

Stress, resilience, mindfulness, burnout, and performance in fitness industry

Cemil Kuzey¹, Nuri Gökhan Torlak², Joy Roach Humphreys³, Sevda Ebrahimi⁴

¹Arthur J. Bauernfeind College of Business, Murray State University, Murray, KY 42071, USA

²Ibn Haldun University, School of Business, Department of Management, Ordu Caddesi, F-05 Blok No.3, 34480, Başakşehir/Istanbul, Türkiye

³Arthur J. Bauernfeind College of Business, Murray State University, Murray, KY 42071, USA

⁴Business Administration, Haliç University, Türkiye



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corresponding author:
ckuzey@murraystate.edu

Abstract

This study examines the effects of stress, resilience, and mindfulness on burnout, and the effects of resilience and burnout on job performance, with the aim of enhancing employee well-being and improving service quality in fitness clubs in a developing country. A quantitative, cross-sectional survey design was employed, and data were collected in person from full-time fitness club managers working in a major metropolitan city. A convenience sampling approach yielded 150 usable questionnaires collected through a structured, self-administered survey with voluntary and anonymous participation. The analysis included descriptive statistics, assessment of univariate normality, correlation analysis, simple linear regression analysis, independent-samples t-tests, and analysis of variance. The results indicate that stress is positively associated with burnout, whereas resilience and mindfulness are negatively associated with burnout. In addition, resilience is positively related to job performance, while burnout is negatively related to job performance. The sample may not be representative of the broader population, and the convenience sampling approach may introduce self-selection bias. The cross-sectional design limits the ability to draw causal conclusions, and the findings reflect societal, economic, and managerial conditions specific to a developing country. All variables were measured using self-report instruments, which may be subject to social desirability bias, recall errors, and subjective interpretation. Despite these limitations, the study addresses a gap in organizational behavior and sports management literature by emphasizing the importance of resilience- and mindfulness-focused initiatives related to stress management, self-care, autonomy, coaching, peer support, counseling, equitable compensation, workload balance, clear goals, defined responsibilities, feedback processes, and training.

Keywords: Burnout, fitness industry, mindfulness, performance, resilience, stress

JEL Classification: M12, M54, Z22

1. Introduction

Fitness industry leaders (club owners, gym managers, head coaches, and senior trainers) in developing countries face long and irregular working hours, emotional labor addressing clients' diverse needs, performance management issues, as well as staffing and supervising personnel in an uncertain environment. Fitness leaders frequently work in small firms with limited human resources, fluctuating earnings, and high customer expectations, which increase organizational, interpersonal, and personal pressures (Mosavi et al., 2019; Snarr & Beasley, 2022). While the fitness business grows, it remains underregulated and economically unstable, with managers facing inadequate financial resources, supervisory style, and insufficient institutional support (Pournaghi et al., 2011). Furthermore, cultural stigmas associated with mental health and stress management discourage open dialogue or professional help-seeking, which addresses the psychological demands placed on managers and innovative solutions that can improve resilience (R) and reduce the effects of burnout (BO) (Mosavi et al., 2019; Kim et al., 2019). Fitness industry leaders face seasonal membership cycles, high competition, client dropouts, low skilled staff, multiple roles, limited administrative systems, managing difficult clients, pressure to maintain performance, power outages, limited equipment, and safety and cleanliness, all of which contribute to BO (Ryska, 2002; Kim, 2020; Maslach & Leiter, 2016a; Sonnetag, 2018; Singh et al., 1994). Additionally, to mitigate the impact of S on BO, leaders attempt to recover staff absences, equipment breakdowns, drop-in payments, solve problems, remain optimistic, have coping capacity, interpret demands as manageable, and benefit from peers, trainers, or community (Hartmann et al., 2020; Tugade & Fredrickson, 2004; Kim et al., 2021).

S is a persistent challenge due to the dynamic and emotionally intensive nature of the work in the fitness industry, where managers are expected to balance supervising staff, managing customer relationships, monitoring finances, handling marketing operations, and responding to client complaints, all while working long hours and putting in emotional labor (Schreibauer et al., 2020; Norris et al., 2017; Marin-Farrona et al., 2021). Managers are vulnerable to weariness because they are expected to exhibit continual vigor and optimism in front of clients and staff (Norris et al., 2017). Economic volatility, currency fluctuations, and a lack of formal job protections all contribute to anxiety about income stability and career longevity (Schreibauer et al., 2020). Cultural norms that restrict access to psychological services can worsen S (Marin-Farrona et al., 2021). The absence of human resource systems in many fitness clubs leads to inadequate workload distribution and a lack of professional development opportunities, exacerbating S (Eraslan, 2022). S occurs when demands exceed personal coping resources due to tight deadlines, customer complaints, low job security, and a lack of institutional support. Chronic stressors emotionally prevent managers from maintaining motivation, interpersonal relationships, and sound decision-making (Sonnetag, 2018). BO causes emotional exhaustion, depersonalization, and a low sense of personal

accomplishment (Maslach & Leiter, 2016a, b). BO, which leads to increased duties and short recuperation times, negatively affecting managerial health, absenteeism, productivity, job satisfaction, and turnover rates (Schaufeli & Bakker, 2004; Demerouti et al., 2001). Maslach and Leiter (2016a, b), Kamali et al. (2022), and Schaufeli and Taris (2014) found that S positively affects BO. A relationship between S and BO affects performance and psychological wellbeing in healthcare, hospitality, and education (Montgomery et al., 2011; Schaufeli & Taris, 2014).

