

The Mediating Role of Work Engagement on the Relationship between Emotional Self-Awareness and Occupational Fatigue among Manufacturing Sector Employees

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Occupational fatigue, marked by feelings of emotional and physical exhaustion, continues to be a significant issue in contemporary work environments. Understanding the psychological factors that protect against fatigue is thus crucial. This study aims to examine whether work engagement mediates the relationship between emotional self-awareness and occupational fatigue. This study examines the mediating role of work engagement in the connection between emotional self-awareness and occupational fatigue. Drawing on Affective Events Theory and Conservation of Resources Theory, the research asserts that employees who understand and control their emotions can better maintain engagement, which acts as a personal resource to resist fatigue. A quantitative approach was taken, gathering survey information from 312 full-time white-collar employees in the manufacturing sector in Türkiye (response rate = 69.3%) with established scales for emotional self-awareness, work engagement and occupational fatigue. The findings show that emotional self-awareness was found to be negatively correlated with occupational fatigue ($b = -.60$, $p < .001$), placing the hypothesis that those with higher levels of awareness feel less fatigue. Further, the findings show that work engagement partially mediates between emotional self-awareness and occupational fatigue (indirect effect $b = -.38$, 95% CI $[-.51, -.27]$), implying that being emotionally self-aware means employees are more engaged at work, reducing fatigue in challenging working situations. The findings highlight the imperative of facilitating emotional self-awareness and engagement among organizations. Enhancing emotions understanding and directing emotions into productive behaviors, organizations can foster resilience, maintain energy, and promote psychological satisfaction, thus alleviating the negative impacts of occupational fatigue.

Keywords: emotional self-awareness; work engagement; occupational fatigue

JEL Codes: L20, M10, M12

Current working circumstances have a rapidly changing and dynamic nature nowadays. To adapt to these challenging conditions, employees are often exposed to intense job demands, heightened performance expectations and rapid organizational changes. This competitive work environment has a direct negative impact on employees' psychological, emotional and physical resources. One of the most essential consequences of challenging working environment can be defined as occupational fatigue. In terms of organizations, occupational fatigue does not only remain a personal issue rather it influences organizational performance, productivity and effectiveness. Therefore, understanding the reasons of this term is crucial for both employees' well-being and organizational purposes.

Fatigue can be defined as multidimensional state of physical, mental and emotional exhaustion (Åkerstedt, Knutsson, & Westerholm, 2004; Boksem & Tops, 2008; Mehta & Parasuraman, 2014;). Unlike stress in workplace, fatigue shows itself in long-term. It appears after a long-term effect of reduced energy, decreased motivation, over workload or heightened stress. Although stress can be reaction of a particular work issue, fatigue

is the accumulated outcome of stress and job-demands. This long-term accumulation of physical exhaustion, mental and emotional strain can have consequences on employees' emotions, psychology and cognitive world. Decreased concentration, lowered working reactions or impaired decision-making can be observed cognitively. Most crucially, irritability, low motivation and diminished psychological aspect can affect individuals' emotions unintentionally. Although lowered productivity, effectiveness or absenteeism can be outcomes of fatigue in terms of organizations, the effects of fatigue in one's psychology should be understood to prevent it. Unlike workplace stress, which is a proximal reaction to a specific demand, and burnout, which is a chronic syndrome combining exhaustion with cynicism and reduced efficacy, fatigue here refers to the cumulative depletion of energy that can also appear acutely and is reversible with recovery. In addition, there are several forms of fatigue in the literature such as physical fatigue, cognitive fatigue, emotional fatigue or compassion fatigue (Barnes & Van Dyne, 2009; Pessiglione, Blain, Wiehler, & Naik, 2025; Zhang, Xiang, Guo, Ma, Guan, & Zhou, 2023). To illustrate, physical fatigue refers to lack of physical energy where cognitive fatigue represents difficulty in concentrating and decision-making problems. Similarly, emotional fatigue means irritability and losing empathy, on the other hand, compassion fatigue is exhaustion due to continuous exposure to others' suffering. One of the most essential type of fatigue can be identified as occupational fatigue. Occupational fatigue is a well-recognized concept in organizational behavior in social work research in recent years.

Occupational fatigue can be defined as multidimensional state of tiredness and reduced functioning caused by prolonged or intense work demands (Di Fabio, Svicher, & Gori, 2021; Satterfield & Van Dongen, 2013; Techera, Hallowell, Stambaugh, & Littlejohn, 2016). Physical, mental and emotional exhaustion caused by occupational fatigue can appear acutely and be reversible with proper recovery. Workplace precursors such as workload, time pressure, role stressors, emotional labor can be the key antecedents of this term. In line with this, recent evidence from working adults indicates that emotional labor intensifies psychosocial and emotional strain and, in turn, undermines mental health, while supportive relational resources buffer this process (Zafar, Zahra, & Saleem, 2026). To illustrate, employees working under constant deadlines and perform multiple tasks can have more tendency to feel occupational fatigue. On the other hand, role conflict, ambiguity or any other unsafe working conditions may cause this term. In this aspect, employees can experience decreased motivation, self-efficacy or concentration where risks of heightened stress, emotional exhaustion and burnout feelings. These personal outcomes also influence organizational productivity and presenteeism in negative way. Furthermore, individuals can have higher turnover intentions where they face increased safety risks and workplace accidents due to fatigue in the workplace.

Occupational fatigue can have different sub-dimensions in the workplace (Marvin, Schram, Orr, & Roberts, 2024; Pignatiello, Martin, & Hickman, 2020; Ren, Zhou, Zhang, Yang, Li, & Liu, 2024). Physical fatigue represents loss of energy and tiredness due to long work hours which accompanies mental fatigue causing reduced concentration and poor decision making. Essentially, decision fatigue, reduced ability to make effective choices can be observed where critical sequences of decisions needed in the workplace. Lastly, emotional fatigue has an effect on psychological state on individual who experience loss of emotional control and empathy which are crucial in social relationships in the workplace. In other words, occupational fatigue is often described as psychological early warning signal that employees' resources are being depleted.

