KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 08 April 2026
Revised 08 July 2026
Accepted 15 July 2026
Initial Publication 29 July 2026
Final Publication 01 November 2026

International Journal of Innovation Management and Organizational Behavior

Volume 6, Issue 6, pp 1-13

E-ISSN: 3041-8992

The Effect of Artificial Intelligence–Induced Stress on Employees' Individual Creativity: Examining the Roles of Stress-Coping Strategies and Management Commitment

Hamideh. Shekari[1*], Saeidreza. Kamanchi[2]

[1] Assistant Professor, Department of Public Administration, Payame Noor University, Tehran, Iran
[2] M.A., Department of Public Administration, Payame Noor University, Tehran, Iran

*** Corresponding author email address**: H.Shekari@pnu.ac.ir

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Shekari, H. & Kamanchi, S. (2026). The Effect of Artificial Intelligence–Induced Stress on Employees' Individual Creativity: Examining the Roles of Stress-Coping Strategies and Management Commitment. *International Journal of Innovation Management and Organizational Behavior*, *6*(6) 1-13.
https://doi.org/10.61838/kman.ijimob.5815

A B S T R A C T

Objective: The present study aimed to investigate the effect of artificial intelligence–induced stress on employees' individual creativity, considering the mediating role of stress-coping strategies and the moderating role of management commitment.

Methods and Materials: In terms of purpose, this was an applied study, and methodologically, it employed a descriptive survey design. The statistical population comprised all permanent employees of the Yazd City Gas Company between September 2025 and March 2026. Based on Cochran's formula, 125 employees were selected through simple random sampling. Data were collected using the standardized questionnaire developed by Tong et al. (2025), which assessed artificial intelligence–induced stress, stress-coping strategies, individual creativity, and management commitment. The validity of the instrument was confirmed through confirmatory factor analysis, average variance extracted, and the Fornell–Larcker criterion, while its reliability was verified using Cronbach's alpha and composite reliability. The data were analyzed using SPSS version 26 and structural equation modeling in SmartPLS version 4.

Findings: The results indicated that artificial intelligence–induced stress had a direct and significant effect on stress-coping strategies, which, in turn, significantly enhanced employees' individual creativity. The indirect effect of artificial intelligence–induced stress on individual creativity through the mediating variable of stress-coping strategies was also confirmed. However, the direct effect of artificial intelligence–induced stress on individual creativity was not statistically significant. Furthermore, the moderating role of management commitment in the relationship between artificial intelligence–induced stress and stress-coping strategies was not confirmed.

Conclusion: The findings demonstrated that artificial intelligence–induced stress does not necessarily lead directly to a reduction in employee creativity; rather, the manner in which employees manage and cope with this stress determines its creative outcomes. The use of adaptive coping strategies can transform technology-related pressures into opportunities for learning, intrinsic motivation, and creative ideation.

Keywords: *artificial intelligence–induced stress, employees' individual creativity, stress-coping strategies, management commitment.*

1 Introduction

Organizations currently operate in environments characterized by rapid technological change, intense competition, and increasing complexity. Under such conditions, employee creativity is recognized as one of the most important sources of sustainable competitive advantage, and organizations capable of developing the creative capacities of their human resources are more likely to respond successfully to environmental challenges (Panda & Swamy, 2025). Employee creativity not only contributes to the generation of novel ideas and the improvement of work processes but also plays a decisive role in enhancing productivity, improving service quality, increasing customer satisfaction, and strengthening organizational innovation (Miao et al., 2020). Accordingly, attention to the factors influencing employees' individual creativity has become one of the principal areas of research in management and organizational behavior over recent decades (Khairy et al., 2025).