R refers to the ability to recover from hardship and constructively adapt to S, hence protecting against BO. Resilient managers display better problem-solving and emotional stability, employ appropriate coping mechanisms, support team morale and operational continuity, and recover faster from setbacks (Luthans et al., 2007). R improves individual wellbeing, adaptation, optimism, and persistence, and maintaining excellent job performance (JP). Robertson et al. (2015) and Chen et al. (2021) noted that managers must deal with shifting member demand, revenue targets, staff coordination, and emotionally charged client contacts under time constraints and public scrutiny. Economic uncertainty, inflationary pressures, and organizational infrastructure variability shape R, resulting in S that puts employee performance at risk. While cultural norms that prioritize tenacity, loyalty, and family responsibilities might inspire perseverance, they may also deter managers from asking for assistance. R is a crucial psychological strategy for continuing to operate in the face of instability since many professionals rely on spiritual and community support when formal psychological resources are scarce. Zahednezhad et al. (2021) and Amiri et al. (2023) revealed that R reduces BO. Robertson et al. (2015) and Judge et al. (2001) found that R improves performance.

Mindfulness (M) uses attention control and emotional regulation to promote present-moment awareness and acceptance, allowing people to respond to S more clearly and calmly (Bishop et al., 2004). M regulates S and enhances R with targeted mental training (Davidson & McEwen, 2012; Zeidan et al., 2010). M in fitness leadership reduces emotional reaction, improves emotional regulation, self-awareness of fatigue, strengthens psychological flexibility, and requires few resources, resulting in a powerful exhaustion-prevention mechanism (Hülshager et al., 2013; Malinowski & Lim, 2015; Lomas et al., 2017). Reb et al. (2014) and Hülshager et al. (2013) argued that mindful managers respond to challenges, communicate effectively, and maintain composure in emotionally charged situations, all of which are necessary given the fast-paced, client-oriented, and physically demanding nature of the fitness industry. Managers must manage operations, inspire employees, settle issues, and interact with clients. M allows individuals to maintain empathy, which promotes connections, boosts employee morale, and alleviates emotional exhaustion. Talebiazar et al. (2024) discovered that an M-based S reduction program significantly improved emotional regulation and empathy in psychiatric nurses, whereas Ghasemi et al. (2023) observed that M training

reduced BO and improved attention control in teachers. Hülseger et al. (2013) demonstrated that M adversely affected BO.

Reb et al. (2014) and Good et al. (2016) showed that fitness club managers must supervise workers, maintain client satisfaction, manage finances, and fulfill revenue targets in an uncertain environment. Technical proficiency and the capacity to remain serene, empathic, and focused under pressure are key performance indicators. Managers with high M and R show more adaptability, problem-solving skills, and motivation, which increases their effectiveness. Conversely, Schaufeli and Taris (2014) discovered that S and BO deplete psychological resources, impede concentration, and reduce overall performance. Alinejad et al. (2023) and Amiri et al. (2023) found that many fitness clubs lack appraisal procedures, resulting in subjective assessments based primarily on interpersonal impressions. Economic uncertainty, role ambiguity, and hierarchical organizational structures all confound performance expectations.

The paper assumes that the combination of Job Demands-Resources (JD-R), Conservation of Resources (COR), Transactional Model of Stress and Coping (TMSC), Psychological Capital (PsyCap), Broaden-and-Build (BAB), Self-Regulation (SR), and Self-Determination (SD) theories seem to be an appropriate conceptual framework for tackling issues prevalent to enhance employee wellbeing that improves service quality in the fitness industry in a developing country. JD-R posits that leaders serve as resources to mitigate occupational S and BO. Poor leadership raises job demands and causes emotional weariness (Bakker & Demerouti, 2007). COR believes that employees under pressure save their remaining energy by avoiding extra roles. Thus, stressed personnel conceal knowledge to preserve resources (Hobfoll, 1989). COR explains BO as the result of losses of valued resources (energy, time, or emotional stability) without sufficient replenishment (Hobfoll, 1989). Maslach and Leiter (2016a) outlined six core mismatches between a person and their job—workload, control, reward, community, fairness, and values—that can significantly increase BO. TMSC views S because of how individuals cognitively appraise environmental demands and their coping abilities (Lazarus & Folkman, 1984). PsyCap positions R alongside hope, efficacy, and optimism as a positive psychological capacity that can be leveraged to improve wellbeing and performance (Luthans et al., 2007). BAB suggests that positive emotions broaden attention and cognition, enabling individuals to build durable resources that buffer subsequent stressors (Fredrickson, 2001). SR posits that M enhances individuals' capacity to observe internal cues and regulate behavior in alignment with goals, reducing impulsive reactions and maladaptive coping (Carver & Scheier, 1998). SDT assumes that intrinsic motivation, arising from the satisfaction of basic psychological needs for competence, autonomy, and relatedness, leads to greater engagement and productivity (Deci & Ryan, 2000).

The following sections present the theoretical framework and hypotheses, describe the research methodology, report the results, discuss the findings and implications, outline the limitations and future research directions, and conclude the study

2. Theoretical framework and hypotheses

2.1. Stress (S)

Selye (1956) argued that S arises when an individual perceives that environmental demands exceed their personal coping resources. Occupational S stems from excessive workload, role ambiguity, interpersonal conflict, and lack of autonomy. There is a distinction between eustress and distress, while the former refers to positive, performance-enhancing S, the latter emphasizes harmful and debilitating S. S physiologically and psychologically affects energy levels, emotional stability, concentration, and decision-making capacity.

The theoretical groundings for S are based on the TMSC, JD-R, and COR. TMSC views S because of how individuals cognitively appraise environmental demands and evaluate their coping abilities (Lazarus & Folkman, 1984). The JD-R model suggests that high job demands (workload, time pressure) paired with low resources (autonomy, support) increase the likelihood of S and BO (Demerouti et al., 2001). COR proposes that individuals become stressed when they perceive a threat of resource loss or are unable to replenish depleted psychological, physical, or social resources (Hobfoll, 1989).

2.2. Burnout (BO)

According to Maslach and Jackson (1981), BO is a psychological syndrome that emerges as a prolonged response to chronic occupational stressors, featuring emotional exhaustion, depersonalization (or cynicism), and reduced personal accomplishment. Emotional exhaustion refers to feelings of being overextended and depleted of emotional and physical resources. Depersonalization involves a detached or indifferent attitude toward work and others, while reduced personal accomplishment reflects a decline in feelings of competence and success at work. Snarr and Beasley (2022) revealed that BO is particularly prevalent in professions that demand high emotional engagement, such as healthcare, education, and service-oriented leadership.