The adverse effects of occupational fatigue make it a growing concern for organizations. While occupational fatigue can lead to unintended outcomes for both employees and organizations, it can be alleviated through certain behavioral and organizational factors. Elements such as organizational culture, climate, trust, and supervisor support are fundamental in preventing fatigue at work (Dopolani, Arefi, Akhlaghi Pirposhteh, & Pourmohammadi, 2022; Dohrmann, Herttua, & Leppin, 2019; Perel, 2015). Because such organizational-level variables lie outside the present research model, this study focuses instead on individual psychological resources emotional self-awareness and work engagement as protective factors against occupational fatigue (Sim et al., 2023). On the other hand, psychological and emotional aspects are also essential to mitigate this unintended situation.

Occupational fatigue, marked by a diminished psychological and physical capacity to sustain effort and recover effectively. It remains closely tied to how employees evaluate their work experiences and manage their recovery processes. Understanding the psychological constructs that diminish this fatigue is thus crucial. Among these constructs, emotional self-awareness stands out as a particularly influential factor, as it enables employees

to recognize and regulate their emotions in response to workplace challenges. Grounded in Conservation of Resources Theory (Hobfoll, 1989) and consistent with empirical evidence that emotional self-awareness is negatively associated with occupational stress (Millette, 2023), emotional self-awareness is expected to function as a personal resource that lets employees detect emotional strain early and regulate it before their energy is depleted. These considerations highlight the role of emotional self-awareness in fostering resilience, maintaining energy, and alleviating the negative impacts of occupational fatigue.

Emotional self-awareness can be defined as one's ability to identify, perceive and understand his/her emotions and their effects on his/her thoughts and behaviors (Killian, 2012; Salzen, 1998; Tamunomiebi & Oworji, 2018). Emotional self-awareness is a multidimensional construct that captures how people respond to their own emotional experiences. It can be represented as key element of emotional mechanism underlying self-regulation and interpersonal functioning. In workplace settings specifically, this capacity enables employees to interpret emotionally demanding work events accurately and to respond adaptively rather than reactively (Huggins, Williams, & Sato, 2023). Furthermore, individuals with high emotional self-awareness can recognize their emotional experiences allowing for understanding nuances. It also involves continuous awareness of emotional state over time where adaptability and emotional capacity of individuals are enhanced. To illustrate, individuals can integrate emotional information with rational thought processes which support decision making and problem-solving skills in complex and stressful situations. In terms of organizational behavior research, this point is relatively essential for employees to cope with challenging working tasks in the workplace.

On the other hand, emotional self-awareness extends beyond mental recognition of emotions rather it provides control of physiological or behavioral outcomes where individuals can analyze their emotional experiences, derive meaning and learn from them. Hence in organizations, employees with higher emotional self-awareness can contribute to their personal growth and emotional maturity which in turn can mitigate occupational fatigue in the workplace. By understanding their own emotions, employees can be more capable of managing their attitudes and social relations which are essential for creating culture of mutual support. Emotional stability and resilience under stress are also enhanced by emotional self-awareness which improves individual and collective performance (Grant & Kinman, 2014; Hills & Argyle, 2001). The resilience under stress also is a central determinant of occupational fatigue which is undesired in the workplace.

In line with these arguments, emotional self-awareness provides a capacity to individuals where they recognize early signs of stress, allowing them to regulate their emotions before occupational fatigue escalates. Being aware of emotional limits can help employees manage work and emotional demands more effectively which can prevent demotivation and depletion of psychology causing fatigue. In addition, individuals with emotional self-awareness can have more tendency to recognize their need for rest and self-care which provides a chance recovery from stressors in the workplace. These mechanisms represent the theoretical rationale for the expected relationship rather than pathways directly tested here; the present study examines the overall association between emotional self-awareness and occupational fatigue and the mediating role of work engagement (Grant & Kinman, 2014; Millette, 2023). Consequently, demanding conditions and challenging situations require sustainable performance and strong psychological construction to cope with in terms of employees, where emotional self-awareness can foster resilience and psychological support to employees, thereby preventing occupational fatigue.

Although emotional self-awareness can reduce occupational fatigue directly, this relationship can be further clarified through the mediating role of work engagement. Work engagement is proposed as the mechanism because, following Affective Events Theory (Weiss & Cropanzano, 1996), employees who are aware of their affective reactions to work events regulate them constructively, and the resulting positive states crystallize into engagement, which per COR Theory acts as a motivational resource that protects energy from depletion. This reasoning is consistent with recent evidence grounded in Affective Events Theory showing that positive psychological states function as mediating mechanisms through which work-related experiences shape employee outcomes (Durukan & Basım, 2026). When individuals are highly aware of their emotions, they are better able to channel their psychological energy into positive attitudes and active involvement in their work. This heightened work engagement characterized by vigor, dedication, and absorption serves as a personal resource that protects against fatigue (Bakker, 2011; Bakker & Albrecht, 2018; Bakker & Demerouti, 2014; Keyko, Cummings, Yonge, & Wong, 2016; Leiter & Bakker, 2010). Work-engaged employees experience their work as

meaningful and stimulating rather than exhausting, sustaining motivation and psychological energy even under demanding conditions. Emotional self-awareness can directly contribute to this engagement by enabling individuals to recognize and regulate their emotional states, focus their energy on purposeful goals, and maintain a positive connection with their tasks. In turn, higher work engagement can reduce occupational fatigue by fostering enthusiasm, concentration, and emotional resilience, which buffer against the depletion of personal resources. Therefore, work engagement serves as a concrete mediating mechanism through which emotional self-awareness alleviates occupational fatigue. To date, however, these constructs have largely been studied separately, and no study has tested work engagement as the mechanism linking emotional self-awareness to occupational fatigue; the present study addresses this gap among employees in Türkiye's manufacturing sector.