Individual creativity in the workplace refers to employees' ability to generate novel, useful, and applicable ideas that can improve individual and organizational performance. Researchers maintain that creativity results from the interaction of individual, psychological, and organizational factors and that variables such as intrinsic motivation, psychological empowerment, leadership style, and working conditions can influence it (Rajab Dari et al., 2021; Yuan, 2022). In this context, the ability to think creatively and innovatively has become increasingly important in technology-oriented organizations because organizational survival and competitiveness in dynamic markets require creative and flexible responses (Yohanna & Suleiman, 2024). Employee creativity can also provide a foundation for organizational transformation and the development of technological innovations (Taheri Lari et al., 2025).

In recent years, the emergence and expansion of artificial intelligence–based technologies have fundamentally transformed traditional organizational structures. By providing capabilities such as big-data analytics, intelligent decision-making, process automation, and machine learning, artificial intelligence has created extensive opportunities to improve organizational performance (Benbya et al., 2020). Organizations use artificial intelligence technologies to improve efficiency, reduce costs, accelerate decision-making processes, and create value (Wang et al., 2020). Research has also demonstrated that the adoption of artificial intelligence can facilitate organizational transformation, strengthen innovation, and improve knowledge management (Taheri Lari et al., 2025).

Despite the extensive advantages of artificial intelligence, the introduction of this technology into workplaces has also generated numerous concerns and psychological pressures for employees. Many employees are concerned about being replaced by intelligent systems, declining job security, increasing task complexity, and the necessity of continuously learning new technologies (Kim et al., 2025; Li & Huang, 2020). These concerns, which are referred to as "artificial intelligence–induced stress" or "artificial intelligence anxiety," have become an important challenge for contemporary organizations (Kaya et al., 2022). Researchers define artificial intelligence–induced stress as a form of psychological pressure arising from the perceived threat posed by intelligent technologies across occupational, social, and cognitive dimensions (Kim & Lee, 2025).

Artificial intelligence–induced stress is generally conceptualized in terms of two main dimensions: replacement stress and learning stress. Replacement stress refers to employees' concerns about the elimination or weakening of their occupational roles as a result of automation and the use of intelligent systems, whereas learning stress originates from a perceived inability to adapt to new technologies and acquire digital skills (Li & Huang, 2020; Tong et al., 2025). This type of stress can deplete employees' cognitive and emotional resources and lead to reduced concentration, motivation, and creative performance (Manosso et al., 2022).

Some studies have shown that stress arising from emerging technologies, particularly artificial intelligence, has numerous negative consequences for employees' mental health and work-related behaviors. For example, artificial intelligence anxiety can intensify feelings of job insecurity, psychological exhaustion, and diminished professional self-confidence (Kim et al., 2025). Employees exposed to rapid technological change also frequently feel that they have lost control over their work environment, which can negatively affect their motivation and creativity (Benbya et al., 2020). In complex, technology-based environments, the pressure associated with adapting to intelligent systems may reduce the risk-taking propensity and courage required to propose innovative ideas (Kim & Lee, 2025).

Conversely, some studies have highlighted the positive and dual effects of artificial intelligence on creative behaviors. Yin et al. demonstrated that artificial intelligence technologies can enhance employee innovation by

increasing creative self-efficacy, while simultaneously increasing technological anxiety by raising awareness of possible technological replacement (Yin et al., 2024). Gao also argued that artificial intelligence, when accompanied by psychological empowerment, can enhance employee creativity (Gao, 2021). Therefore, the relationship between artificial intelligence–induced stress and employee creativity is complex and multidimensional and is influenced by psychological and organizational variables.

Under such circumstances, stress-coping strategies emerge as some of the most important mechanisms regulating employee behavior. Coping strategies refer to the collection of cognitive and behavioral efforts individuals employ to manage psychological pressures and control the consequences of stress (Liang, 2019). These strategies are generally divided into two broad categories: problem-focused and emotion-focused strategies. Problem-focused strategies emphasize problem-solving, information seeking, and modifying stressful conditions, whereas emotion-focused strategies concentrate on regulating emotions and reducing psychological pressure (Garriott & Nisle, 2018).