Theoretical foundation for BO is grounded in JD-R and COR. JD-R posits that BO arises when the psychological and physical demands of a job exceed the individual's access to supportive resources (Bakker & Demerouti, 2007). COR explains BO as the result of continuous threats to or losses of valued resources—such as energy, time, or emotional stability—without sufficient replenishment (Hobfoll, 1989).

2.3. Resilience (R)

Luthans et al. (2006) noted that R refers to the psychological capacity to adapt positively and recover effectively in the face of adversity and S. R reflects ongoing person–environment transactions in which individuals with high R tend to maintain emotional equilibrium, sustain goal-directed behavior, and flexible coping strategies under pressure. Core facets include emotional regulation, cognitive flexibility, optimism, self-efficacy, and persistence, supporting effective functioning when demands are high, and resources are strained.

R is based on PsyCap, BAB, and COR. PsyCap positions R alongside hope, efficacy, and optimism as a positive psychological capacity that can be developed and leveraged to improve wellbeing and performance (Luthans et al., 2007). BAB suggests that positive emotions broaden attention and cognition, enabling individuals to build durable resources that buffer subsequent stressors (Fredrickson, 2001). COR assumes that resilient employees are more effective at protecting, replenishing, and investing resources, thereby slowing resource-loss spirals that otherwise culminate in emotional exhaustion and disengagement (Hobfoll, 1989).

2.4. Mindfulness (M)

Kabat-Zinn (2003) and Bishop et al. (2004) noted that M refers to an awareness characterized by purposeful attention to the present moment, accompanied by an attitude of self-regulated attention, accepted experience, openness, curiosity, and non-judgment. M is viewed as a mental practice that fosters emotional balance and cognitive flexibility. M involves cultivating awareness of one’s internal experiences—thoughts, emotions, bodily sensations—and external stimuli, while maintaining an accepting and non-reactive stance.

M is based on SR, BAB, COR, JD-R. SR posits that M enhances individuals’ capacity to observe internal cues and regulate behavior in alignment with goals, reducing impulsive reactions and maladaptive coping (Carver & Scheier, 1998). BAB suggests that M induces positive emotions that expand attention, cognition, and behavioral repertoires, leading to the development of long-term resources such as R and emotional intelligence (Fredrickson, 2001). COR assumes that M can be understood as a resource-building process that replenishes depleted psychological reserves (Hobfoll, 1989). By preventing resource loss and promoting cognitive recovery, M interrupts the S-BO cycle and sustains engagement at work (Van der Riet et al., 2018). JD-R posits that high job demands exhaust employees’ resources, while M buffers this effect. M moderates the relationship between job demands and BO (Grover et al., 2017). Through attention regulation, M improves self-awareness, enhances emotional regulation, and facilitates adaptive coping strategies, helping individuals to perceive work demands more accurately and recover more efficiently from strain (Good et al., 2016).

2.5. Job performance (JP)

Borman and Motowidlo (1993) argued that JP refers to the behaviors and outcomes through which employees contribute to organizational effectiveness, encompassing task performance (the execution of duties) and contextual performance (discretionary behaviors like cooperation, adaptability, and initiative). JP is understood as a function of technical ability and cognitive, emotional, and motivational processes that determine how effectively individuals respond to workplace demands (Campbell & Wiernik, 2015).

JP is based on JD-R, PsyCap, and SDT. JD-R proposes that performance is optimized when job resources—such as autonomy, feedback, and social support—balance the psychological and physical demands of work (Bakker & Demerouti, 2007). PsyCap highlights those internal capacities like R, optimism, and self-efficacy are essential for sustaining effective performance under pressure (Luthans et al., 2007). SDT assumes that intrinsic motivation leads to greater engagement and productivity (Deci & Ryan, 2000). These perspectives suggest that JP results from a dynamic interaction between personal resources and organizational conditions.

2.6. Relationship between stress (S) and burnout (BO)

Kamali et al. (2022) showed that managers face stressors that intensify BO. Economic uncertainty, inflation, and weak organizational infrastructure often result in high job insecurity and low autonomy. Social norms that stigmatize psychological distress may discourage leaders from acknowledging BO. There is often an implicit expectation for managers to exhibit R, loyalty, and continuous productivity at the expense of mental health. This internalized pressure may delay self-care and accelerate BO. Most businesses lack fair workload distribution and performance feedback, which can mitigate BO. Maslach and Leiter (2016a, b) and Schaufeli and Taris (2014) found that S positively affects BO across diverse occupational settings. Kamali et al. (2022) also reported elevated emotional exhaustion and depersonalization among healthcare workers operating in high-stress environments. Alinejad et al. (2023) demonstrated that occupational S predicted BO and reduced performance among service employees.

JD-R assumes that poor leadership elevates job demands and leads to exhaustion (Bakker and Demerouti, 2007). TMSC assumes that individuals experience strain when environmental demands, exceeding their coping capacities. Persistent exposure to such stressors depletes emotional energy, leading to exhaustion and disengagement (Lazarus & Folkman, 1984). COR suggests that continuous resource loss contributes to BO (Hobfoll, 1989).

H1: S is positively associated with BO.

2.7. Relationship between resilience (R) and burnout (BO)

Maslach and Leiter (2016a, b) emphasized that BO has become a global occupational health crisis, urging organizations to address individual and systemic contributors in which BO is a psychological response to excessive demands and a reflection of structural and cultural deficiencies within organizations. Zahednezhad et al. (2021) found that high R and quality of work life were significantly associated with lower BO among nurses during the COVID-19 pandemic. Amiri et al. (2023) reported that R significantly mediated the association between job S and satisfaction, while Zahednezhad et al. (2021) noted that higher R and better work–life quality were associated with lower BO during intense pressure, underscoring R as a protective factor against BO and a positive predictor of sustained job performance. Avey et al. (2010) and Zahednezhad et al. (2021) found that employees with higher R experience lower BO and better psychological well-being.