Theoretical underpinnings and research hypotheses

The link between emotional self-awareness and occupational fatigue

Occupational fatigue can be represented as physical, emotional and cognitive exhaustion due to long-term work demands which exceed one's capacity of internal resources (Di Fabio, Svicher, & Gori, 2021; Marvin, Schram, Orr, & Roberts, 2024; Palazzeschi, 2025; Satterfield & Van Dongen, 2013). It has a multidimensional structure affecting attitudes, emotions and cognitions of individuals. Decline in energy, motivation and performance caused by accumulated work-related stressors construct occupational fatigue for the employees. Unlike burnout, which is a chronic syndrome combining exhaustion with cynicism and reduced efficacy, occupational fatigue can also appear acutely and is reversible with adequate recovery (Winwood, Winefield, & Dawson, 2005). In this respect, high job demands with long working hours, and heavy workloads are the preceding factors for occupational fatigue causing burnout in the end. Occupational fatigue can be caused by both psychological and physical antecedents (Hotopf, 1998; LeGal, Rhéaume, & Mullen, 2019; Levenson, 2017; Techera, Hallowell, Stambaugh, & Littlejohn, 2016). On the other hand, employees need sufficient recovery elements such as rest, sleep, work-life balance to prevent chronic fatigue accumulation. In addition, workplace stressors as time constraints, interpersonal tensions can accelerate fatigue levels.

Furthermore, occupational fatigue can affect the employees' psychological state in negative way. Fatigued employees can experience reduce concentration and decrease performance which in turn increase absenteeism and turnover intentions. Moreover, occupational fatigue can damage engagement of employees with their work by burnout symptoms and health problems. Hence, reduced productivity and workplace safety can be observed among employees. This fatigue can be categorized into three main sub-dimensions as acute fatigue, chronic fatigue and recovery (Burley, Cox, & Findley, 2007; Heilbronn, Doma, Sinclair, Connor, & Orr, 2023; Mounstephen & Sharpe, 1997). To illustrate, acute fatigue represents short-term tiredness and energy depletion due to intensive work periods. Whereas chronic fatigue has a long-term characteristic reflecting prolonged imbalance between work demands and personal resources. If workload is intensively high in long periods, recovery of employees' psychological state is needed. Recovery is the ability to restore motivation and energy where effective rest practices can be applied to fatigued employees. From organizational behavior viewpoint, occupational fatigue is a critical element determining individuals' well-being and performance.

Occupational fatigue does not only affect individuals but also it is a strategic concern from organizational perspective. Higher levels of occupational fatigue undermine employees' psychology by reducing engagement, concentration and effectiveness. Hence, management of occupational fatigue is critical for sustaining both subjective and collective performances. In this manner, organizational aspects such as leadership styles, organizational culture or colleague support can be key elements to mitigate this kind of behavior. On the other hand, psychological and emotional factors such as well-being, resilience or emotional self-awareness can buffer occupational fatigue. In line with this discussion, employees being aware with their emotions can identify early signs of fatigue, recognize emotional strain and regulate their responses before exhaustion intensifies.

Self-awareness can be defined as one's ability to understand own thoughts, emotions, values and their impact on personal behaviors (Blakemore & Frith, 2003; Carver, 2003; Cook, 1999). Self-awareness is viewed as a core component of emotional intelligence defining as "*ability to advantageously deal with one's own emotions, thoughts and behaviors in problem solving and decision making*" Mayer and Salovey (1993, p. 434). Common subdimensions of self-awareness can be represented as accurate self-assessment, self-confidence, social

awareness or emotional self-awareness (Greenacre, Tung, & Chapman, 2014; Panadero, Jonsson, & Botella, 2017; Wegner & Giuliano, 1982).

In this aspect, emotional self-awareness is specifically focused on individual's emotions and their influence on cognition, behavior and social relationships. According to organizational behavior literature, emotional self-awareness can be defined as ability to perceive, understand and identify one's emotions and their consequences on attitudes and thoughts (Huggins, Williams, & Sato, 2023; Morin, 2011; Thompson, 2022). It is narrower than emotional intelligence, of which it forms the intrapersonal perception component; in the present study it is treated as a unidimensional construct consistent with the measurement instrument used (Tatar et al., 2018), rather than through the descriptive sub-dimensions outlined below. In this manner, higher level of emotional self-awareness provides a capacity for individuals to interpret emotional events accurately and respond adaptively. Furthermore, this ability can serve as a personal resource while employees with higher emotional self-awareness can experience some positive outcomes which can mitigate fatigue or burnout. To illustrate, this ability can help employees to prevent occupational fatigue while recognizing emotional strain early by controlling impulsive reactions and handling stressful situations effectively.

Emotional self-awareness has five common sub-dimensions in literature which can mitigate occupational fatigue in the workplace. First sub-dimension as emotional identification is recognizing one's emotions accurately that helps employees to identify fatigue-related emotions such as anxiety and frustration before they intensify. This recognition can interrupt the occupational fatigue in earlier stages which gives employees a chance to recover. On the other hand, emotional differentiation and emotional understanding are two other sub-dimensions which allow individuals to apply right coping strategy between misinterpreting emotions. These dimensions enable employees to manage emotional triggers effectively which avoid emotional tension lowering occupational fatigue. Lastly, emotional expression awareness and emotional regulation awareness help employees to regulate interpersonal communication which prevents conflict, miscommunication and emotional labor which are all major sources of occupational fatigue. This cognitive and emotional balance protects employees from occupation fatigue by strengthening self-composure in demanding situations.