Recent research has demonstrated that coping strategies can play an important role in reducing the negative effects of artificial intelligence–induced stress. Employees who employ adaptive coping strategies are better able to manage technological pressures and transform them into opportunities for learning and creativity (Tong et al., 2025). Effective coping strategies can also prevent the depletion of cognitive resources and preserve the mental capacity required for creative ideation (Liu & Liu, 2020). Conversely, inadequate coping skills may intensify anxiety, reduce motivation, and impair creative performance (Mao, 2021).

Several studies have examined the relationship between technological stress and creativity. For example, Mao demonstrated that artificial intelligence anxiety affects employee creativity and that coping strategies mediate this relationship (Mao, 2021). Nasaj et al. similarly found that collective artificial intelligence anxiety can influence team innovative behavior and that coping strategies play a decisive role in directing this effect (Nasaj et al., 2025). Yazdanmehr et al. also argued that the type of employee response to technology-related stress can influence adaptive or maladaptive behaviors (Yazdanmehr et al., 2023).

In addition to individual variables, organizational factors can influence the intensity of artificial intelligence–induced stress and its consequences. One of the most important of these factors is management commitment. Management commitment refers to the degree of support, participation, and dedication demonstrated by managers toward organizational objectives and employee well-being (Dubey et al., 2018). Managers who perform supportive and facilitating roles during digital transformation can strengthen employees' psychological safety and trust (He, 2020).

Management commitment is particularly important during the implementation of artificial intelligence because employees experiencing technological ambiguity require support, training, and transparency from managers (Neumann et al., 2024). When managers communicate transparently with employees about the objectives and consequences of artificial intelligence use and provide opportunities for employees to participate in technological changes, employees experience lower levels of stress and demonstrate a stronger inclination toward creative behaviors (Tong et al., 2025). Management commitment can also contribute to reducing job insecurity and strengthening employees' confidence in their occupational futures (Ebrahimnejad, 2021).

Recent research has also confirmed the importance of management and organizational support in responding to intelligent technologies. Neumann et al. demonstrated that a learning culture, senior management support, and organizational readiness are key factors in the successful adoption of artificial intelligence (Neumann et al., 2024). Hosseinzadeh Moghadam et al. similarly reported that technological awareness and organizational support can reduce technology-related stress and strengthen employee creativity (Hosseinzadeh Moghadam et al., 2024). Rezaei further reported that properly managed artificial intelligence technologies can contribute to improved mental health and reduced employee stress (Rezaei, 2024).

Despite the increasing volume of research on artificial intelligence, creativity, and technological stress, several research gaps remain. Most previous studies have focused either on the technological consequences of artificial intelligence or have examined the roles of individual variables separately. Moreover, few studies have simultaneously investigated the relationships among artificial intelligence–induced stress, stress-coping strategies, employees' individual creativity, and management commitment (Kumar et al., 2024; Shekari et al., 2025). Furthermore, many studies have not been conducted in industrial settings and service organizations in developing countries, which may limit the generalizability of their findings.

From a theoretical perspective, the present study can contribute to the development of the organizational behavior and technology management literature by examining the roles of psychological and managerial variables in explaining the consequences of artificial intelligence–induced stress. From a practical perspective, its findings can assist organizational managers in designing supportive strategies, providing coping-skills training, and developing creative work environments in the age of digital transformation (Bostani & Ghorban-Hosseini, 2020; Shekari & Hosseini, 2020).

Therefore, the present study aimed to investigate the effect of artificial intelligence–induced stress on employees' individual creativity, considering the mediating role of stress-coping strategies and the moderating role of management commitment.

2 Methods and Materials

In terms of purpose, the present research was applied; in terms of temporal design, it was cross-sectional; and in terms of data-collection method, it was a descriptive survey study. The statistical population consisted of 211 permanent employees of the Yazd City Gas Company during 2025–2026. The sample was selected from this population through simple random sampling. To determine the sample size, because the standard deviations of the variables were initially unknown, a preliminary sample of 30 participants was selected. After estimating the standard deviation as 0.428, the required sample size was calculated as 121 using Cochran's formula at a 95% confidence level and with a margin of error of 0.05. Ultimately, 125 complete and acceptable questionnaires were included in the analysis. The study was conducted in the field. The data-collection instrument comprised four questionnaires, the characteristics of which are presented in Table 1.