PsyCap posits that R enhances emotional regulation and problem-solving capabilities, reducing the impact of S on exhaustion (Luthans et al., 2007).

H2: R is negatively associated with BO.

2.8. Relationship between mindfulness (M) and burnout (BO)

Hülshager et al. (2013) demonstrated that workplace M significantly reduces emotional exhaustion and enhances work engagement among service employees. Donald et al. (2020) found that M promotes psychological safety and improves leadership quality, while Malinowski and Lim (2015) reported that M training enhances cognitive flexibility and job satisfaction among organizational leaders. M promotes wellbeing and performance in occupational settings. Hülshager et al. (2013) and Talebiazar et al. (2024) found that M adversely affects BO in healthcare settings.

BAB suggests that M broadens cognitive and emotional perspectives, allowing individuals to preserve resources and reduce BO risk (Fredrickson, 2001). SR assumes that M enhances individual capacity to regulate behavior in combination with goals, reducing impulsive reactions and maladaptive coping (Carver & Scheier, 1998). COR posits that M eases resource building process that sustains engagement and reduces BO (Hobfoll, 1989). JD-R assumes that M buffers the negative effect of high job demands, leading to exhaustion (Grover et al., 2017).

H3: M is negatively associated with BO.

2.9. Relationship between resilience (R) and job performance (JP)

Workplace R training can improve wellbeing, S management, and performance across sectors (Robertson et al., 2015). R moderates the S–performance linkage, dampening the translation of high demands into impaired functioning in the service industry (Nguyen et al., 2022). Judge et al. (2001) found that emotional stability and conscientiousness predict JP across

diverse occupational settings. Luthans et al. (2007) demonstrated that resilient managers can maintain focus, recover from setbacks, and engage with team members. Youssef and Luthans (2007) and Amiri et al. (2023) revealed a positive link between R and JP in managerial and service-oriented contexts.

PsyCap theory assumes that resilient individuals demonstrate higher adaptability, perseverance, and motivation that sustain effective performance under pressure (Luthans et al., 2007).

H4: R is positively associated with JP.

2.10. Relationship between burnout (BO) and job performance (JP)

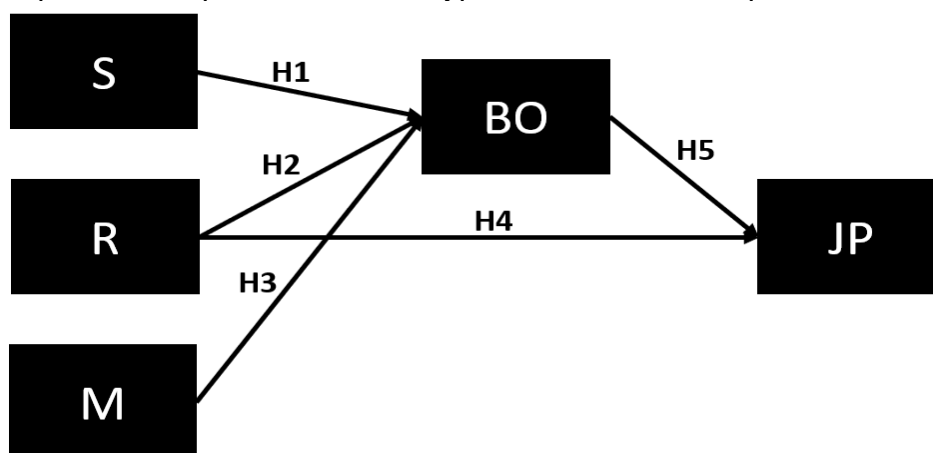
Alinejad et al. (2023) reported that occupational exhaustion negatively affects JP, with moral and emotional intelligence acting as protective mediators among managers. Azizi et al. (2021) found that job satisfaction and psychological capital significantly improve performance in service industries, highlighting that JP depends on technical proficiency, psychological resources, and supportive work environments. Bakker and Demerouti (2007) argued that prolonged exposure to high job demands without sufficient resources leads to emotional exhaustion, which reduces motivation, commitment, communication, and performance. Schaufeli and Bakker (2004) and Marchand and Blanc (2016) found that BO adversely affects JP across organizational settings.

COR proposes that individuals strive to retain, protect, and build valuable resources. When these resources are lost or threatened, BO and diminished performance follow (Hobfoll, 1989).

H5: BO is negatively associated with JP.

Figure 1 illustrates the hypothesized relationships among the study variables.

Figure 1
Proposed Conceptual Model and Hypothesized Relationships



Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. Arrows indicate direct relationships between variables. H1–H5 correspond to the research hypotheses tested in this study.

3. Research methodology

3.1. Sample and data collection

The original measurement scales were translated from English into Persian using a standard translation and back-translation procedure to ensure linguistic equivalence. This approach, which involved bilingual experts and independent back-translation, is widely recommended for enhancing the reliability and validity of cross-cultural instruments (Beaton et al., 2000).

After finalizing the translated questionnaires, data were collected from full-time fitness club managers working in different fitness clubs located in a major metropolitan city of a developing country. The questionnaires were distributed directly to managers who were actively employed at the time of data collection. A total of 225 questionnaires were distributed, and 160 were returned, yielding a response rate of 71.1%. After screening the responses, 10 questionnaires were excluded due to excessive missing data or response inconsistencies, resulting in a final sample of 150 usable questionnaires. Participation was voluntary, and respondents were assured of confidentiality.

The study employed a convenience sampling method due to practical constraints related to access, time, and availability of participants. Convenience sampling is commonly used in organizational and field-based research when probability sampling is not feasible (Etikan et al., 2016). The final sample reflected a balanced gender distribution and included managers with diverse ages, educational backgrounds, and levels of managerial experience. However, this sampling approach may introduce potential bias, which is acknowledged as a limitation of the study.

