$ ($SE = 0.05$), the "Mental-Virtual Activity Engagement" (Profile 3) profile had $M = 2.90$ ($SE = 0.12$), and the "Comprehensive Activity Engagement" (Profile 4) profile had $M = 2.77$ ($SE = 0.10$). Concerning the comparisons, pairwise comparisons confirmed that significant differences were not found between the Profile 1 and the Profile 2 (Wald's $\chi^2 = 1.26, p = .263$), the Profile 1 and the Profile 3 (Wald's $\chi^2 = 0.01, p = .931$), the Profile 1 and the Profile 4 (Wald's $\chi^2 = 1.07, p = .301$), the Profile 2 and the Profile 3 (Wald's $\chi^2 = 0.75, p = .387$), the Profile 2 and the Profile 4 (Wald's $\chi^2 = 0.01, p = .921$), and the Profile 3 and the Profile 4 (Wald's $\chi^2 = 0.60, p = .438$).

The BCH analysis indicated that across the four profiles, there were no significant differences in cognitive weariness (Wald's $\chi^2 = 2.21, p = .531$). In terms of mean and standard error, the "Low Activity Engagement" (Profile 1) profile had a mean cognitive fatigue score of $M = 2.47$ ($SE = 0.08$), the "Low to Moderate Activity Engagement"

(Profile 2) profile had $M = 2.47$ ($SE = 0.05$), the "Mental-Virtual Activity Engagement" (Profile 3) profile had $M = 2.44$ ($SE = 0.09$), and the "Comprehensive Activity Engagement" (Profile 4) profile had $M = 2.34$ ($SE = 0.08$). Concerning the comparisons, pairwise comparisons confirmed that significant differences were not found between the Profile 1 and the Profile 2 (Wald's $\chi^2 = 0.01$, $p = .937$), the Profile 1 and the Profile 3 (Wald's $\chi^2 = 0.07$, $p = .796$), the Profile 1 and the Profile 4 (Wald's $\chi^2 = 1.37$, $p = .242$), the Profile 2 and the Profile 3 (Wald's $\chi^2 = 0.13$, $p = .717$), the Profile 2 and the Profile 4 ($\chi^2 = 1.96$, $p = .162$), and the Profile 3 and the Profile 4 (Wald's $\chi^2 = 0.59$, $p = .442$).

The BCH analysis indicated that across the four profiles, there were no significant differences in emotional exhaustion (Wald's $\chi^2 = 0.92$, $p = .821$). In terms of mean and standard error, the "Low Activity Engagement" (Profile 1) profile had a mean emotional fatigue score of $M = 2.15$ ($SE = 0.08$), the "Low to Moderate Activity Engagement" (Profile 2) profile had $M = 2.10$ ($SE = 0.04$), the "Mental-Virtual Activity Engagement" (Profile 3) profile had $M = 2.15$ ($SE = 0.11$), and the "Comprehensive Activity Engagement" (Profile 4) profile had $M = 2.04$ ($SE = 0.09$). Concerning the comparisons, pairwise comparisons confirmed that significant differences were not found between the Profile 1 and the Profile 2 (Wald's $\chi^2 = 0.26$, $p = .613$), the Profile 1 and the Profile 3 (Wald's $\chi^2 = 0.00$, $p = .973$), the Profile 1 and the Profile 4 (Wald's $\chi^2 = 0.80$, $p = .373$), the Profile 2 and the Profile 3 (Wald's $\chi^2 = 0.19$, $p = .661$), the Profile 2 and the Profile 4 (Wald's $\chi^2 = 0.28$, $p = .596$), and the Profile 3 and the Profile 4 (Wald's $\chi^2 = 0.54$, $p = .462$).

3.6.2 Differences in Work Engagement Across the Four Profiles

The BCH analysis indicated that across the four profiles, there were significant differences in work engagement (Wald's $\chi^2 = 30.83$, $p < .001$). In terms of mean and

standard error, the "Low Activity Engagement (Profile 1)" profile had a mean work engagement score of $M = 3.01$ ($SE = 0.08$), the "Low to Moderate Activity Engagement (Profile 2)" profile had a mean work engagement score of $M = 3.20$ ($SE = 0.05$), the "Mental-Virtual Activity Engagement (Profile 3)" profile had a mean work engagement score of $M = 3.23$ ($SE = 0.10$), the "Comprehensive Activity Engagement (Profile 4)" profile had a mean work engagement score of $M = 3.65$ ($SE = 0.09$). Concerning the comparisons, pairwise comparisons confirmed that work engagement scores significantly differed between the Profile 1 and the Profile 2 (Wald's $\chi^2 = 4.22$, $p = .040$), the Profile 1 and the Profile 4 (Wald's $\chi^2 = 29.79$, $p < .001$), the Profile 2 and the Profile 4 (Wald's $\chi^2 = 17.09$, $p < .001$), and the Profile 3 and the Profile 4 (Wald's $\chi^2 = 8.22$, $p = .004$). However, significant differences were not found between the Profile 1 and the Profile 3 (Wald's $\chi^2 = 3.27$, $p = .071$) or the Profile 2 and the Profile 3 (Wald's $\chi^2 = 0.07$, $p = .794$). In summary, the "Comprehensive Activity Engagement" profile had the highest score in work engagement, while the "Low Activity Engagement" had the lowest one.

Table 3.8 *Dependent Variable Differences Across Four Recovery Profiles*

Outcome Variable	Class 1 = Low Activity Engagement (Mean, SE)	Class 2 = Low to Moderate Activity Engagement (Mean, SE)	Class 3 = Mental- Virtual Activity Engagement (Mean, SE)	Class 4 = Comprehensive Activity Engagement (Mean, SE)	Overall Test (Wald χ^2 , $df=$ 3)	Pairwise Comparisons
Work Engagement	3.01 (0.08)	3.20 (0.05)	3.23 (0.10)	3.65 (0.09)	$\chi^2(3) = 30.84, p < .001$	4 > 1***, 2*** 3, 2 > 1**, 4 > 3** 3 > 2 ^{ns}
Emotional Exhaustion	2.15 (0.08)	2.10 (0.04)	2.15 (0.11)	2.04 (0.09)	$\chi^2(3) = 0.92, p = .821$	3 > 4 ^{ns} , 2 ^{ns} , 1 ^{ns} 1, 2 > 4 ^{ns} 1 > 2 ^{ns}
Cognitive Weariness	2.47 (0.08)	2.47 (0.05)	2.44 (0.09)	2.34 (0.08)	$\chi^2(3) = 2.21, p = .531$	2 > 4 ^{ns} , 3 ^{ns} , 1 ^{ns} 1, 3 > 4 ^{ns} 1 > 3 ^{ns}
Physical Fatigue	2.91 (0.09)	2.79 (0.05)	2.90 (0.12)	2.77 (0.10)	$\chi^2(3) = 1.87, p = .601$	1 > 4 ^{ns} , 3 ^{ns} , 2 ^{ns} 3, 2 > 4 ^{ns} 3 > 2 ^{ns}

Note. Means are estimated with robust standard errors. Overall Wald χ^2 tests ($df = 3$) evaluate equality across classes. Pairwise comparisons are Wald χ^2 tests ($df = 1$). *ns* = non-significant. Significance: $p < .01 = **$, $p < .001 = ***$.

4. DISCUSSION

This exploratory study was designed with a person-centered approach to examine recovery activities in which employees engaged during their off-job time, and Latent Profile Analysis (LPA) was used. As a result of the analysis, it was found that employees were differentiated into different profiles according to their engagement patterns in recovery activities. Additionally, whether the profile membership was based on employees' job demands was explored. Lastly, the relationship between the profiles in question and burnout (emotional exhaustion, physical fatigue, and cognitive weariness) and work engagement was investigated, and whether these outcome variables differed significantly among the profiles was evaluated.