Table 1

Questionnaire Information

Variable	Questionnaire Source	Dimension	Number of Items
Artificial intelligence–induced stress	(Tong et al., 2025)	Replacement stress	3
Artificial intelligence–induced stress	—	Learning stress	3
Stress-coping strategies	—	Problem-focused strategy	5
Stress-coping strategies	—	Internal emotion-focused coping strategy	4
Stress-coping strategies	—	External emotion-focused coping strategy	4
Individual creativity	—	—	5
Management commitment	—	—	5

Descriptive analyses of the research data were performed using SPSS version 26, while analyses related to hypothesis testing were conducted through structural equation modeling using SmartPLS version 4.

3 Findings and Results

The results of the descriptive analysis of the demographic variables indicated that, among the 125 respondents participating in the study, 84% were men and 16% were women. Regarding marital status, 5.6% were single and 94.4% were married. In terms of age, 3.2% of the respondents were younger than 30 years, 34.4% were between 30 and 40 years, 56.8% were between 41 and 50 years, and 5.6% were older than 50 years. Regarding educational attainment, 12.8% held a high school diploma, 12.8% held an associate degree, 42.4% held a bachelor's degree, 31.2% held a master's degree, and 0.8% held a doctoral degree. Regarding work experience, 9.6% of the participants had fewer than 5 years of experience, 11.2% had between 6 and 10 years, 20.8% had between 11 and 15 years, 20.8% had between 16 and 20 years, and 37.6% had more than 21 years of work experience. The descriptive statistics for the four research variables are presented in Table 2.

Table 2

Descriptive Indicators of the Research Variables

Variable	Number of Responses	Mean	Standard Deviation	Variance
Artificial intelligence–induced stress	125	2.7387	0.73242	0.536
Stress-coping strategies	125	3.7552	0.67614	0.457
Individual creativity	125	2.6528	0.66529	0.443
Management commitment	125	3.1129	0.93191	0.868

The Kolmogorov–Smirnov and Shapiro–Wilk tests were used to assess the normality of the data distributions. The results of these tests are presented in Table 3. Given that the significance values for artificial intelligence–induced stress and stress-coping strategies were lower than 0.05 in both tests, the distributions of these two variables were considered non-normal. In contrast, the distributions of individual creativity and management commitment were considered normal.

Table 3

Results of the Assessment of Variable Distributions

Variable	Number of Responses	Shapiro–Wilk Test Sig.	Kolmogorov–Smirnov Test Sig.
Artificial intelligence–induced stress	125	0.020	0.003
Stress-coping strategies	125	0.002	0.000
Individual creativity	125	0.101	0.200
Management commitment	125	0.070	0.059

The reliability of the questionnaires was assessed using Cronbach's alpha and composite reliability, the results of which are presented in Table 4. The values of both Cronbach's alpha and composite reliability exceeded 0.70 for all variables; therefore, the questionnaires demonstrated acceptable reliability. Questionnaire validity was assessed using three methods: average variance extracted, the Fornell–Larcker criterion, and confirmatory factor analysis. The results obtained using average variance extracted are presented in Table 4. The average variance extracted value exceeded 0.50 for each variable, confirming the acceptable convergent validity of the questionnaires.

Table 4

Assessment of Validity and Reliability

Variable	Number of Dimensions/Items	Cronbach's Alpha	Composite Reliability	AVE
Stress-coping strategies	3	0.762	0.863	0.677
Artificial intelligence–induced stress	2	0.800	0.909	0.833
Management commitment	5	0.885	0.915	0.684
Individual creativity	5	0.890	0.920	0.698

The results of the assessment of discriminant validity using the Fornell–Larcker criterion are presented in Table 5. Because the square root of the average variance extracted for each construct, shown on the main diagonal of the matrix, was greater than the corresponding correlations below and to the right of it, the discriminant validity of the model was confirmed.