This study employed a quantitative, cross-sectional survey design to examine the relationships among S, R, M, BO, and JP among fitness club managers. Data were collected using a structured, self-administered questionnaire distributed to managers working in fitness clubs. Participation was voluntary, and respondents were assured of confidentiality and anonymity to minimize response bias. Only individuals holding managerial responsibilities were eligible to participate.

A total of 150 usable questionnaires were obtained and included in the final analysis. The sample comprised an equal number of male and female respondents and reflected a range of age groups, educational backgrounds, and levels of managerial experience. The demographic characteristics of the participants are summarized (Table 1).

Table 1
Demographic Characteristics of Participants

Variable	Categories	Frequency	Percent
Age	Below 25 years	50	33.30%
	25-34	60	40.00%
	35-44	25	16.70%
	45 and above	15	10.00%
	Total	150	100.00%
Gender	Male	75	50.00%
	Female	75	50.00%
	Total	150	100.00%
Qualification	Bachelor's Degree	70	46.70%
	Master's Degree	60	40.00%
	PhD	20	13.30%
	Total	150	100.00%
Managerial Experience	Less than 6 years	80	53.30%
	6-10 years	40	26.70%
	11-15 years	20	13.30%
	16-20 years	10	6.70%
	Total	150	100.00%

Note. N = 150 fitness club managers. Age and managerial experience are reported in years.

3.2. Measures

All study constructs were measured using well-established and validated instruments widely applied in organizational and psychological research. Unless otherwise stated, responses were recorded on five-point Likert-type scales ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating higher levels of the respective constructs. An overview of the measurement scales, item counts, scale characteristics, and internal consistency reliability coefficients is provided (Table 2).

Perceived S was measured using the 10-item Perceived Stress Scale (PSS) (Cohen et al., 1993), which assesses individuals' perceptions of unpredictability and lack of control.

BO was assessed using the 22-item Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981), capturing emotional exhaustion, depersonalization, and reduced personal accomplishment.

R was measured with the 25-item Connor–Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003), which evaluates adaptability, confidence, and perceived control under stressful conditions.

M was assessed using the 15-item Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003), measuring dispositional mindfulness and present-moment awareness.

JP was measured using the 15-item Patterson Job Performance Questionnaire (P-JPQ) (Patterson & Husband, 1970), which assesses work quality, responsibility, effort, and cooperation.

Table 2
Summary of Measures Used in the Study

Variable	Scale	Reference	Items	Subdimensions / Notes	Cronbach's α
S	Perceived Stress Scale (PSS)	Cohen et al. (1993)	10	Measures perceived lack of control and unpredictability	0.80
BO	Maslach Burnout Inventory (MBI)	Maslach and Jackson (1981)	22	Emotional exhaustion, depersonalization, reduced personal accomplishment	0.85
R	Connor–Davidson Resilience Scale (CD-RISC)	Connor and Davidson (2003)	25	Measures adaptability, confidence, and control under pressure	0.89
JP	Patterson Job Performance Questionnaire (PJPQ)	Patterson & Husband (1970)	10	Assesses work quality, responsibility, effort, and cooperation	0.82
M	Mindful Attention Awareness Scale (MAAS)	Brown and Ryan (2003)	15	Measures dispositional mindfulness	0.87

Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. All measures used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alpha values indicate internal consistency reliability. N = 150.

3.3. Reliability and measurement validity

Internal consistency reliability was examined using Cronbach's alpha coefficients for all study variables. All scales demonstrated acceptable to strong reliability, with alpha values ranging from .80 to .89 (Table 3). These values exceed the commonly accepted minimum threshold of .70, indicating that the measurement instruments used in this study were internally consistent and reliable (Nunnally & Bernstein, 1994; Hair et al., 2017). Among the constructs, R showed the highest reliability ($\alpha = .89$), followed by M ($\alpha = .87$), BO ($\alpha = .85$), JP ($\alpha = .82$), and S ($\alpha = .80$).

Confirmatory factor analysis (CFA) was conducted to assess the adequacy of the measurement model and to confirm that the constructs were empirically distinct. Model fit was evaluated using multiple fit indices, including the chi-square to degrees of freedom ratio (χ^2/df), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Standardized Root Mean Square Residual (SRMR). As reported in Table 4, the CFA results indicated acceptable model fit across all constructs. Specifically, χ^2/df values were below the recommended cutoff of 5.0, RMSEA values ranged from .068 to .081, and SRMR values were below .08, suggesting reasonable model fit (Hu & Bentler, 1999; Kline, 2015). Although CFI values were slightly below the conventional .90 benchmark, they remained within an acceptable range for field research and complex behavioral models (Hair et al., 2017).

Convergent validity and construct reliability were further evaluated using standardized factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). As presented in Table 5, all retained items loaded significantly on their intended constructs ($p < .001$), with standardized loadings ranging from .66 to .85, exceeding the recommended minimum of .60 (Hair et al., 2019). Composite reliability values ranged from .76 to .84, indicating satisfactory construct reliability. AVE values met or closely approached the recommended threshold of .50, supporting adequate convergent validity for most constructs (Fornell & Larcker, 1981). Taken together, these results provide strong evidence that the measurement model demonstrates acceptable reliability and validity.

Table 3
Reliability Coefficients of Research Variables

Variable	Scale	Items	Cronbach's α
S	Perceived Stress Scale (PSS)	10	0.80
BO	Maslach Burnout Inventory (MBI)	22	0.85
R	Connor–Davidson Resilience Scale (CD-RISC)	25	0.89
M	Mindful Attention Awareness Scale (MAAS)	15	0.87
JP	Patterson Job Performance Questionnaire (P-JPQ)	10	0.82

Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. Cronbach's alpha values indicate internal consistency reliability. N = 150.

Table 4
Confirmatory Factor Analysis (CFA) Results and Model Fit Indices

Variable	χ^2/df	RMSEA	CFI	SRMR
S	3.12	0.076	0.85	0.065
BO	3.45	0.081	0.84	0.071
R	2.97	0.070	0.86	0.062
M	3.08	0.072	0.87	0.060
JP	2.85	0.068	0.88	0.058

Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. χ^2/df = chi-square divided by degrees of freedom; RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardized root means square residual.