4.1 Recovery Activity Profiles

This current study showed that participants could be grouped into four profiles based on the patterns of recovery activities (the levels of recovery activity dimensions: physical, social, creative, mental, spiritual, virtual, and outdoor). The identification of four distinct profiles demonstrates that employees engage in recovery activities in various ways. When the profiles were evaluated both within and between groups, social and mental dimensions were seen as among the most engaged dimensions in recovery activities in terms of their levels. Having high levels in social and mental dimensions shows that employees use mental and interpersonal interactions as primary resources during their recovery process. In relationship-oriented cultural contexts such as Türkiye, many activities involve social interaction even when performed individually, because the self is shaped through relational ties (Kağıtçıbaşı, 2005). Triandis (2018) emphasized that behaviors are led by group cohesiveness, and Arrindell (2003) indicated that in Türkiye,

people define their identity through social relationships. Similarly, Hofstede (2001) posits that in such cultures, individuals are deeply integrated into strong, cohesive in-groups from birth onwards, which provide protection and support throughout life. Consequently, spending off-job time within these close circles is perceived as a fundamental source of comfort and emotional renewal rather than a demand. Therefore, sociality appears not as a separate preference but as a culturally embedded component of recovery activities. Moreover, high levels in the mental dimension across the profiles could have stemmed from participants' evaluations of many daily activities as involving cognitive engagement, such as thinking and planning. Because of this, even routine activities could be seen as cognitively stimulating. In contrast, the consistently low level of the outdoor dimension across all profiles is remarkable. A possible reason for this may be that the data were collected during the winter months.

The most represented profile is the “Low to Moderate Activity Engagement” profile, including 50.2% of the participants. In general, the levels of engagement in the recovery activity dimensions among individuals in this group were between "to a small extent" and "to a moderate extent" (approximately between 2 and 3 on a 5-point scale). Only the social dimension slightly exceeded this range.

The other profile, which had a similar dimensional pattern, was the “Low Activity Engagement” profile. Only the social and virtual dimensions had average or above-average scores in this profile. It was named due to the low scores observed across almost all dimensions. Approximately one in four participants (22.9%) belonged to this profile.

When these two profiles are considered together, a great proportion (almost 73%) of the sample seemed to engage in low or low-to-moderate recovery behaviors. This

distribution shows that most of the employees may have contented themselves with minimal engagement.

The profile, which was significantly differentiated from the other profiles due to its above-average scores in almost all dimensions, was the "Comprehensive Activity Engagement" profile, consisting of 15.1% of the sample. The individuals in this group exhibited below-average scores only in the outdoor dimension.

Finally, the "Mental–Virtual Activity Engagement" profile, which was highly characterized by mental and virtual dimensions, represented 11.7% of the sample. Although it was the smallest group in terms of sample size, it still included 101 participants. The preferences for activities involving mental and digital dimensions can be explained by employees' tendency toward easily accessible, low-effort activities. Research has shown that virtual leisure-time activities provide a quick and effortless recovery path (Kuykendall et al., 2020).

The identification of different profiles can demonstrate employees' distinct recovery needs, job demands, and personal resources. These findings support the person-centered approach by indicating that employees differ in how they engage in recovery activities, which can be predicted by their individual characteristics and the contextual conditions in which they work (Laursen & Hoff, 2006; Sonnentag & Fritz, 2007).

4.2 Predictors of Profile Membership

The findings about the second research question indicate that job demands significantly predicted profile membership; as job demands increased, individuals showed a pattern suggesting a higher likelihood of belonging to the Comprehensive Activity Engagement profile relative to the other profiles.

This finding is in line with the Effort–Recovery Model (ERM) (Meijman & Mulder, 1998), which serves as the primary theoretical basis for this study, as well as with previous research (e.g., Sonnentag & Zijlstra, 2006) suggesting that high job demands heighten employees' need for recovery. High demands at work lead to mental and physical fatigue, creating a need for recovery. From the ERM perspective, this implies that job demands generate stress and exhaustion and may also trigger recovery behaviors that help employees rest and recover from strain.

Furthermore, the present findings suggest that high job demands not only increase the need for recovery but, under certain conditions, may also be associated with more comprehensive and active forms of recovery. In other words, some employees who experience high job demands may cope with their increased need for recovery not just through passive recovery or resting, but through engagement in various forms of active and multidimensional recovery. Such engagement may occur because employees recognize the need to recover, or as a natural response to fatigue.

These results are also consistent with the Job Demands–Resources (JD–R) Model (Bakker & Demerouti, 2017). According to the JD–R model, job demands deplete employees' energy resources and increase their need for recovery. Accordingly, employees exposed to higher demands may be more inclined to engage in recovery activities to recover from the strain caused by their work environment. Thus, this finding is consistent with the JD-R model's description of the energy depletion process, indicating that high demands increase employees' need for recovery, which may account for their tendency to engage in multiple recovery activity dimensions.

Overall, the findings indicate that the influence of job demands on the recovery process is consistent with theoretical expectations; under certain conditions, high job

demands may be related to active and multidimensional recovery behaviors. This highlights that recovery should not be viewed merely as a passive rest period but also as an effective coping strategy in response to high job demands.

Although not within the scope of the main research question, some demographic and work-related variables significantly predicted profile membership. Firstly, in terms of work arrangements, hybrid and remote workers were disproportionately represented in the Mental–Virtual Activity Engagement profile, a pattern also supported by the significant association observed in the cross-tab analysis. This finding can be explained by the fact that digitalized work routines may lead employees to engage more in virtual activities. When men and the "Comprehensive Activity Engagement" profile were used as the reference, the likelihood of women belonging to the "Low Activity Engagement profile" increased. This may be related to the effects of women's work–life balance challenges, which can limit their participation in recovery activities. Lastly, compared to the "Comprehensive Activity Engagement" profile, longer working hours increased the likelihood of belonging to the "Low Activity Engagement" profile, whereas fewer working days increased the likelihood of belonging to the "Mental–Virtual Activity Engagement" profile. These findings indicate that work arrangements and time demands may function as contextual factors influencing employees' engagement in recovery activities.

In conclusion, high job demands, which in this study encompassed work pace, quantitative demands, and emotional demands, may encourage some employees to translate their need for recovery into action by engaging in more comprehensive activities. However, longer working hours or limited off-job time may, as mentioned, reverse this process and lead to the recovery paradox: individuals who most need recovery

tend to engage least in recovery activities (Sonnentag & Zijlstra, 2006). In this context, the present findings may also relate to the "recovery paradox" concept.

4.3 Differences Between the Profiles

4.3.1 Differences in Burnout Across the Four Profiles

In the current study, among the four recovery activity profiles, there were no significant differences found in all burnout dimensions: emotional exhaustion, cognitive weariness, and physical fatigue. In terms of theoretical background, although the findings did not contradict the Effort-Recovery Model (Meijman & Mulder, 1998), they slightly differ from the proposition of the model, because the model suggests that if recovery is insufficient, load reactions accumulate and lead to load consequences such as burnout. Thus, it could be expected that different profiles would show distinct levels of burnout. However, the results did not support this expectation. At this point, it should be considered that the study did not directly test the processual structure of the ERM, which suggests that, over time, accumulated load reactions turn into burnout. In other words, the study has a cross-sectional structure and did not observe such cumulative processes within a time frame.

One of the possible explanations of the findings is that recovery is related more to the recovery experiences, especially to the level of psychological detachment from work, than to the quantity of activities or the extent to which they include different characteristic dimensions (Sonnetag & Fritz, 2007). Even if employees engage in multiple recovery activity dimensions, if the activities do not provide psychological refreshment or detachment, the expected recovery effect may not be observed. Additionally, the effects of the activities may change depending on who performs them. While some activities can

have a recovery function, others can cause extra load according to individuals' conditions (Alameer et al., 2023).

Another possible explanation is that while burnout is a chronic process that emerges over a long time, recovery is a short-term concept. As indicated in the literature (Canu et al., 2020; Demerouti, 2024), burnout generally emerges as a result of prolonged stress, whereas recovery activities are mostly examined at a daily or weekly level. A difference in time frame may explain the absence of significant results among the profiles. In light of this, conducting longitudinal research that examines the association between long-term recovery activity patterns and burnout could be beneficial for the literature.

Moreover, this finding supports that burnout is not only a personal concept but also a social and situational one (Bakker et al., 2023; Maslach et al., 2001). Under conditions of high job demands and limited resources, the recovery activities employees engage in during their off-job time may not be sufficient on their own to reduce burnout. Indeed, the finding that job demands significantly predicted the memberships of the recovery activity profiles, while no differences were found in burnout levels across these profiles, suggests that high job demands and low resources may render the protective effect of recovery behaviors insufficient. Hence, different recovery activity profiles alone may not lead to differences in burnout levels; the process may also be influenced by organizational support, resource availability, and individual coping mechanisms.

In conclusion, the results of the current study reveal the necessity of a comprehensive and integrative perspective to explain the relationship between recovery processes and burnout. Even though recovery activities are theoretically related to resource replenishment, the strength of this relationship may depend on individuals' experiences, the nature of the activities, and contextual conditions.