Table 5

Discriminant Validity Matrix Based on the Fornell–Larcker Criterion

Variable	Stress-Coping Strategies	Artificial Intelligence–Induced Stress	Management Commitment	Individual Creativity
Stress-coping strategies	0.823			

Artificial intelligence–induced stress	0.546	0.913		
Management commitment	0.343	0.141	0.827	
Individual creativity	0.394	0.119	0.219	0.836

The results of the validity assessment performed through confirmatory factor analysis are presented in Table 6.

Table 6

Results of the Confirmatory Factor Analysis of the Variables

Variable	Dimension	Item Number	Factor Loading	*t*-Statistic
Individual creativity	—	Q7	0.778	13.704
Individual creativity	—	Q8	0.881	29.069
Individual creativity	—	Q9	0.900	54.067
Individual creativity	—	Q10	0.886	48.294
Individual creativity	—	Q11	0.716	9.662
Management commitment	—	Q25	0.775	11.405
Management commitment	—	Q26	0.886	39.286
Management commitment	—	Q27	0.863	16.281
Management commitment	—	Q28	0.851	19.081
Management commitment	—	Q29	0.754	12.302
Artificial intelligence–induced stress	Replacement stress	Q1	0.825	21.384
Artificial intelligence–induced stress	Replacement stress	Q2	0.835	24.614
Artificial intelligence–induced stress	Replacement stress	Q3	0.848	33.272
Artificial intelligence–induced stress	Learning stress	Q4	0.819	12.244
Artificial intelligence–induced stress	Learning stress	Q5	0.835	8.115
Artificial intelligence–induced stress	Learning stress	Q6	0.747	6.417
Stress-coping strategies	Problem-focused strategy	Q12	0.573	6.378
Stress-coping strategies	Problem-focused strategy	Q13	0.728	10.367
Stress-coping strategies	Problem-focused strategy	Q14	0.890	44.818
Stress-coping strategies	Problem-focused strategy	Q15	0.835	27.496
Stress-coping strategies	Problem-focused strategy	Q16	0.821	16.548
Stress-coping strategies	External emotion-focused coping strategy	Q17	0.785	12.814
Stress-coping strategies	External emotion-focused coping strategy	Q18	0.822	21.964
Stress-coping strategies	External emotion-focused coping strategy	Q19	0.803	16.520
Stress-coping strategies	External emotion-focused coping strategy	Q20	0.759	12.145
Stress-coping strategies	Internal emotion-focused coping strategy	Q21	0.878	36.811
Stress-coping strategies	Internal emotion-focused coping strategy	Q22	0.892	40.649
Stress-coping strategies	Internal emotion-focused coping strategy	Q23	0.827	24.305
Stress-coping strategies	Internal emotion-focused coping strategy	Q24	0.921	63.338

As shown in Table 6, all factor loadings exceeded 0.40, and the absolute values of all significance coefficients were greater than 1.96. Therefore, all measurement relationships were statistically significant, and the validity of the constructs was confirmed. Accordingly, no item needed to be removed before estimating the research structural model and examining the paths of the conceptual model. Structural equation modeling using SmartPLS version 4 was employed to evaluate the conceptual model. The path coefficients are presented in Figure 1, and the results concerning path significance are presented in Figure 2.