Table 5
Standardized Factor Loadings and Convergent Validity Estimates

Construct	Item	Standardized Loading	AVE	CR
S	S1	0.72	0.50	0.76
	S2	0.68		
	S3	0.75		
BO	BO1	0.81	0.59	0.81
	BO2	0.77		
	BO3	0.79		
R	R1	0.70	0.49	0.78
	R2	0.66		
	R3	0.73		
M	M1	0.76	0.55	0.82
	M2	0.73		
	M3	0.78		
JP	JP1	0.82	0.58	0.84
	JP2	0.85		
	JP3	0.80		

Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. All standardized factor loadings were statistically significant ($p < .001$). AVE = Average Variance Extracted; CR = Composite Reliability.

3.4 Data analysis strategy

Data analysis was conducted using standard quantitative statistical procedures. Descriptive statistics were first calculated to summarize the central tendency and variability of the study variables. In addition, skewness and kurtosis values were examined to assess univariate normality. The results of these analyses indicated that the data met the assumptions required for parametric statistical testing (Table 6).

Pearson correlation analyses were performed to examine the bivariate relationships among S, BO, R, M, and JP. These correlations provided an initial overview of the strength and direction of associations among the study variables and offered preliminary support for the proposed hypotheses. The correlation matrix is reported in Table 7.

To formally test the hypothesized relationships, a series of simple linear regression analyses were conducted. Each regression model examined the direct effect of a single predictor variable on its corresponding outcome variable, as specified in the hypotheses. Unstandardized regression coefficients (B), t-values, F-statistics, and explained variance (R^2) were reported to assess the magnitude and statistical significance of each relationship. Results of the regression analyses are summarized in Table 8 and Figure 2, and statistical significance was evaluated using conventional two-tailed thresholds.

Additional analyses were conducted to examine potential differences in the study variables across demographic groups. Independent-samples t-tests were used to compare mean differences by gender, while one-way analysis of variance (ANOVA) was used to test differences across age, education level, and managerial experience. As no statistically

significant demographic effects were observed, these variables were not included as control variables in the regression models. Detailed results of these supplementary analyses are provided (Appendix A1 and A2).

Table 6
Descriptive Statistics and Normality Assessment of Study Variables

Variable	N	Mean	SD	Skewness	Kurtosis
S	150	3.12	0.85	-0.32	0.18
BO	150	2.19	0.95	-0.10	-0.45
R	150	4.25	0.65	-0.48	0.51
M	150	4.10	0.72	-0.25	0.12
JP	150	4.18	0.70	-0.41	0.29

Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. N = 150. SD = standard deviation. Skewness and kurtosis values indicate acceptable univariate normality.

Table 7
Pearson Correlation Matrix for Study Variables

Variable	(1)	(2)	(3)	(4)	(5)
(1) S	1				
(2) BO	.58**	1			
(3) R	-.49**	-.53**	1		
(4) M	-.36**	-.45**	.46**	1	
(5) JP	-.41**	-.47**	.59**	.51**	1

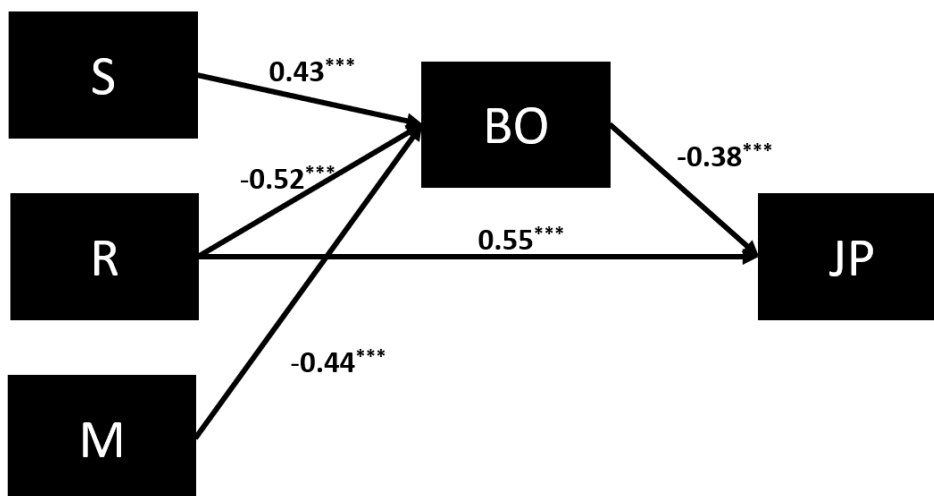
Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. N = 150. Values represent Pearson correlation coefficients. **p < .05.

Table 8
Simple Linear Regression Results for Hypothesized Relationships

Hypothesis	Predictor	→ Outcome	B	t	F	R ²
H1	S	→ BO	0.43	6.11***	37.32***	0.23
H2	R	→ BO	-0.52	-7.32***	53.58***	0.27
H3	M	→ BO	-0.44	-6.61***	43.68***	0.21
H4	R	→ JP	0.55	7.09***	50.26***	0.32
H5	BO	→ JP	-0.38	-5.68***	32.26***	0.18

Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. B = unstandardized regression coefficient. ***p < .001 (two-tailed). N = 150.

Figure 2
Estimated Path Coefficients for the Hypothesized Model



Note. Values shown on the arrows represent unstandardized regression coefficients (B). S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. ***p < .001.

4. Results

4.1. Measurement model and descriptive results

Prior to hypothesis testing, the measurement properties of the study constructs were examined. As reported earlier, all scales demonstrated satisfactory internal consistency reliability (Table 3).

The CFA results supported the adequacy of the measurement model. Fit indices indicated acceptable model fit across all constructs (Table 4), and standardized factor loadings, AVE, and CR values provided evidence of convergent validity and construct reliability (Table 5).