4.3.2 Differences in Work Engagement Across the Four Profiles

The results of the study demonstrate that employees' work engagement levels differ depending on how they engage in recovery activities. According to the findings, participants who are included in the "Comprehensive Activity Engagement" ($M = 3.65$) profile had the highest level of work engagement compared to others, and this profile was followed by the "Mental–Virtual Activity Engagement" ($M = 3.23$), "Low to Moderate Activity Engagement" ($M = 3.20$), and "Low Activity Engagement" ($M = 3.01$) profiles, respectively. This pattern shows a positive relationship between the enriching nature of recovery activities engaged in during off-job time and the level of work engagement.

These findings are consistent with the theoretical framework of the Effort–Recovery Model (Meijman & Mulder, 1998). The model suggests that the energy expended in response to job demands can only be rebalanced through sufficient recovery processes. Although the model focused initially on preventing exhaustion, later research has demonstrated that recovery is also associated with positive work outcomes. For instance, ten Brummelhuis and Bakker (2012) showed that adequate recovery enables employees to start the next workday with higher energy and dedication. In this regard, employees engaging in multidimensional recovery exhibit higher work engagement levels, indicating that recovery also supports motivational processes (Sonnentag & Fritz, 2007; Alameer et al., 2023).

The variety of recovery behaviors, beyond physical rest, fosters recovery experiences such as psychological detachment, mastery, relaxation, and control (Sonntag & Fritz, 2015). Individuals in the “Comprehensive Activity Engagement” profile may find the opportunity to renew their psychological energy because they experience many of these processes simultaneously. This result highlights the central role

of recovery processes in sustaining work engagement (Sonnentag et al., 2022) and aligns with the motivational process of the Job Demands–Resources (JD-R) Model, which emphasizes that work engagement arises not only from job resources but also from personal resources (Bakker & Demerouti, 2017). Based on the JD-R Model, employees' well-being and work engagement are not only derived from job resources but also from the personal resources individuals have. Recovery activities in off-job time support employees' self-efficacy, resilience, and optimism, and this is reflected as higher engagement at work (Xanthopoulou et al., 2007; Bakker et al., 2014). Therefore, engagement in multiple recovery activity dimensions enhances work engagement by enriching employees' motivational resources.

The current study exhibited parallel results with the previous literature. For instance, ten Brummelhuis and Bakker (2012) indicated that sufficient recovery during off-job time increased next-day work engagement, and Garrick et al. (2017) suggested that activities including social interaction support vigor and dedication. Additionally, studies showed that creative and meaningful activities enhance intrinsic motivation by strengthening individuals' sense of autonomy and meaningfulness (Barnett & Vasiu, 2024; Deci & Ryan, 2000). In light of these findings, the fact that employees in the “Comprehensive Activity Engagement” profile showed the highest level of work engagement may be explained by the multidimensional nature of their recovery activities, which can simultaneously foster emotional, cognitive, and physical restoration.

In conclusion, the results of the current study demonstrate that differences in profiles indicate a significant relationship between employees' recovery methods during off-job time and their work engagement levels. The findings support both the process of energy replenishment in the Effort–Recovery Model and the motivational mechanism of

the JD-R Model. This framework suggests that recovery activities are not only passive rest periods but also essential areas of psychological recovery for sustainable work engagement and performance.

4.4 Contributions to the Literature

This study contributes holistically to the theoretical, methodological, and analytical gaps associated with the recovery process. Firstly, the current study adopts a person-centered approach instead of a variable-centered approach used in previous studies. In this way, it allows the examination of activities as multidimensional combinations that come together through individuals' subjective experiences rather than as independent activities. In this respect, the study reveals the diversity and interactive nature of recovery processes as they are experienced in employees' real lives.

Building on this perspective, the study was based on the “recovery activity characteristics” approach, which defines recovery activities in terms of seven dimensions: physical, social, creative, mental, spiritual, virtual, and outdoor, and was developed by Alameer et al. (2023). In this way, it went beyond a predefined and top-down activity categorization, which has been criticized in the literature for a long time (e.g., De Bloom et al., 2018; Sonnentag, 2001). Participants were asked to indicate to what extent their activities involved each of these seven dimensions; this “bottom-up” method allows capturing how individuals experience and assign meaning to their recovery activities. In doing so, it becomes possible to acknowledge that the same activity can hold different meanings for different individuals and incorporate these multiple meanings into the measurement process.

At the measurement level, this study presents the first Turkish adaptation and validation of the RAC scale (Alameer et al., 2023). The results of the confirmatory factor

analysis demonstrated that the Turkish version of the scale has a structurally sound model fit. This finding provides the first evidence of the scale's validity in a Turkish sample ($N = 860$) and further indicates that the lower factor loading observed in the spiritual dimension may stem from cultural differences. In Türkiye, spirituality is usually understood as intertwined with religious beliefs rather than as an individual or secular sense of transcendence. Cross-cultural and adaptation studies (Johnson et al., 2024; Apak, 2025) also show that spirituality is mainly expressed through faith-based and collective values, while its individual aspects remain limited. This may explain the lower variance and factor loadings in this dimension. This provides an important opportunity for further research on cross-cultural adaptation and item development.

Beyond measurement validation, the study also advances methodologically by using the Latent Profile Analysis (LPA) to identify four different employee profiles based on their recovery activities: “Comprehensive Activity Engagement”, “Low to Moderate Activity Engagement”, “Mental–Virtual Activity Engagement”, and “Low Activity Engagement”. These profiles demonstrate the multifaceted nature of recovery behaviors by showing how employees engage in different off-the-job activities. Furthermore, the correlation between the “Comprehensive Activity Engagement” profile and high job demands implies that high demands do not always result in a poor recovery; they may actually stimulate more active and rich recovery strategies.

Theoretically, the results offer a novel conceptual interpretation at the intersection of the Job Demands–Resources (JD-R) model (Bakker & Demerouti, 2017) and the Effort–Recovery Model (ERM) (Meijman & Mulder, 1998). The observation that the profiles differed significantly in work engagement but not in burnout dimensions (emotional exhaustion, physical fatigue, and cognitive weariness) indicates that recovery

may be more sensitive to short-term motivational outcomes (e.g., engagement) than to long-term health-related outcomes (e.g., burnout). This finding provides an integrative explanation that bridges the motivational pathway of the JD-R model with the energy balance perspective of the ERM.

In respect to practice, the research provides a multidimensional approach for recovery processes to support employee engagement and well-being. According to the results, organizations should provide well-integrated recovery programs that offer diverse opportunities for rest and recovery beyond regular working hours. On the other hand, the processes of recovery may be deemed effective for increasing the motivational resources for the employees.

4.5 Limitations of the Study

The current study has several limitations. First, the cross-sectional design prevents us from observing how recovery processes change over time. Second, the short version (14 items) of the RAC Questionnaire was chosen because the full version contained many repetitive items. However, using only two items per dimension likely lowered the internal reliability. This was especially noticeable in the spiritual dimension, which showed lower reliability scores. Despite this, the spiritual dimension was kept to preserve the full structure of the scale, as it reflects important experiences of inner peace and meaning. Third, there is a potential issue with the wording of some scale items. Although participants were asked to focus on activities they found restorative, some items describe activities as physically tiring or demanding. This creates a slight contradiction: while the activity itself may help the user recover, the specific words in the scale highlight physical exertion rather than the feeling of recovery.

4.6 Suggestions for Future Research

This exploratory study investigated employees' off-job recovery activities using a person-centered approach. However, future research should build on this approach and further examine the relationships between recovery activities and other related concepts through different research designs and methods, while considering the multidimensional nature of recovery processes. In future studies, the changes in recovery behaviors across days or weeks and the effects of these changes on well-being indicators can be examined by using longitudinal or daily designs (e.g., daily diary and experience sampling). This approach would capture the fact that recovery is not only a momentary process but also a sustainable one. In addition, collecting the data in the winter months can explain the low level of engagement in the outdoor dimension. Hence, collecting data in different seasons and including the effect of the season in future studies could be important in understanding the contextual differences in recovery activities. To address measurement limitations, future research should use the full scale or add items to improve reliability, particularly for the spiritual dimension. Additionally, refining item wording to ensure it emphasizes the restorative nature of activities rather than physical tiredness is recommended.

In addition, beyond studying recovery activities, measuring the recovery experiences (i.e., psychological detachment, control, mastery, relaxation) that individuals experience during these activities offers a valuable research direction for future studies. These variables could play an important role as a mediator or moderator in the relationship between recovery activities and work-related outcomes. Therefore, testing such process models would be a significant step to describe through which mechanisms recovery contributes to employee well-being.