Figure 1

Research Structural Model in the Standardized Estimation Mode

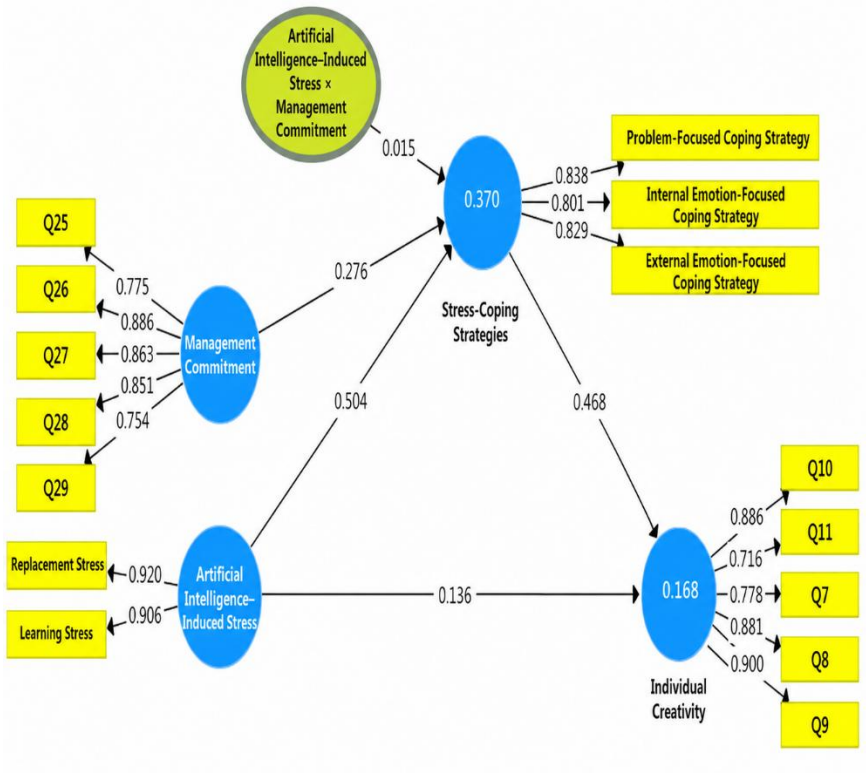
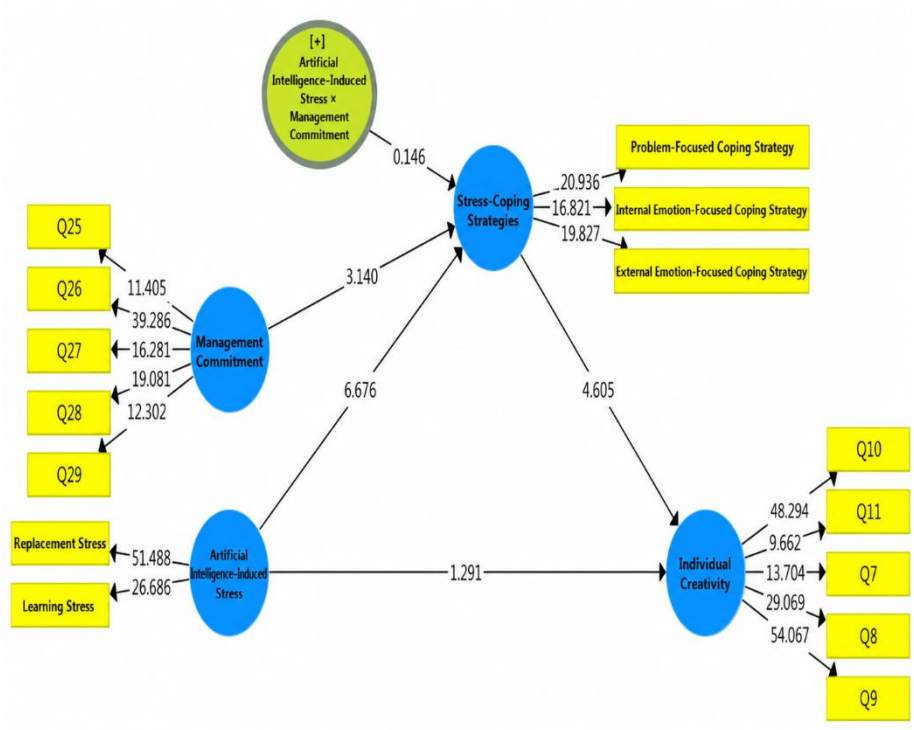