Descriptive statistics and normality assessments for the main study variables are reported (Table 6). The results indicate moderate levels of perceived S and BO, alongside relatively high levels of R, M, and JP among fitness club managers. Skewness and kurtosis values fell within acceptable ranges, suggesting no substantial departures from normality.

Pearson correlation coefficients among the study variables are presented (Table 7). Perceived S was positively correlated with BO and negatively correlated with R, M, and JP. BO was negatively associated with R, M, and JP, while R and M were positively related to JP. Overall, the correlation patterns were consistent with the proposed hypotheses.

4.2. Hypothesis testing

The proposed hypotheses were tested using simple linear regression analyses. The regression results are summarized (Table 8). Consistent with H1, perceived S was positively and significantly associated with BO ($B = 0.43$, $t = 6.11$, $p < .001$), explaining 23% of the variance in BO. In support of H2, R was negatively related to BO ($B = -0.52$, $t = -7.32$, $p < .001$), accounting for 27% of the variance. Similarly, H3 was supported, as M was negatively associated with BO ($B = -0.44$, $t = -6.61$, $p < .001$), explaining 21% of the variance. Regarding JP, H4 was supported. R demonstrated a positive and statistically significant association with JP ($B = 0.55$, $t = 7.09$, $p < .001$), accounting for 32% of the variance. H5 was supported, as BO was negatively associated with JP ($B = -0.38$, $t = -5.68$, $p < .001$), explaining 18% of the variance. Overall, the regression analyses provided strong support for all hypothesized relationships.

4.3. Supplementary analyses

Supplementary analyses examining demographic differences are reported (Appendix A1 and A2). No statistically significant differences were observed across gender, age, education level, or managerial experience for any of the main study variables. Accordingly, demographic variables were not included as control variables in the regression analyses.

5. Discussion

5.1. Theoretical implications

The study reveals a significant positive association between S and BO (H1) with findings corroborated by various previous research studies (Maslach & Leiter, 2016a, b; Kamali et al., 2022; Schaufeli & Taris, 2014; Alinejad et al., 2023). H1 illustrates the major impact of job demands, such as long working hours, emotional exhaustion, and performance pressures that drain employees' psychological resources, on BO in the service industry in a developing country, thereby endorsing JD-R (Bakker & Demerouti), TMSC (Lazarus & Folkman, 1984), and COR (Hobfoll, 1989).

Zahednezhad et al. (2021), Amiri et al. (2023), Avey et al. (2010), Maslach and Leiter (2016b), Robertson et al. (2015), Youseff and Luthans (2007), Judge et al. (2001), Nguyen et al. (2022), and Amiri et al. (2023) all support that R reduces BO (H2) and improves JP (H4). H2 and H4 demonstrate that resilient managers who convey hope, optimism, efficacy, perseverance, emotional regulation, and problem-solving ability adapt and thrive in the face of adversity and can buffer the negative effects of S and BO while sustaining high levels of professional effectiveness. In doing so, this study expands the scope of PsyCap (Luthans et al., 2007) within organizational settings in emerging economies.

Prior research (Hülshager et al., 2013; Talebiazar et al., 2024; Donald et al., 2020; Malinowski & Lim, 2015) suggests that M adversely affects BO (H3). H3 shows that mindful managers who possess cognitive and emotional capacity to regulate behavior buffer impulsive reactions and job demands, leading a reduction in exhaustion. Thus, the study expands the scope of BAB (Fredrickson, 2001), SR (Carver & Scheier, 1998), COR (Hobfoll, 1989), and JD-R (Bakker & Demerouti, 2007) in fitness industry in a developing country.

The study's finding that BO negatively affects JP (H5) aligns with the outcomes of works by Alinejad et al. (2023), Azizi et al. (2021), Schaufeli and Bakker (2004), and Marchand and Blanc (2016). H3 reveals that managers suffering from BO exhibited lower JP, validating the idea that depleted emotional and cognitive resources directly compromise task execution, thereby supporting COR (Hobfoll, 1989) in fitness sector in a developing country.

5.2. Managerial implications

A positive relationship between S and BO suggests that fitness clubs should develop S management skills training (time management, emotional regulation, and problem-solving), physical self-care (adequate sleep and hydration, participation, and exercise), psychological resilience-building (adaptive coping, realistic goals, peer sharing), workload and role clarity (clear roles and avoiding double shift), supportive leadership (regular feedback and open communication), adequate staffing (hiring part-time staff and cross training employees), social and peer support (informal managerial support groups and professional pairings), fair

compensation and bonuses, and reasonable working hours (Kortum et al., 2010; Richardson & Rothstein, 2008; Halbesleben, 2006; Goodger et al., 2007; Skakon et al., 2010; ILO, 2016).

Negative relationships between R/M and BO suggest that fitness clubs should build structured R and M programs with clear goals, review workloads and schedules to adjust unrealistic expectations, teach problem-solving, coping, listening, non-judgmental feedback, link wellbeing programs to organizational outcomes, create spaces to discuss stressors, survey staff on program relevance and workload impact, encourage counseling or peer support for managers to handle operations, and provide stress management education and mental health professionals (Doui et al., 2025; Elkady, 2019; Gelaw et al., 2023). These resilience and mindfulness-building programs, which should be included in training schedules and performance strategies, can assist managers in dealing with stress, improving emotional regulation, self-confidence, adaptability, mental agility, and reducing BO in demanding tasks.

A positive relationship between R and JP suggests that fitness clubs should teach managers adaptive thinking, problem-solving, and focus; establish peer support systems (mentoring and case-sharing); align member retention, staff engagement, and safety compliance with wellbeing and service quality; offer predictable shift planning, transparent pay systems, and supportive leadership; guarantee rest periods; incorporate recovery practices (breathing, relaxing, sleeping, nutrition, and hydration); set clear goals and feedback loops; employ peer-trainers; and measure JP, absenteeism, customer satisfaction, member retention, turnover intention, and BO scores (Shen et al., 2024; Kasparikova et al., 2018; Winwood et al., 2013).