Future research could also evaluate intervention programs to test the effects of specific recovery activity profiles on work engagement, burnout-related concepts, or overall well-being. Such designs would contribute to practical applications and guide organizations in developing recovery-based programs.

Finally, future studies could examine other potential antecedents of recovery profiles beyond job demands, such as individual resources (e.g., mindfulness, resilience, or recovery self-efficacy) and organizational factors (e.g., perceived support or leadership style). Similarly, the profiles identified in this research could be tested for their relationships with other distal outcomes, such as life satisfaction or performance. In this way, future research can build a more comprehensive understanding of the mechanisms and consequences of recovery processes in working life.

REFERENCES

- Alameer, K. M., Uitdewilligen, S., & Hülshager, U. R. (2023). What are the active ingredients in recovery activities? Introducing a dimensional approach. *Journal of Occupational Health Psychology*, 28(4), 239–262. <https://doi.org/10.1037/ocp0000354>
- Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in organizational behavior*, 10(1), 123-167.
- Amatori, S., Gobbi, E., Sisti, D., Pivato, G., Giombini, G., Rombaldoni, R., Calcagnini, G., Rocchi, M. B. L., & Perroni, F. (2024). Physical activity, musculoskeletal disorders, burnout, and work engagement: a cross-sectional study on Italian white-collar employees. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1375817>
- American Psychological Association. (n.d.). *Spirituality*. In *APA Dictionary of Psychology*. Retrieved June 28, 2025, from <https://dictionary.apa.org/spirituality>
- Apak, H. (2024). Adaptation of the Employee Spirituality Scale into Turkish: A Study on Healthcare Workers. *Spiritual Psychology and Counseling*, 10(1), 7–17. <https://doi.org/10.37898/spiritualpc.1407910>
- Arrindell, W. (2003). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations. *Behaviour Research and Therapy*, 41(7), 861–862. [https://doi.org/10.1016/s0005-7967\(02\)00184-5](https://doi.org/10.1016/s0005-7967(02)00184-5)
- Asparouhov, T., & Muthén, B. (2014). Auxiliary variables in mixture Modeling: Three-Step Approaches using MPIUs. *Structural Equation Modeling a Multidisciplinary Journal*, 21(3), 329–341. <https://doi.org/10.1080/10705511.2014.915181>

- Aziz, S., Meier, B., Wuensch, K., & Dolbier, C. (2023). Take a break! Leisure participation moderates the workaholism–work stress relationship. *The Career Development Quarterly*, 71(4), 315–329. <https://doi.org/10.1002/cdq.12336>
- Bakker, A. B. (2015). Towards a multilevel approach of employee well-being. *European Journal of Work and Organizational Psychology*, 24(6), 839–843. <https://doi.org/10.1080/1359432x.2015.1071423>
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Bakker, A. B., & Schaufeli, W. B. (2015). Work engagement. *Wiley Encyclopedia of Management*, 1–5. <https://doi.org/10.1002/9781118785317.weom110009>
- Bakker, A. B., Demerouti, E., Oerlemans, W., & Sonnentag, S. (2012). Workaholism and daily recovery: A day reconstruction study of leisure activities. *Journal of Organizational Behavior*, 34(1), 87–107. <https://doi.org/10.1002/job.1796>
- Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2022). Job Demands–Resources Theory: Ten years later. *Annual Review of Organizational Psychology and Organizational Behavior*, 10(1), 25–53. <https://doi.org/10.1146/annurev-orgpsych-120920-053933>
- Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: the JD–R approach. *Annual Review of Organizational Psychology*

- and Organizational Behavior*, 1(1), 389–411. <https://doi.org/10.1146/annurev-orgpsych-031413-091235>
- Barnett, K. S., & Vasiu, F. (2024). How the arts heal: a review of the neural mechanisms behind the therapeutic effects of creative arts on mental and physical health. *Frontiers in Behavioral Neuroscience*, 18. <https://doi.org/10.3389/fnbeh.2024.1422361>
- Bauer, J. (2022). A primer to latent profile and latent class analysis. In *Professional and practice-based learning* (pp. 243–268). https://doi.org/10.1007/978-3-031-08518-5_11
- Baysal, M. (2022). Positive Psychology and Spirituality: A review study. *Spiritual Psychology and Counseling*, 7(3), 359–388. <https://doi.org/10.37898/spc.2022.7.3.179>
- Berkemeyer, L., Hilbert, M., & Binnewies, C. (2024). Evening recovery through nonwork creative activities: a diary study on well-being, self-expression, and absorption. *World Leisure Journal*, 1–23. <https://doi.org/10.1080/16078055.2024.2423404>
- Bolck, A., Croon, M., & Hagenaars, J. (2004). Estimating Latent Structure Models with Categorical Variables: One-Step Versus Three-Step Estimators. *Political Analysis*, 12(1), 3–27. <https://doi.org/10.1093/pan/mpd001>
- Brossoit, R. M., Crain, T. L., Leslie, J. J., Fisher, G. G., & Eakman, A. M. (2024). Engaging with nature and work: associations among the built and natural environment, experiences outside, and job engagement and creativity. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1268962>

- Brummelhuis, L. L. T., & Bakker, A. B. (2012). Staying engaged during the week: The effect of off-job activities on next day work engagement. *Journal of Occupational Health Psychology, 17*(4), 445–455. <https://doi.org/10.1037/a0029213>
- Brummelhuis, L. L. T., & Trougakos, J. P. (2013). The recovery potential of intrinsically versus extrinsically motivated off-job activities. *Journal of Occupational and Organizational Psychology, 87*(1), 177–199. <https://doi.org/10.1111/joop.12050>
- Burr, H., Berthelsen, H., Moncada, S., Nübling, M., Dupret, E., Demiral, Y., Oudyk, J., Kristensen, T. S., Llorens, C., Navarro, A., Lincke, H., Bocéréan, C., Sahan, C., Smith, P., & Pohrt, A. (2019). The third version of the Copenhagen Psychosocial Questionnaire. *Safety and Health at Work, 10*(4), 482–503. <https://doi.org/10.1016/j.shaw.2019.10.002>
- Calderwood, C., Gabriel, A. S., Rosen, C. C., Simon, L. S., & Koopman, J. (2015). 100 years running: The need to understand why employee physical activity benefits organizations. *Journal of Organizational Behavior, 37*(7), 1104–1109. <https://doi.org/10.1002/job.2064>
- Canu, I. G., Marca, S. C., Dell’Oro, F., Balázs, Á., Bergamaschi, E., Besse, C., Bianchi, R., Bislimovska, J., Bjelajac, A. K., Bugge, M., Busneag, C. I., Çağlayan, Ç., Cernițanu, M., Pereira, C. C., Hafner, N. D., Droz, N., Eglite, M., Godderis, L., Gündel, H., Wahlen, A. (2020). Harmonized definition of occupational burnout: A systematic review, semantic analysis, and Delphi consensus in 29 countries. *Scandinavian Journal of Work Environment & Health, 47*(2), 95–107. <https://doi.org/10.5271/sjweh.3935>

- Caspersen, C. J., Powell, K. E., & Christenson, G. M. (1985). Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. *PubMed*, 100(2), 126–131. <https://pubmed.ncbi.nlm.nih.gov/3920711>
- Chawla, N., MacGowan, R. L., Gabriel, A. S., & Podsakoff, N. P. (2019). Unplugging or staying connected? Examining the nature, antecedents, and consequences of profiles of daily recovery experiences. *Journal of Applied Psychology*, 105(1), 19–39. <https://doi.org/10.1037/apl0000423>
- Cheng, Y., & Cho, S. (2021). Are social media bad for your employees? Effects of at-work break activities on recovery experiences. *International Journal of Hospitality Management*, 96, 102957. <https://doi.org/10.1016/j.ijhm.2021.102957>
- Cho, S., & Park, Y. (2018). How to benefit from weekend physical activities: Moderating roles of psychological recovery experiences and sleep. *Stress and Health*, 34(5), 639–648. <https://doi.org/10.1002/smi.2831>
- Collins, E., & Cox, A. L. (2014). Switch on to games: Can digital games aid post-work recovery? *International Journal of Human-Computer Studies*, 72(8–9), 654–662. <https://doi.org/10.1016/j.ijhcs.2013.12.006>
- Daniel, V. L., & Zhan, Y. (2023). Wearing different hats enriches “outside the box” thinking: Examining the relationship between personal life activity breadth and creativity at work. *Journal of Applied Psychology*, 108(11), 1881–1901. <https://doi.org/10.1037/apl0001098>
- Dawes, J. (2008). Do data characteristics change according to the number of scale points used? An experiment using 5-Point, 7-Point and 10-Point scales. *International Journal of Market Research*, 50(1), 61–104. <https://doi.org/10.1177/147078530805000106>