At this point, it is necessary to emphasize the theories that this study depends on. According to affective events theory, the experiences gained in the workplace trigger affective reactions that has impact on employees' behaviors, psychology and emotions. Weiss and Cropanzano (1996) introduced this theory by stating that workplace behaviors are the key determinants of personal emotions. Applied to the present model, AET predicts not only the direct ESA–fatigue link but specifically the engagement pathway (H2), since cumulative positive affective reactions shaped by how accurately employees perceive and regulate them crystallize into the attitudinal state of work engagement. In this aspect, emotional self-awareness can play a central role by allowing employees to recognize and regulate their emotional responses to work events. Workplace events processed by employees can be evaluated by individuals in a balanced way that prevent negative accumulative effects causing occupational fatigue. Consequently, employees enabled to manage workplace experiences effectively can avoid maladaptive reactions such as stress or exhaustion.

Second theory that this research is founded is the conservation of resources theory. This theory is developed by Hobfoll (1989), and states how people tend to acquire, protect and maintain valuable resources to manage stress, fatigue and psychological well-being. This theory emphasizes that stress and fatigue occur when employees lose their personal resources or feel a threat of resources loss in the workplace. Employees continuously invest in cognitive and emotional resources to handle workplace demands. When workplace stressors exceed one's available resources, occupational fatigue can arise. In this model, emotional self-awareness is the personal resource, work engagement is the energized motivational state produced by successful resource investment, and occupational fatigue indexes resource depletion.

In this respect, emotional self-awareness is a personal resource that prevents loss of psychological energy where employees can conserve emotional resources reducing risk of fatigue. Emotionally self-aware employees can allocate their emotions more effectively which in turn withdraws unnecessary emotional strain causing occupational fatigue.

Emotional self-awareness refers to capacity to recognize, understand and regulate emotions and how these affect behavior and decision-making. Emotionally aware employees are more capable of managing

emotional demands and sustaining psychological balance. By recognizing emotions and regulating them in necessary circumstances, it can allow employees to prevent the accumulation of negative emotional strain and stress contributing to occupational fatigue. To illustrate, Millette (2023) conducted research and found that emotional self-awareness is negatively associated with occupational stress among mental health professionals. Similarly, Kikuchi and Ishii (2015) emphasized the importance of self-awareness which prevents fatigue symptoms in the workplace. Furthermore, emotional self-awareness can foster emotional balance that constructs psychological barriers to interrupt occupational fatigue. When emotional experiences are understood constructively, employees can be more likely to cope with job demands without any stress or exhaustion. In line with these arguments, emotional self-awareness functions as a self-protective resource that mitigates the negative emotional consequences of workplace demands, leading to lower levels of occupational fatigue and greater overall well-being. Drawing on these theoretical perspectives and previous empirical findings, the first hypothesis is proposed as follows:

H1: Emotional self-awareness is negatively associated with occupational fatigue.

Workers with greater emotional self-awareness tend to be less susceptible to severe levels of occupational fatigue; however, the nature of this link might be driven by different organizational, behavioral, and psychological factors. The link between emotional self-understanding and occupational fatigue may be further elucidated by offering a mediating construct relating to employees' psychological energy and motivation at work. In particular, work engagement could be a vital mechanism accounting for how emotional self-awareness affects employees' capacity to maintain performance and well-being in demanding working situations. Work engagement allows employees to leverage their emotional self-understanding into a positive energy and focus of mind, thus enhancing their resilience and lowered probability to suffer from fatigue. More emotionally self-aware employees can detect early signs of stress, thus regulating their emotions effectively, and being psychologically engaged with their job. Such an increased engagement increases their effectiveness in coping with workload-related demands and can allow them to recover fast from work-related stressors.

The mediating function of work engagement in the connection between emotional self-awareness and occupational fatigue

Work engagement can be conceptualized as “positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption” (Schaufeli et al., 2002). Engagement represents a persistent emotional and attitudinal state where employees can dedicate themselves to their work. Being energetic, enthusiastic and deeply involved in job activities are the main characteristics of work engagement. By definition, work engagement has three core dimensions as vigor, dedication and absorption (Schaufeli & Bakker, 2004; Zainab et al., 2022). In this respect, vigor refers to enhanced levels of mental resilience and emotional energy where employees are willing to work and persist to difficulties. Dedication represents experiencing enthusiasm, inspiration and pride while individuals are sharply involved in work activities. On the other hand, absorption means deep concentration and immersion which comprehends full focus and time deep engrossment. Beyond its definition, recent evidence shows engagement operates as a protective resource: emotional competencies promote engagement while reducing burnout (Pangket et al., 2025), and engagement mediates the link between employees' emotion-regulation strategies and positive work outcomes (Yagil, 2012), supporting its role as the mediator between emotional self-awareness and occupational fatigue. Work-engaged employees can have high energy, strong involvement and deep concentration which in turn lessen unintended outcomes in the workplace. To illustrate, engagement can act as a buffer against emotional exhaustion where individuals experience higher satisfaction and lower workplace fatigue.

As a dynamic construct, work engagement can be affected by daily work experiences both from job activities or social relationships. This dynamic aspect can be strengthened through personal resource enhancement, supervisor or leadership support or other psychological variables. Although work engagement refers to a positive and supportive state of mind constructed by vigor, dedication and absorption, it can be influenced by some psychological and emotional factors. While organizational factors such leadership styles or colleague and organizational support can foster engagement of employees to organizations, personal attributes such as emotional intelligence or emotional self-awareness can be essential determinants of this variable.

By enabling employees to manage and regulate their emotions effectively, emotional self-awareness can allow individuals to respond to workplace challenges more constructively and maintain motivation during challenging situations. This awareness can also enhance emotional resilience and motivation which is vital for consistent work engagement. Interpreting emotions effectively can provide an ability to stay calm, patient and composed under pressure. This helps employees to stay focused and productive which maintain steady engagement to work. As discussed, vigor component can be strengthened through sustained energy and endurance. As a result, emotional self-awareness can give employees a chance to manage stress and energy to reinforce work engagement.