A negative relationship between BO and JP suggests that fitness clubs should lower job demands (predictable schedules, rotation for demanding tasks, and standardization of processes), offer autonomy, clear roles, support, and training opportunities, develop mentoring programs and problem-solving workshops, guarantee member retention and satisfaction, teach task prioritization and realistic goal-setting, practice coaching and praise effort, screen stress, and enforce micro-breaks and rest days (Maslach & Leiter, 2016a, b; Salvagioni et al., 2016).

6. Limitations and research agenda

Data from 150 full-time managers from various fitness clubs may not fully represent the broader population in the fitness industry across a developing country. The diversity in geographic location, club size, organizational culture, and socioeconomic background was not systematically controlled. A larger, more stratified sample in future research would help improve statistical power and enhance external validity. The study employed a convenience sampling method may have introduced self-selection bias. Participants who chose to respond might have had prior awareness of, or stronger experiences with, S and BO, potentially

influencing the observed relationships. The cross-sectional design of the study restricts the ability to draw causal inferences. Since data were collected at a single point in time, the temporal sequence of variables—such as whether S leads to BO or vice versa—cannot be conclusively established. Longitudinal research designs are required to trace the development and directionality of these psychological dynamics over time. All participants were based in a developing country, and thus the findings reflect sociocultural, economic, and managerial norms specific to this setting. It is unclear whether the same relationships between S, BO, R, M, and JP would hold in different countries or cultures, particularly those with contrasting organizational practices or mental health norms. Future research should pursue cross-cultural replications to evaluate the universality versus cultural specificity of these findings. All constructs in this study were measured using self-report instruments. Although these are widely used in psychological research, they are susceptible to social desirability bias, memory inaccuracies, and subjective interpretation. Relying solely on participant-reported data may compromise the objectivity of the results. Future studies should consider integrating supervisor evaluations, peer feedback, or objective performance metrics, to triangulate the findings and improve measurement validity.

Future studies are encouraged to employ longitudinal research designs to assess how S, BO, and R evolve over time, helping establish causal inferences and clarify the sustained impact of interventions like M training. To enhance methodological rigor, future research should utilize controlled experimental designs to test the effectiveness of M-based tools in workplaces.

Comparing intervention and control groups can yield stronger evidence to support organizational implementation strategies. Examining the influence of organizational climate, leadership style, and team cohesion could help clarify how environmental variables interact with individual-level interventions. Understanding these dynamics may enable more targeted strategies for BO prevention. To complement self-reported measures, future studies should incorporate objective performance data, such as supervisor ratings, absenteeism records, or client satisfaction scores that can enhance the external validity of research findings and support practical application. Emerging technologies such as mobile applications, biofeedback wearables, and digital wellness platforms hold promise for expanding access to M-based tools. Investigating their usability and effectiveness among different managerial populations is a worthwhile direction. By addressing these research opportunities, future investigations can build a more comprehensive understanding of how to mitigate occupational S, cultivate R, and sustain high performance in complex service environments.

7. Conclusion

The associations between S, BO, R, M, and JP among fitness club managers in a developing nation were examined in this study. All of the hypotheses were statistically supported, demonstrating that S positively predicts BO, BO negatively affects JP, and R and M significantly reduce BO while improving JP. This broadens the scope of JD-R, COR, PsyCap, TMSC, SR, BAB, and SDT, and reveals pathways to managerial wellbeing that enhances service quality in the fitness industry.

A multifaceted view of how S, R, and M interact to affect managerial success under pressure is provided by the study. As a psychological resource, M helps people better handle job demands, refill exhausted resources, and stop the escalation of S and BO by providing a self-regulatory mechanism that improves emotional balance, attentional control, and cognitive clarity. Similarly, R, a powerful and protective factor, was both raising JP and decreasing BO, supporting the notion that R is a psychological resource that may be developed rather than a fixed characteristic. These results imply that psychological R&M training ought to be regarded as a key component of contemporary managerial development.

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Conflict of Interest Statement

The authors declare no conflict of interest.

Data Availability Statement

The data cannot be shared due to privacy concerns.

Ethics Approval and Consent

Ethical approval was obtained from the Ethics Committee of Halic University.

Author Contributions

Cemil Kuzey: Data modeling and analysis.

Nuri Gökhan Torlak: Introduction and hypothesis development.

Joy Roach Humphreys: Organization of the paper, reviewing, and editing.

Sevda Ebrahimi: Data collection and literature review.

Use of Artificial Intelligence Tools

No artificial intelligence tools were used in the preparation of this manuscript.

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Appendix

Table A1
Independent-Samples t-Tests by Gender

Variable	Gender	Mean	SD	t	p
S	Male	3.10	0.84	0.56	.578
	Female	3.14	0.86		
BO	Male	2.21	0.96	-0.31	.756
	Female	2.18	0.94		
R	Male	4.22	0.67	-0.51	.612
	Female	4.28	0.63		
M	Male	4.05	0.71	-0.84	.402
	Female	4.14	0.72		
JP	Male	4.20	0.69	0.49	.622
	Female	4.17	0.71		

Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. N = 150. SD = standard deviation. p values are two-tailed.

Table A2
One-Way ANOVA Results by Demographic Characteristics

Variable	Factor	Mean Square	F	p
S	Age	0.61	0.91	.437
	Education	0.84	1.27	.285
	Experience	0.55	0.83	.479
B	Age	0.71	0.74	.528
	Education	0.66	0.69	.503
	Experience	0.82	1.02	.386
R	Age	0.67	1.12	.343
	Education	0.58	0.91	.406
	Experience	0.60	0.97	.410
M	Age	0.54	0.88	.453
	Education	0.70	1.08	.345
	Experience	0.50	0.75	.523
JP	Age	0.61	0.96	.417
	Education	0.56	0.82	.442
	Experience	0.73	1.05	.373

Note. S: stress, R: resilience, M: mindfulness, BO: burnout, JP: job performance. N = 150. All F tests are non-significant.