- De Bloom, J., Geurts, S. a. E., & Kompier, M. a. J. (2013). Vacation (after-) effects on employee health and well-being, and the role of vacation activities, experiences and sleep. *Journal of Happiness Studies*, 14(2), 613–633. <https://doi.org/10.1007/s10902-012-9345-3>
- De Bloom, J., Rantanen, J., Tement, S., & Kinnunen, U. (2018). Longitudinal leisure activity profiles and their associations with recovery experiences and job performance. *Leisure Sciences*, 40(3), 151–173. <https://doi.org/10.1080/01490400.2017.1356254>
- De Vries, J. D., & Bakker, A. B. (2021). The physical activity paradox: a longitudinal study of the implications for burnout. *International Archives of Occupational and Environmental Health*, 95(5), 965–979. <https://doi.org/10.1007/s00420-021-01759-y>
- Demerouti, E. (2024). Burnout: a comprehensive review. *Zeitschrift Für Arbeitswissenschaft*, 78(4), 492–504. <https://doi.org/10.1007/s41449-024-00452-3>
- Demerouti, E., Bakker, A. B., Geurts, S. A., & Taris, T. W. (2009). Daily recovery from work-related effort during non-work time. In *Research in occupational stress and well being* (pp. 85–123). [https://doi.org/10.1108/s1479-3555\(2009\)0000007006](https://doi.org/10.1108/s1479-3555(2009)0000007006)
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512. <https://doi.org/10.1037/0021-9010.86.3.499>
- Demerouti, E., Mostert, K., & Bakker, A. B. (2010). Burnout and work engagement: A thorough investigation of the independency of both constructs. *Journal of*

Occupational Health Psychology, 15(3), 209–222.
<https://doi.org/10.1037/a0019408>

Edú-Valsania, S., Laguía, A., & Moriano, J. A. (2022). Burnout: A review of theory and measurement. *International Journal of Environmental Research and Public Health*, 19(3), 1780. <https://doi.org/10.3390/ijerph19031780>

Eschleman, K. J., Madsen, J., Alarcon, G., & Barelka, A. (2014). Benefiting from creative activity: The positive relationships between creative activity, recovery experiences, and performance-related outcomes. *Journal of Occupational and Organizational Psychology*, 87(3), 579–598. <https://doi.org/10.1111/joop.12064>

Eschleman, K. J., Mathieu, M., & Cooper, J. (2017). Creating a Recovery Filled Weekend: The Moderating Effect of Occupation Type on the Relationship between Non-work Creative Activity and State of Feeling Recovered at Work. *Creativity Research Journal*, 29(2), 97–107.
<https://doi.org/10.1080/10400419.2017.1302756>

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218–226. <https://doi.org/10.1037/0003-066x.56.3.218>

Fritz, C., & Sonnentag, S. (2005). Recovery, health, and job performance: Effects of weekend experiences. *Journal of Occupational Health Psychology*, 10(3), 187–199. <https://doi.org/10.1037/1076-8998.10.3.187>

Garrick, A., Mak, A. S., Cathcart, S., Winwood, P. C., Bakker, A. B., & Lushington, K. (2017). Non-Work time Activities Predicting Teachers' Work-Related Fatigue and Engagement: An Effort-Recovery Approach. *Australian Psychologist*, 53(3), 243–252. <https://doi.org/10.1111/ap.12290>

- Ginoux, C., Isoard-Gautheur, S., & Sarrazin, P. (2021). “What did you do this weekend?” Relationships between weekend activities, recovery experiences, and changes in work-related well-being. *Applied Psychology Health and Well-Being*, 13(4), 798–816. <https://doi.org/10.1111/aphw.12272>
- González-Romá, V., Schaufeli, W. B., Bakker, A. B., & Lloret, S. (2005). Burnout and work engagement: Independent factors or opposite poles? *Journal of Vocational Behavior*, 68(1), 165–174. <https://doi.org/10.1016/j.jvb.2005.01.003>
- Green, A. E., Albanese, B. J., Shapiro, N. M., & Aarons, G. A. (2014). The roles of individual and organizational factors in burnout among community-based mental health service providers. *Psychological Services*, 11(1), 41–49. <https://doi.org/10.1037/a0035299>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson.
- Ho, R. T. H., Sing, C. Y., Fong, T. C. T., Au-Yeung, F. S. W., Law, K. Y., Lee, L. F., & Ng, S. M. (2015). Underlying spirituality and mental health: the role of burnout. *Journal of Occupational Health*, 58(1), 66–71. <https://doi.org/10.1539/joh.15-0142-oa>
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066x.44.3.513>
- Hofstede, G. (2001). *Culture’s consequences: Comparing values, behaviors, institutions and organizations across nations* (2. bs.). Sage Publications.
- Hyvönen, K., Törnroos, K., Salonen, K., Korpela, K., Feldt, T., & Kinnunen, U. (2018). Profiles of nature exposure and outdoor activities associated with Occupational

- Well-Being among employees. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.00754>
- IBM Corp. (2020). *IBM SPSS Statistics for Windows* (Version 27.0) [Computer software]. IBM Corp.
- Jeong, J., Kang, S., & Choi, S. B. (2020). Employees' Weekend Activities and Psychological Well-Being via Job Stress: A Moderated Mediation role of recovery experience. *International Journal of Environmental Research and Public Health*, 17(5), 1642. <https://doi.org/10.3390/ijerph17051642>
- Johnson, K. A., Moon, J. W., VanderWeele, T. J., Schnitker, S., & Johnson, B. R. (2023). Assessing religion and spirituality in a cross-cultural sample: development of religion and spirituality items for the Global Flourishing Study. *Religion Brain & Behavior*, 14(4), 345–358. <https://doi.org/10.1080/2153599x.2023.2217245>
- Kagiticibasi, C. (2005). Autonomy and relatedness in cultural context. *Journal of Cross-Cultural Psychology*, 36(4), 403–422. <https://doi.org/10.1177/0022022105275959>
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24(2), 285. <https://doi.org/10.2307/2392498>
- Kim, M. J., & Sul, S. (2023). On the relationship between the social brain, social connectedness, and wellbeing. *Frontiers in Psychiatry*, 14. <https://doi.org/10.3389/fpsyg.2023.1112438>
- Kim, S., Park, Y., & Niu, Q. (2016). Micro-break activities at work to recover from daily work demands. *Journal of Organizational Behavior*, 38(1), 28–44. <https://doi.org/10.1002/job.2109>

- King, D. B., & DeCicco, T. L. (2009). A viable model and Self-Report measure of spiritual intelligence. *International Journal of Transpersonal Studies*, 28(1), 68–85. <https://doi.org/10.24972/ijts.2009.28.1.68>
- Kinnunen, U., Feldt, T., Siltaloppi, M., & Sonnentag, S. (2011). Job demands–resources model in the context of recovery: Testing recovery experiences as mediators. *European Journal of Work and Organizational Psychology*, 20(6), 805–832. <https://doi.org/10.1080/1359432x.2010.524411>
- Kinnunen, U., & Mäkikangas, A. (2023). Longitudinal Profiles of Recovery-Enhancing Processes: Job-Related antecedents and Well-Being outcomes. *International Journal of Environmental Research and Public Health*, 20(7), 5382. <https://doi.org/10.3390/ijerph20075382>
- Kline, R. B. (2011) Principles and practice of structural equation modeling (5th ed.). The Guilford Press.
- Klotz, A. C., McClean, S. T., Yim, J., Koopman, J., & Tang, P. M. (2022). Getting outdoors after the workday: The affective and cognitive effects of evening nature contact. *Journal of Management*, 49(7), 2254–2287. <https://doi.org/10.1177/01492063221106430>
- Korpela, K., & Kinnunen, U. (2010). How Is Leisure Time Interacting with Nature Related to the Need for Recovery from Work Demands? Testing Multiple Mediators. *Leisure Sciences*, 33(1), 1–14. <https://doi.org/10.1080/01490400.2011.533103>
- Kuykendall, L., Lei, X., Zhu, Z., & Hu, X. (2020). Leisure Choices and Employee Well-Being: Comparing Need Fulfillment and Well-Being during TV and Other Leisure