Greater levels of work engagement, in turn, might lower occupational fatigue by nurturing enthusiasm, persistence, and sustained psychological energy. Engaged workers tend to hold a profound sense of purpose and intrinsic motivation, which allows them to approach demanding tasks with optimism rather than depletion. They perceive their job as meaningful and rewarding, thus turning potential stressors into challenges stimulating personal growth instead of leading to exhaustion. Such a positive frame of mind enables them to recover more efficiently from daily strain, thereby preventing fatigue from accumulating over time.

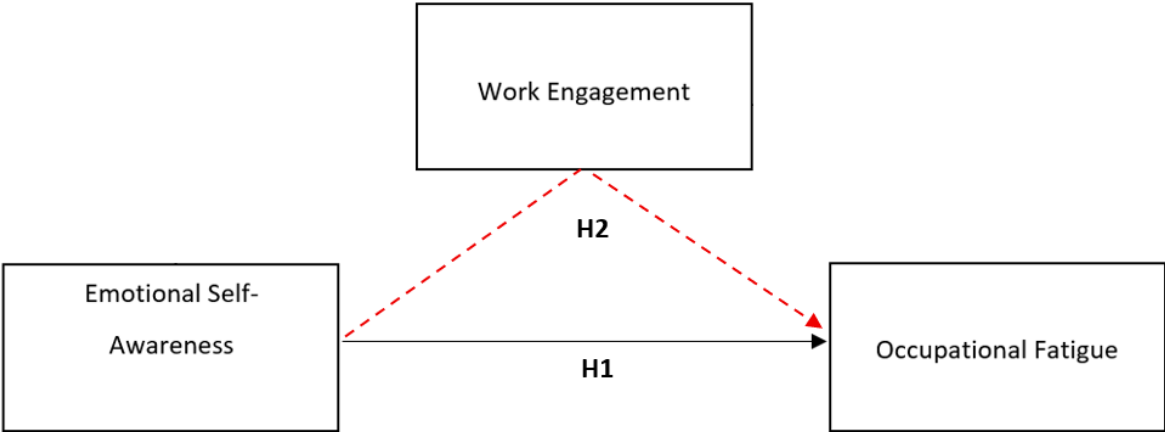
Accordingly, work engagement could function as a vital mediating mechanism linking emotional self-awareness and occupational fatigue. Emotional self-understanding fosters engagement by allowing employees to cope with their emotions constructively, while engagement leverages this awareness into a positive energy and dedication. By means of this process, emotional self-awareness may indirectly diminish occupational fatigue by sustaining workers' motivation, enthusiasm, and psychological well-being (Mubeen et al., 2022).

In light of the foregoing discussions, the following hypothesis was put forward.

H2: Work engagement will mediate the relationship between emotional self-awareness and occupational fatigue.

The research model illustrated in Figure 1 was developed in accordance with the hypotheses derived from the theoretical foundations discussed above.

Figure 1 Research Model



Method

Data Analysis

In the present study, statistical analyses were performed by means of IBM SPSS Statistics 26.0 along with the AMOS software. To assess construct validity, a separate confirmatory factor analysis was run for each scale, and model fit. The reliability of the measurement instruments was established through the examination of Cronbach's alpha coefficients, composite reliability, and average variance extracted. Descriptive statistics, together with Pearson correlation coefficients, were computed for all study variables. The proposed mediation model was tested via the PROCESS Macro 3.5.3 (Hayes, 2017), relying on 5,000 bootstrap resamples and 95% bias-corrected confidence intervals.

Sample

The research was conducted among currently employed white-collar employees. Out of 450 individuals invited via e-mail, 312 provided valid responses (response rate = 69.3%). Convenience sampling technique was used to gather responses from participants. Participants were full-time employees from Türkiye's manufacturing sector. The survey, administered in Turkish, was carried out between October and November 2025. The sample displayed a balanced gender distribution, with 47.1% male and 52.9% female respondents. In terms of education, 82.1% held a bachelor's degree, and 17.9% had a postgraduate qualification. Regarding marital status, 51.3% were married, while 48.7% were single. Most participants were aged between 30 and 45 years. Regarding total work experience, the largest group (42.5%) reported 11–20 years, followed by 28.2% with 6–10 years, 25.6% with 1–5 years, and 3.7% with 21+ years, consistent with Table 1.

Table 1

Demographic Information (N = 312)

	Category	Frequency (%)
Gender	Male	47%
	Female	53%
Marital Status	Married	51%
	Single	49%
Education	Bachelor's	82.1%
	Master's	12.3%
	Doctoral	5.6%
Work Experience	1–5 years	25.6%
	6–10 years	28.2%
	11–20 years	42.5%
	21+ years	3.7%

Measurement instruments

To investigate the mediating function of work engagement in the connection between emotional self-awareness and occupational fatigue, three validated instruments emotional self-awareness, work engagement, and occupational fatigue were employed. All scales were previously translated and adapted into Turkish by researchers in the relevant literature. Emotional Self-Awareness and Work Engagement scales employ a 5-point Likert format ranging from “Strongly Disagree” (1) to “Strongly Agree” (5). Rather, Occupational Fatigue scale employs 6-Point Likert Format.

Emotional Self-Awareness Scale: Originally developed and validated by Tatar, Özdemir, Çelikbaş, and Özmen (2018), this 10-item instrument measures individuals' ability to recognize, differentiate, and interpret their own emotions. The measure has one dimension. Reliability and validity analyses confirmed its suitability for assessing emotional awareness within Turkish samples.

Work Engagement Scale (Short Form – 3 Items): Adapted to Turkish by Güler, Çetin, and Basım (2019) from the Utrecht Work Engagement Scale. This short-form version has one dimension includes and three items. Because work engagement served as a single mediating variable rather than being analyzed by sub-dimension, the unidimensional UWES-3 was sufficient and appropriate.

Occupational Fatigue Scale: Originally developed by Winwood, Winefield, and Dawson (2005) and later adapted into Turkish by Havlioğlu, Ortabay, and Winwood (2019). The scale has fifteen items and 3 sub-dimensions. Turkish adaptation demonstrated robust reliability and validity, confirming the scale’s effectiveness for evaluating occupational fatigue among Turkish employees.

Results

Measurement model: validity, reliability, and fit indices

The findings indicate that the three constructs; Emotional Self-Awareness, Work Engagement, and Occupational Fatigue displayed a high level of internal reliability, with Cronbach's Alpha values of .88, .75, and .95, respectively. Moreover, the measurement model for Emotional Self-Awareness yielded an excellent fit to the data, as evidenced by the indices CMIN/DF = 2.237, GFI = 0.949, RMSEA = 0.063, and CFI = 0.996, thus confirming the adequacy of the model (Hu and Bentler, 1999; Kline, 2016).

Since the work engagement scale contains only three items, the confirmatory factor analysis model was just-identified (df = 0), making it impossible to compute global model fit indices. Consequently, an exploratory factor analysis was conducted to assess the construct validity of the scale. The Kaiser–Meyer–Olkin value was 0.66, and Bartlett’s test of sphericity was significant, $\chi^2(3) = 208.02$, $p < .001$, confirming the data’s suitability for factor analysis. The exploratory factor analysis results indicated a single-factor structure explaining 49.4% of the total variance. Standardized loadings of questions were 0.74 for WE1, 0.90 for WE2, and 0.52 for WE3, all above the acceptable threshold of .40. Although the loading of WE3 was lower than those of the other two items, it exceeds the .40 criterion and is consistent with prior findings that the absorption item tends to load more weakly in ultra-short engagement measures. Moreover, the scale demonstrated good internal consistency, with a composite reliability (CR) of 0.77 and an average variance extracted (AVE) of 0.54, both meeting recommended standards. Overall, the findings support that the Work Engagement Scale has a unidimensional structure with adequate reliability and convergent validity in this sample.

The Occupational Fatigue model demonstrated a satisfactory overall fit, with goodness-of-fit indices of CMIN/DF = 1.926, GFI = 0.934, CFI = 0.976, RMSEA = 0.055, and AGFI = 0.906.

In summary, the results indicate strong reliability and adequate validity across all three measurement models. The constructs showed solid composite reliability (CR) values 0.89 for Emotional Self-Awareness, 0.77 for Work Engagement, and 0.96 for Occupational Fatigue along with average variance extracted (AVE) values of 0.45, 0.54, and 0.61, respectively. These results confirm the models’ adequate convergent validity and overall sound measurement quality. Although AVE for Emotional Self-Awareness fell below the conventional threshold, convergent validity was deemed adequate given that its composite reliability (.89) well exceeded the .60 criterion (Fornell & Larcker, 1981), indicating that convergent validity remains acceptable.

Table 2
Model Fit Indices and Reliability/Validity Statistics

Variables	CRA	CMIN/SD	GFI	AGFI	CFI	NNFI	IFI	RMSEA	χ^2	df	p
ESA	0.88	2.237	0.949	0.945	0.996	0.985	0.965	0.063	76.120	34	<.001
OF	0.95	1.926	0.934	0.906	0.976	0.952	0.973	0.055	161.756	84	<.001
	CRA	KMO	BTS	TV	CR	AVE	p				
WE*	0.75	0.66	208.02	49.4%	0.77	0.54	<.001				

Notes: Fit thresholds: CMIN/DF ≤ 5 (good ≤ 3); GFI, CFI, NNFI, IFI ≥ 0.90 (good ≥ 0.95); AGFI ≥ 0.85 (good ≥ 0.90); RMSEA ≤ 0.08 (good ≤ 0.05). KMO = Kaiser–Meyer–Olkin; $\chi^2(3)$ = Bartlett's test; TV = total variance; CR = composite reliability; AVE = average variance extracted; ESA = emotional self-awareness; WE = work engagement; OF = occupational fatigue. Exploratory factor analysis conducted.

To measure common method bias, Harman's single-factor test was accomplished, and the consequences exposed that the first (unrotated) factor explained 36.57% of the total variance, remaining well under the recommended 50% cutoff. This indicates that common method bias does not pose a significant threat to the

validity of the findings in this study (Podsakoff et al., 2003). Nevertheless, because Harman's single-factor test is a necessary but not sufficient diagnostic and all constructs were self-reported by the same respondents, the possibility of common method variance cannot be entirely excluded. This is noted as a limitation.

Discriminant validity was assessed using the Fornell-Larcker criterion; the square root of the AVE for each construct Emotional Self-Awareness (0.67), Work Engagement (0.74), and Occupational Fatigue (0.78) exceeded the corresponding inter-construct correlations, thereby confirming the distinctiveness of the three constructs (Fornell & Larcker, 1981).

1.1. Descriptive statistics and intercorrelations

Informative information, reliability coefficients, and intercorrelations between the study variables were calculated and are displayed in Table 3. The purpose of this analysis was to explore the unique effects of the variables under examination. Because descriptive statistics alone cannot establish normality, univariate normality was assessed through skewness and kurtosis values, which fell within the ± 2 range considered acceptable. Furthermore, the bivariate correlation analysis pointed to significant associations among the main variables incorporated in the model.