- Activities. *Applied Psychology Health and Well-Being*, 12(2), 532–558.
<https://doi.org/10.1111/aphw.12196>
- Kühnel, J., Sonnentag, S., & Bledow, R. (2011). Resources and time pressure as day-level antecedents of work engagement. *Journal of Occupational and Organizational Psychology*, 85(1), 181–198. <https://doi.org/10.1111/j.2044-8325.2011.02022.x>
- Laursen, B. P., & Hoff, E. (2006). Person-Centered and Variable-Centered approaches to longitudinal data. *Merrill-Palmer Quarterly*, 52(3), 377–389.
<https://doi.org/10.1353/mpq.2006.0029>
- Lee, D. Y., & Jo, Y. (2023). The job demands-resource model and performance: the mediating role of employee engagement. *Frontiers in Psychology*, 14.
<https://doi.org/10.3389/fpsyg.2023.1194018>
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, 2(2), 99–113.
<https://doi.org/10.1002/job.4030020205>
- Maslach, C., & Leiter, M. P. (2016). Burnout. In G. Fink (Ed.), *Stress: Concepts, cognition, emotion, and behavior* (pp. 351–357). Elsevier Academic Press.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). *Job burnout*. *Annual Review of Psychology*, 52(1), 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Mauno, S., Kinnunen, U., & Ruokolainen, M. (2006). Job demands and resources as antecedents of work engagement: A longitudinal study. *Journal of Vocational Behavior*, 70(1), 149–171. <https://doi.org/10.1016/j.jvb.2006.09.002>
- Mazzetti, G., Robledo, E., Vignoli, M., Topa, G., Guglielmi, D., & Schaufeli, W. B. (2021). Work Engagement: A Meta-Analysis using the Job Demands-Resources

- model. *Psychological Reports*, 126(3), 1069–1107.
<https://doi.org/10.1177/00332941211051988>
- McEwen, B. S. (1998). Stress, adaptation, and disease: allostasis and allostatic load. *Annals of the New York Academy of Sciences*, 840(1), 33–44.
<https://doi.org/10.1111/j.1749-6632.1998.tb09546.x>
- Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth, H. Thierry, & C. J. de Wolff (Eds.), *Handbook of work and organizational: Work psychology* (2nd ed., pp. 5–33). Psychology Press/Erlbaum (UK) Taylor & Francis.
- Melamed, S., Shirom, A., Toker, S., Berliner, S., & Shapira, I. (2006). Burnout and risk of cardiovascular disease: Evidence, possible causal paths, and promising research directions. *Psychological Bulletin*, 132(3), 327–353.
<https://doi.org/10.1037/0033-2909.132.3.327>
- Naczenski, L. M., De Vries, J. D., Van Hooff, M. L. M., & Kompier, M. a. J. (2017). Systematic review of the association between physical activity and burnout. *Journal of Occupational Health*, 59(6), 477–494. <https://doi.org/10.1539/joh.17-0050-ra>
- Nielsen, K., Nielsen, M. B., Ogbonnaya, C., Käsälä, M., Saari, E., & Isaksson, K. (2017). Workplace resources to improve both employee well-being and performance: A systematic review and meta-analysis. *Work & Stress*, 31(2), 101–120.
<https://doi.org/10.1080/02678373.2017.1304463>
- Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo

- Simulation study. *Structural Equation Modeling a Multidisciplinary Journal*, 14(4), 535–569. <https://doi.org/10.1080/10705510701575396>
- Olivier, A., & Rothmann, S. (2007). Antecedents of work engagement in a multinational oil company. *SA Journal of Industrial Psychology*, 33(3). <https://doi.org/10.4102/sajip.v33i3.396>
- Özkalp, E., & Meydan, B. (2015). Schaufeli ve Bakker tarafından geliştirilmiş olan İşe Angaje Olma Ölçeğinin Türkçe’de güvenilirlik ve geçerliliğinin analizi. *İş, Güç/İktisadi Yenilik Dergisi*, 17(3), 4–19. <https://doi.org/10.4026/1303-2860.2015.0285.x>
- Ragsdale, J. M., & Beehr, T. A. (2016). A rigorous test of a model of employees’ resource recovery mechanisms during a weekend. *Journal of Organizational Behavior*, 37(6), 911–932. <https://doi.org/10.1002/job.2086>
- Revilla, M. A., Saris, W. E., & Krosnick, J. A. (2013). Choosing the number of categories in Agree–Disagree scales. *Sociological Methods & Research*, 43(1), 73–97. <https://doi.org/10.1177/0049124113509605>
- Rook, J. W., & Zijlstra, F. R. H. (2006). The contribution of various types of activities to recovery. *European Journal of Work and Organizational Psychology*, 15(2), 218–240. <https://doi.org/10.1080/13594320500513962>
- Roswag, M., Hadi, S. A., Häusser, J. A., & Mojzisch, A. (2023). Running toward my challenges: Day-level effects of physical activity before work on appraisal of the upcoming workday and employee well-being. *Journal of Occupational Health Psychology*, 28(5), 310–324. <https://doi.org/10.1037/ocp0000360>

- Rozo, J. A., Olson, D. M., Thu, H., & Stutzman, S. E. (2017). Situational factors associated with burnout among emergency department nurses. *Workplace Health & Safety*, 65(6), 262–265. <https://doi.org/10.1177/2165079917705669>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066x.55.1.68>
- Sargeant, S., & Yoxall, J. (2023). Psychology and Spirituality: Reviewing developments in history, method and practice. *Journal of Religion and Health*, 62(2), 1159–1174. <https://doi.org/10.1007/s10943-022-01731-1>
- Schaufeli, W.B. (2018). Burnout in Europe: Relations with national economy, governance, and culture. Research Unit Occupational & Organizational Psychology and Professional Learning (internal report). KU Leuven, Belgium.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. <https://doi.org/10.1002/job.248>
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. *Educational and Psychological Measurement*, 66(4), 701–716. <https://doi.org/10.1177/0013164405282471>
- Schaufeli, W. B., Taris, T. W., & Van Rhenen, W. (2007). Workaholism, burnout, and work engagement: three of a kind or three different kinds of employee well-being? *Applied Psychology*, 57(2), 173–203. <https://doi.org/10.1111/j.1464-0597.2007.00285.x>

- Shirom, A. (2003). Job-related burnout: A review. In *American Psychological Association eBooks* (pp. 245–264). <https://doi.org/10.1037/10474-012>
- Shirom, A., & Melamed, S. (2006). A comparison of the construct validity of two burnout measures in two groups of professionals. *International Journal of Stress Management*, 13(2), 176–200. <https://doi.org/10.1037/1072-5245.13.2.176>
- Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, 1(1), 27–41. <https://doi.org/10.1037/1076-8998.1.1.27>
- Smith, C. E., Lee, S., Brooks, M. E., Barratt, C. L., & Yang, H. (2023b). Working and working out: Decision-making inputs connect daily work demands to physical exercise. *Journal of Occupational Health Psychology*, 28(3), 160–173. <https://doi.org/10.1037/ocp0000349>
- Sonnentag, S. (2001). Work, recovery activities, and individual well-being: A diary study. *Journal of Occupational Health Psychology*, 6(3), 196–210. <https://doi.org/10.1037/1076-8998.6.3.196>
- Sonnentag, S. (2003). Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. *Journal of Applied Psychology*, 88(3), 518–528. <https://doi.org/10.1037/0021-9010.88.3.518>
- Sonnentag, S. (2015). Dynamics of well-Being. *Annual Review of Organizational Psychology and Organizational Behavior*, 2(1), 261–293. <https://doi.org/10.1146/annurev-orgpsych-032414-111347>
- Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work.