Table 3

Means, Standard Deviations, and Intercorrelations

	Mean	SD	Gender	Marital Status	Education	Sector	Exp.	Age	ESA	WE	OF	
ender	1.53	.50	1									
Marital Status	1.49	.50	.111	1								
Education	2.31	.30	.064	-.029	1							
Sector	2.04	.66	.030	-.081	-.055	1						
Work Experience	10.82	6.86	-.028	-.002	.157**	-.090	1					
Age	35.61	7.37	-.052	-.041	.156**	-.116*	.155**	1				
ESA	4.04	.62	.065	-.019	-.087	-.065	-.043	-.096	1			
WE	4.00	.85	-.037	-.053	.051	-	.007	-.019	.517**	1		
OF	2.33	.92	.032	.011	-.072	.164**	.309**	-.076	.112*	-.659**	-.705**	1

Notes: Coding: gender (1 = male, 2 = female); marital status (1 = married, 2 = single); education (1 = diploma, 2 = bachelor's, 3 = master's, 4 = PhD); sector (1 = public, 2 = private, 3 = freelance). ESA = emotional self-awareness; WE = work engagement; OF = occupational fatigue. * $p < .05$; ** $p < .01$.

Regression and mediation analyses

The mediation assessment in the present analysis was carried out by means of SPSS version 26 and the PROCESS macro established by Hayes (2017), using Model 4 (simple mediation) with emotional self-awareness as the independent variable, work engagement as the mediator, and occupational fatigue as the dependent variable; no covariates were included. This macro enables the testing of complex mediation forms by estimating direct and indirect effects simultaneously within a unified analytical framework. In this research, 5,000 bootstrap samples were utilized to establish the significance of the indirect effects, thus yielding bias-corrected confidence intervals for enhanced precision. Such a bootstrapping technique reinforces the dependability of the mediation analysis by lowering reliance on normality assumptions in the sampling distribution. All coefficients reported below are unstandardized (b), as produced by the PROCESS macro by default. Variables were measured on their original Likert metrics stated in Section 4.1.

Hypothesis 1 proposed that emotional self-awareness is negatively associated with occupational fatigue. The results of the analysis showed that emotional self-awareness explained 44% of the variance in occupational fatigue. Emotional self-awareness significantly predicted occupational fatigue, explaining a significant proportion of variance in fatigue levels. In particular, emotional self-awareness displayed a significant negative

relationship with occupational fatigue ($b = -.5981, p < .01, 95\% \text{ CI } [-.7187, -.4775]$). The detailed results are displayed in Table 4. Accordingly, Hypothesis 1 was supported by the findings.

Table 4
Direct effect of emotional self-awareness on occupational fatigue

Coefficient (b)	Se	t	P	LLCI	ULCI
-.5981	.0635	-9,7569	<.001	-.7187	-.4775

Secondly, Hypothesis 2 was formulated on the expectation that work engagement would mediate the link between emotional self-awareness and occupational fatigue. The analysis showed that the indirect effect of emotional self-awareness on occupational fatigue was significant, given that the 95% confidence interval did not contain zero ($b = -.3816, \text{BootLLCI} = -.5069, \text{BootULCI} = -.2733$). Such a finding verifies the mediating role of work engagement. In particular, emotional self-awareness proved to exert a positive effect on work engagement ($b = .7125, p < .01$), which in turn was negatively related to occupational fatigue ($b = -.5356, p < .01$). Furthermore, the direct effect of emotional self-awareness on occupational fatigue remained significant ($b = -.5981, p < .01$), thus indicating that work engagement partially mediates the link between emotional self-awareness and occupational fatigue.

Table 5
Indirect effect of emotional self-awareness on occupational fatigue

Coefficient (b)	se	p	BootLLCI	BootULCI
-.3816	.0592	<.001	-.5069	-.2733

The total effect analysis showed that emotional self-awareness exerted a significant negative influence on occupational fatigue ($b = -.9797, SE = .0635, t = -15.4299, p < .001$). The 95% confidence interval ($\text{LLCI} = -1.1047, \text{ULCI} = -.8548$) did not contain zero, thus verifying the robustness of this effect. Such findings imply that workers with greater emotional self-awareness experience lower levels of occupational fatigue when both direct and indirect effects are taken into account together. The detailed results are displayed in Table 56.

Table 6
Total effect of emotional self-awareness on occupational fatigue

Coefficient (b)	se	t	p	LLCI	ULCI
-.9797	.0635	-15.4299	<.001	-1.1047	-.8548

All in all, summary of research hypothesis whether they are supported or not, can be seen on Table-7 below.

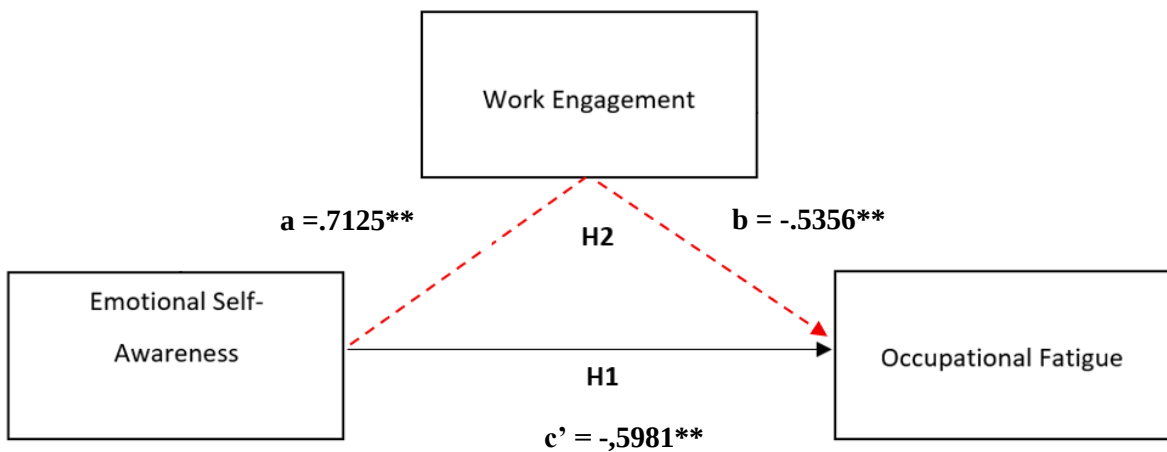
Table 7
Summary of Hypothesis Testing

Hypothesis	Path	Coefficient (b)	95% CI	Result
H1	ESA → OF (direct effect)	-.5981	[-.7187, -.4775]	Supported
H2	ESA → WE → OF (indirect effect)	-.3816	[-.5069, -.2733]	Supported (partial mediation)

ESA = emotional self-awareness; WE = work engagement; OF = occupational fatigue.

Figure 2

Research findings



Mediation path diagram: $a = .7125^{**}$ (ESA→WE), $b = -.5356^{**}$ (WE→OF), $c' = -.5981^{**}$ (direct), $c = -.9797^{***}$ (total); indirect effect = $-.3816$, 95% CI $[-.5069, -.2733]$. $^{**}p < .01$, $^{***}p < .001$.

Discussion and Implications

The findings of the present study indicate that emotional self-awareness significantly and negatively associated with occupational fatigue among workers. The results verified a significant and negative link between emotional self-awareness and occupational fatigue, thus implying that individuals capable of recognizing and regulating their emotions experience lower levels of fatigue. Such a finding is in line with prior research; for instance, a study on mental health professionals reported that greater emotional self-awareness nurtures purposeful stress reduction by means of adaptive coping skills and positive emotional experiences, thereby buffering the exhaustion arising from chronic occupational stress. In a similar vein, research on workers across demanding occupations showed that emotional stability was significantly and negatively related to chronic, acute, and total occupational fatigue, thus supporting the protective function of emotion-related competencies against fatigue (Magnano et al., 2021). Furthermore, work engagement proved to be a significant partial mediator in this link. This pattern suggests that emotionally self-aware employees are better able to recognize and regulate emotional strain early, which helps them channel psychological energy into work engagement and, in turn, buffers the depletion of personal resources that manifests as occupational fatigue. Such a mediating pattern is consistent with the work of Pangket et al., (2025), who showed that emotional intelligence enhances work engagement while simultaneously lowering burnout among employees, thus indicating that emotional competencies operate through engagement-related mechanisms. In a comparable manner, Yagil (2012) reported that engagement mediated the link between employees' emotion regulation strategies and positive work outcomes, thus reinforcing the role of engagement as an explanatory pathway connecting emotional processes to well-being. The fact that work engagement only partially mediated this relationship indicates that emotional self-awareness is also linked to lower fatigue through additional pathways not tested here such as adaptive coping, recovery experiences, or self-efficacy which future research should examine.

Taken together, these results underline that fostering workers' emotional self-awareness and engagement could serve as an effective strategy for lowering occupational fatigue and promoting psychological resilience in demanding working situations.

From a managerial standpoint, such findings stress the importance of incorporating emotional self-awareness into organizational well-being and performance strategies. Managers should promote self-reflection and emotional regulation practices by means of workshops and leadership programs that reinforce employees' capacity to understand and cope with their emotions. Establishing supportive organizational climates that nurture work engagement through recognition, autonomy, and meaningful job design may further prevent fatigue. Additionally, organizations are encouraged to develop mentoring and emotional intelligence training initiatives

aimed at improving workers' emotional competence and engagement. This recommendation echoes Kravariti et al., (2021), who observed that emotionally intelligent employees tend to be more engaged owing to their enhanced capacity to manage stress, communicate effectively, and build positive workplace relationships. By cultivating emotionally aware and engaged employees, managers can mitigate fatigue, boost productivity, and sustain long-term organizational effectiveness.

From a theoretical perspective, the present study contributes to the literature by identifying work engagement as a key mechanism through which emotional self-awareness affects occupational fatigue. Grounded in Affective Events Theory and Conservation of Resources Theory, the research accounts for how emotional regulation and psychological resource conservation jointly diminish fatigue levels. By integrating these theoretical perspectives, the study offers a nuanced understanding of how emotional processes and engagement interact to shape employee well-being. Furthermore, the resource-based reasoning of the present study is in line with research grounded in Conservation of Resources Theory (Zhang et al., 2026), which showed that individuals in a state of chronic resource depletion are more susceptible to occupational fatigue, whereas emotion-regulation capacities help replenish those resources. In addition, the study broadens the conceptualization of occupational fatigue beyond physiological exhaustion, positioning it as a psychological outcome shaped by emotional self-regulation and engagement dynamics.

Final Considerations and Conclusion

To sum up, the present study shows that emotional self-awareness is significantly and negatively associated with occupational fatigue among workers, with work engagement functioning as a key partial mediator in this link. The findings indicate that employees capable of effectively recognizing and regulating their emotions tend to be more engaged in their job, which in turn is associated with lower fatigue in demanding working situations. By integrating Affective Events Theory and Conservation of Resources Theory, the present research advances both the theoretical understanding and the practical strategies for cultivating emotionally aware, engaged, and resilient employees within organizations.

Limitations and suggestions for future research

This research has numerous limitations that should be counted in understanding its results. First, the study employed a cross-sectional, self-report design, which cannot establish causal or temporal precedence among the variables; the mediation findings should therefore be interpreted as associational rather than causal, and common method variance cannot be fully ruled out. Longitudinal or multi-source designs are recommended for future research. The sample was limited to white-collar employees in Türkiye's manufacturing sector, which restricts generalizability to other occupational or cultural perspectives. Future studies could adopt comparative or longitudinal designs to examine whether these relationships hold across different job types and time periods. Future research could include other mediators such as psychological empowerment, resilience, or emotional regulation to deepen the understanding of mechanisms linking emotional self-awareness and occupational fatigue.

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