- Journal of Occupational Health Psychology*, 12(3), 204–221.
<https://doi.org/10.1037/1076-8998.12.3.204>
- Sonnentag, S., & Natter, E. (2004). Flight attendants' daily recovery from work: Is there no place like home? *International Journal of Stress Management*, 11(4), 366–391.
<https://doi.org/10.1037/1072-5245.11.4.366>
- Sonnentag, S., & Zijlstra, F. R. H. (2006). Job characteristics and off-job activities as predictors of need for recovery, well-being, and fatigue. *Journal of Applied Psychology*, 91(2), 330–350. <https://doi.org/10.1037/0021-9010.91.2.330>
- Sonnentag, S., Cheng, B. H., & Parker, S. L. (2022). Recovery from Work: Advancing the field toward the future. *Annual Review of Organizational Psychology and Organizational Behavior*, 9(1), 33–60. <https://doi.org/10.1146/annurev-orgpsych-012420-091355>
- Sonnentag, S., Venz, L., & Casper, A. (2017). Advances in recovery research: What have we learned? What should be done next? *Journal of Occupational Health Psychology*, 22(3), 365–380. <https://doi.org/10.1037/ocp0000079>
- Spurk, D., Hirschi, A., Wang, M., Valero, D., & Kauffeld, S. (2020). Latent profile analysis: A review and “how to” guide of its application within vocational behavior research. *Journal of Vocational Behavior*, 120, 103445.
<https://doi.org/10.1016/j.jvb.2020.103445>
- Steed, L. B., Swider, B. W., Keem, S., & Liu, J. T. (2019). Leaving Work at Work: A Meta-Analysis on Employee Recovery from Work. *Journal of Management*, 47(4), 867–897. <https://doi.org/10.1177/0149206319864153>
- Syahir, A. N. A., Abidin, M. S. Z., Sa'ari, C. Z., & Rahman, M. Z. A. (2025). Workplace Spirituality and Its Impact on Employee Well-Being: A Systematic Literature

- Review of Global evidence. *Journal of Religion and Health*.
<https://doi.org/10.1007/s10943-025-02350-2>
- Syrek, C. J., De Bloom, J., & Lehr, D. (2021). Well recovered and more creative? A longitudinal study on the relationship between vacation and creativity. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.784844>
- Şahan C. Validity of Turkish Core Version of Copenhagen Psychosocial Risk Questionnaire. [02 Eylül 2020]. Available from: <https://www.copsoq-network.org/assets/Uploads/C.-Sahan-Validity-of-Turkish-Core-Version-of-Copenhagen-Psychosocial-Risk-Questionnaire.pdf>
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Pearson Education, Inc.
- Taylor, M. J., Andreatta, R., Woltenberg, L., Cormier, M., & Hoch, J. M. (2024). The relationship of emotional intelligence to burnout and related factors in healthcare profession students. *Nurse Education Today*, 143, 106387. <https://doi.org/10.1016/j.nedt.2024.106387>
- Tinsley, H. E. A., & Eldredge, B. D. (1995). Psychological benefits of leisure participation: A taxonomy of leisure activities based on their need-gratifying properties. *Journal of Counseling Psychology*, 42(2), 123–132. <https://doi.org/10.1037/0022-0167.42.2.123>
- Trajković, N., Mitić, P. M., Barić, R., & Bogataj, Š. (2023). Editorial: Effects of physical activity on psychological well-being. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1121976>
- Triandis, H. C. (2018). *Individualism and collectivism*. <https://doi.org/10.4324/9780429499845>

- Tuisku, K., Pulkki-Råback, L., Ahola, K., Hakanen, J., & Virtanen, M. (2012). Cultural leisure activities and well-being at work: A study among health care professionals. *Journal of Applied Arts and Health*, 2(3), 273–287. https://doi.org/10.1386/jaah.2.3.273_1
- Tuisku, K., Virtanen, M., De Bloom, J., & Kinnunen, U. (2016). Cultural leisure activities, recovery and work engagement among hospital employees. *Industrial Health*, 54(3), 254–262. <https://doi.org/10.2486/indhealth.2015-0124>
- Ülbeği, İ. D., & Iplik, E. (2017). Shirom-Melamed Tükenmişlik Ölçeğinin güvenirlik ve geçerlik çalışması. *Çağ Üniversitesi Sosyal Bilimler Dergisi*, 14(1), 19–30. <https://dergipark.org.tr/tr/download/article-file/696229>
- Vallières, F., McAuliffe, E., Hyland, P., Galligan, M., & Ghee, A. (2017). Measuring work engagement among community health workers in Sierra Leone: Validating the Utrecht Work Engagement Scale. *Journal of Work and Organizational Psychology*, 33(1), 41–46. <https://doi.org/10.1016/j.rpto.2016.12.001>
- Van As, S., Beckers, D. G. J., Veling, H., Hooftman, W., Kompier, M. a. J., & Geurts, S. a. E. (2021). Sedentary work and participation in leisure–time physical activity. *International Archives of Occupational and Environmental Health*, 95(2), 509–525. <https://doi.org/10.1007/s00420-021-01750-7>
- Van Berkel, J., Proper, K. I., Van Dam, A., Boot, C. R., Bongers, P. M., & Van Der Beek, A. J. (2013). An exploratory study of associations of physical activity with mental health and work engagement. *BMC Public Health*, 13(1). <https://doi.org/10.1186/1471-2458-13-558>

- Van Hooff, M. L. M., De Grave, R. M. B., & Geurts, S. a. E. (2018). No pain, no gain? Recovery and strenuousness of physical activity. *Journal of Occupational Health Psychology*, 24(5), 499–511. <https://doi.org/10.1037/ocp0000141>
- Volman, F. E., Bakker, A. B., & Xanthopoulou, D. (2013). Recovery at home and performance at work: A diary study on self–family facilitation. *European Journal of Work and Organizational Psychology*, 22(2), 218–234. <https://doi.org/10.1080/1359432x.2011.648375>
- Wang, P., Wei, X., Hu, D., & Meng, F. (2022). Does leisure contribute to the improvement of individual job performance? a field tracking study based on the Chinese manufacturing industry. *Sustainability*, 14(11), 6594. <https://doi.org/10.3390/su14116594>
- Wijngaards, I., King, O. C., Burger, M. J., & Van Exel, J. (2021). Worker well-being: what it is, and how it should be measured. *Applied Research in Quality of Life*, 17(2), 795–832. <https://doi.org/10.1007/s11482-021-09930-w>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121–141. <https://doi.org/10.1037/1072-5245.14.2.121>
- Zahari, N., & Kaliannan, M. (2022). Antecedents of work engagement in the public sector: A systematic literature review. *Review of Public Personnel Administration*, 43(3), 557–582. <https://doi.org/10.1177/0734371x221106792>
- Zheng, X., Zhu, W., Zhao, H., & Zhang, C. (2015). Employee well-being in organizations: Theoretical model, scale development, and cross-cultural validation. *Journal of Organizational Behavior*, 36(5), 621–644. <https://doi.org/10.1002/job.1990>

- Zhu, J. N. Y., Lam, L. W., Liu, Y., & Jiang, N. (2022). Performance pressure and employee expediency: The role of Moral Decoupling. *Journal of Business Ethics*, 186(2), 465–478. <https://doi.org/10.1007/s10551-022-05254-3>
- Zhu, Z., Kuykendall, L., & Zhang, X. (2018). The impact of within-day work breaks on daily recovery processes: An event-based pre-/post-experience sampling study. *Journal of Occupational and Organizational Psychology*, 92(1), 191–211. <https://doi.org/10.1111/joop.12246>
- Zijlstra, F. R. H., Cropley, M., & Rydstedt, L. W. (2014). From Recovery to Regulation: An Attempt to Reconceptualize ‘Recovery from Work.’ *Stress and Health*, 30(3), 244–252. <https://doi.org/10.1002/smi.2604>



APPENDICES

APPENDIX A. THE STUDY POSTER

ARAŞTIRMAMIZA KATILIMCI OLMAK İSTER MİSİNİZ?



İş Dışında Yaptığınız Aktiviteler Üzerine Bir Araştırma

Katılım tamamen gönüllüdür ve sağladığınız bilgiler anonim kalacaktır.
Sorularınız için bize dicle.tontu@ozu.edu.tr adresinden ulaşabilirsiniz.

ÖZYEGİN
UNIVERSITY

APPENDIX B. INFORMED CONSENT FORM

Gönüllü Katılım Onay Formu

Projenin Adı: Toparlanma Aktivitesi Profillerine İlişkin Keşifsel Bir Çalışma: İşe Bağlılık ve Tükenmişlikle Bağlantıları

Proje yürütücüsünün adı ve iletişim bilgileri: Dicle Tontu

Proje bütçesine katkı ile ve/veya diğer şekillerde projeyi destekleyen kuruluşlar: Çalışmanın herhangi bir finansman kaynağı bulunmamakta ve çalışma herhangi bir kurumdan destek almamaktadır.

Projenin amacı: Araştırmanın amacı, iş dışı zamanlarda gerçekleştirilen çeşitli aktivitelerin bireyler üzerindeki etkilerini anlamaktır. Araştırma sizin için herhangi bir istenmeyen etki ya da risk taşımamaktadır. Sizin yanıtlarınızdan elde edilecek sonuçlarla bu kavramlar hakkında daha fazla bilgiye sahip olunması mümkündür. Bu nedenle soruların tümüne içtenlikle cevap vermeniz büyük önem taşımaktadır.

Süreç: İlk bölümde bazı demografik sorularla karşılaşacaksınız. Bu bölümde anket üzerinde yaşıınızı, cinsiyetinizi, eğitim düzeyinizi, iş sektörünüzü, pozisyonunuzu, çalışma şeklinizi, işe ayırdığınız vakti, medeni durumunuzu, ebeveynlik durumunuzu belirtmelisiniz. Sonraki kısımlarda ise sizden son bir hafta içerisinde boş zamanlarınızda yapmış olduğunuz aktivitelere, son bir hafta içerisindeki iş durumunuza ve kendinizi nasıl hissettiğinize dair iki farklı anket doldurmanız istenecektir. Bu çalışmadaki toplam 53 soru, 10 ile 15 dakika aralığında zamanınızı alacak ve kavramlardaki düzeyinizi anlamamıza yardımcı olacaktır. Bu çalışmada yanıtlarınızı, soruların altında yer alan seçenekler arasından uygun olanı seçerek verebilirsiniz.

Araştırma amacıyla yapılacak yukarıda belirtilen testler için sizden bir ücret talep edilmeyecek ve aynı zamanda da, çalışmada yer aldığınız için size herhangi bir ücret ödenmeyecektir. Anketi yanıtladığınız için teşekkür ederiz.

Gizlilik: Çalışmaya katılım durumunuz ve kişisel bilgileriniz gizli kalacaktır. Bu form aracılığı ile elde edilecek bilgiler sadece araştırma amacıyla (veya “bilimsel amaçlar için”) kullanılacaktır. Ayrıca bu bilgiler sadece araştırmacının erişim sağlayabileceği bir masaüstü klasörü içinde saklanacaktır.

Gönüllü Katılım: Araştırmaya katılmanız gönüllülük esasına dayalıdır. Herhangi bir yaptırım olmadan çalışmaya katılmamayı tercih edebilir, anketi doldururken istemezseniz son verebilir, veya elde edilen verilerin kullanımını daha sonra kısıtlayabilirsiniz.

Yukarıda sözü geçen “Toparlanma Aktivitesi Profillerine İlişkin Keşifsel Bir Çalışma: İşe Bağlılık ve Tükenmişlikle Bağlantıları” isimli araştırma projesinin detaylarını okudum ve bu proje ile ilgili sorularım cevaplandı. Bu çalışmaya gönüllü olarak katılıyorum.

İsim Soyadı

Tarih

APPENDIX C. DEMOGRAPHIC INFORMATION FORM

Öncelikle katılımcılarımızı daha yakından tanıyabilmek amacıyla size bazı sorular soracağız. Lütfen tüm soruları cevaplayınız.

1. Yaşınız? _____

2. Cinsiyetiniz?

Kadın ()

Erkek ()

Diğer () Belirtiniz: _____

3. Eğitim düzeyiniz?

İlkokul/Ortaokul ()

Lise ()

Lisans ()

Lisansüstü ()

4. Çalıştığınız sektör?

5. Çalışmakta olduğunuz yerde pozisyonunuz?

6. Çalışma şekliniz?

Yüz yüze ()

Hibrit (hem yüz yüze hem uzaktan) ()

Uzaktan ()

7. Haftada kaç gün çalışıyorsunuz? _____

8. Bir günde ortalama çalışma süreniz? _____

9. Medeni durumunuz?

Bekar ()

Evli ()

10. Çocuk sayınız?

0 ()

1 ()

2 ()

3 ()

4 veya daha fazla ()

APPENDIX D. RECOVERY ACTIVITY CHARACTERISTICS

QUESTIONNAIRE

Bu bölümde son bir hafta içerisinde çalışma saatleriniz haricindeki boş zamanlarınızda yapmış olduğunuz size iyi gelen aktiviteleri düşünmenizi istiyoruz. Aşağıda aktiviteler ile ilgili ifadeler bulunmaktadır. Lütfen bu soruları cevaplandırırken yapmış olduğunuz aktivitelerin tamamını düşünün. Örneğin salı günü televizyon izlemişseniz, perşembe günü arkadaşlarınızla buluşmuşsanız ve haftasonu ise yoga yapmış, dışarıda yürüyüşe çıkmışsanız yapmış olduğunuz bu aktivitelerin bütünü aşağıdaki özellikleri ne ölçüde içeriyor buna karar veriniz.

Son bir hafta içerisinde yaptığınız faaliyetler ne ölçüde aşağıdaki özellikleri içeriyordu?					
Yaptığınız faaliyetler:					
1. Yoğun fiziksel aktivite içeriyordu.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
2. Fiziksel olarak yorucuydu.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
3. Sosyal etkileşim içeriyordu.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
4. Başkalarıyla iletişim kurmamı içeriyordu.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
5. Yaratıcı olmama olanak sağladı.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
6. Yaratıcıydı.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
7. Çok düşünmemi gerektirdi.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)

8. Zihinsel olarak aktif olmamı gerektirdi.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
9. Manevi yönü vardı.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
10. Hayatın anlamı, ölüm veya din gibi manevi temaları içeriyordu.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
11. Dijital cihazlar (akıllı telefon, bilgisayar, tablet gibi) aracılığıyla gerçekleşti.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
12. Sanaldı (dijital teknolojiyi kullandım).	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
13. Açık havadaydı.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
14. Doğal ortamda (örneğin bitkiler ve ağaçlar arasında) gerçekleşti.	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)

APPENDIX E. COPENHAGEN PSYCHOSOCIAL QUESTIONNAIRE-3

(“DEMAND” DIMENSION)

Bu bölümde iş ile ilgili durumları tanımlayan ifadeler yer almaktadır.

Lütfen her bir maddeyi okuyup SON BİR HAFTA İÇERİSİNDE yaşadıklarınızı

göz önünde bulundurarak cevaplayınız. Son bir hafta içerisinde:

1. Çok hızlı çalışmak zorunda kaldınız mı?	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
2. Gün boyunca yüksek bir hızda mı çalıştınız?	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
3. İşlerinizi yetiştiremediğiniz oldu mu?	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
4. Tüm görevlerinizi tamamlamak için zamanınızın yetmediği ne sıklıkla oldu?	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
5. Başkalarının kişisel sorunları ile uğraşmak işinizin bir parçası mıydı?	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)
6. İşiniz size duygusal olarak bir yük getirdi mi?	Hiç (1)	Az Ölçüde (2)	Orta Ölçüde (3)	Büyük Ölçüde (4)	Çok büyük Ölçüde (5)

APPENDIX F. SHIROM-MELAMED BURNOUT MEASURE

Bu bölümde işinizle ilgili duygularınızı yansıtan ifadeler bulunmaktadır.

Lütfen her bir maddeyi okuyarak size ne derece uyduğunu belirtiniz ve tüm maddeleri cevaplayınız.

1. Kendimi yorgun hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
2. Fiziksel olarak bitkin hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
3. Fiziksel olarak tükenmiş hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
4. Sabahları işe gidecek enerjim olmuyor.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
5. Kendimi bıkkın hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
6. Tüm enerjimin tükendiğini hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
7. Düşüncelerime odaklanamadığımı hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
8. Sağlıklı düşünemediğimi hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
9. Konsantre olmakta zorluk çekiyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
10. Düşünme sürecimin yavaş olduğunu düşünüyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
11. Karmaşık şeyleri düşünmede zorluk çekiyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
12. İşim gereği karşılaştığım insanların ihtiyaçlarına karşı duyarlı olamadığımı hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
13. İşim gereği karşılaştığım insanlar ile aramda duygusal bir bağ kuramadığımı düşünüyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
14. İşim gereği karşılaştığım insanlara karşı anlayışlı olamadığımı hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)

APPENDIX G. UTRECHT WORK ENGAGEMENT SCALE

(SHORT VERSION)

Bu bölümde işinizle ilgili duygularınızı yansıtan ifadeler bulunmaktadır.

Lütfen her bir maddeyi okuyarak size ne derece uyduğunu belirtiniz ve tüm

maddeleri cevaplayınız.

1. İşimi yaparken kendimi çok enerjik hissedirim.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
2. İşimi yaparken kendimi güçlü ve dinç hissedirim.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
3. Sabah uyandığımda işe gitme isteği duyuyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
4. İşim bana coşku veriyor.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
5. İşim bana ilham veriyor.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
6. Yaptığım işten gurur duyuyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
7. Yoğun bir şekilde çalışırken kendimi mutlu hissediyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
8. İşime kendimi kaptırmış durumdayım.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)
9. Çalışırken kendimden geçiyorum.	Hiçbir zaman (1)	Nadiren (2)	Bazen (3)	Sıklıkla (4)	Her zaman (5)