Figure 2

Research Structural Model in the Significance Estimation Mode



Before examining the research hypotheses, the model-fit indices were assessed to determine whether the model possessed sufficient adequacy to support hypothesis testing. The first and most fundamental criterion for evaluating relationships among constructs in the structural model is the significance of the *t*-statistics, or *t*-values. These coefficients are presented in Figure 2. Structural-model fit based on the *t*-coefficients requires these coefficients to exceed 1.96 for their statistical significance to be confirmed at the 95% confidence level. As shown in Figure 2, the coefficient exceeded 1.96 for all paths except the path from artificial intelligence–induced stress to individual creativity and the interaction effects used to evaluate the moderating role. Therefore, the significance of the remaining relationships was confirmed at the 95% confidence level.

Another model-fit indicator is the coefficient of determination. The coefficient of determination is one of the criteria used to connect the measurement and structural components of structural equation modeling and indicates the effect of an exogenous, or independent, variable on an endogenous, or dependent, variable. The coefficient of determination is calculated only for the dependent or endogenous constructs of the model, whereas its value is zero for exogenous constructs. Higher coefficients of determination for the endogenous constructs indicate better model fit. Values of 0.19, 0.33, and 0.67 have been proposed as benchmarks for weak, moderate, and strong structural-model fit, respectively. The coefficients of determination for the dependent variables in the structural model—stress-coping strategies and individual creativity—were 0.37 and 0.17, respectively, indicating an acceptable overall fit of the model.

Another fit indicator is the redundancy criterion. This criterion is obtained by multiplying the communality values of the constructs by their coefficients of determination and represents the variability of the indicators of an endogenous construct explained by one or more exogenous constructs. The values of this criterion for the structural model were calculated as follows:

Red (Coping Strategies) = 0.234

Red (Creativity) = 0.110

A higher value of this criterion indicates a more satisfactory fit of the structural component of the research model.

Another indicator used to examine model fit is the goodness-of-fit criterion, which evaluates the overall fit of the model.

The communality values for stress-coping strategies, artificial intelligence–induced stress, management commitment, and individual creativity were 0.677, 0.833, 0.684, and 0.698, respectively. The mean communality value was 0.723, and the mean coefficient of determination was 0.269. Substituting these values into the formula yielded a GOF value of 0.441. Considering the benchmark values of 0.01, 0.25, and 0.36 for weak, moderate, and strong fit, respectively, the research model demonstrated strong overall fit.

Having established the acceptable fit of the structural model, the paths of the research conceptual model were examined based on the standardized and significance estimates of the structural model. The results are presented in Table 7.

Table 7

Results of the Assessment of the Research Conceptual-Model Path

Path	Path Coefficient	Test Statistic	Result	Type of Relationship
Artificial intelligence–induced stress → Individual creativity	0.136	1.291	Rejected	Not significant
Artificial intelligence–induced stress → Stress-coping strategies	0.504	6.676	Confirmed	Significant and direct
Stress-coping strategies → Individual creativity	0.468	4.605	Confirmed	Significant and direct
Artificial intelligence–induced stress → Stress-coping strategies → Individual creativity	0.236	3.725	Confirmed	Significant and indirect
Artificial intelligence–induced stress × Management commitment → Stress-coping strategies	0.015	0.146	Rejected	Not significant

The results presented in Table 7 indicate that the effect of artificial intelligence–induced stress on individual creativity, with a path coefficient of 0.136, was not statistically significant. The *t*-statistic was lower than 1.96, confirming the nonsignificance of the calculated coefficient. Therefore, artificial intelligence–induced stress did not have a direct effect on the individual creativity of employees at the Yazd City Gas Company.

According to Table 7, the effect of artificial intelligence–induced stress on stress-coping strategies, with a path coefficient of 0.504, was statistically significant. The *t*-statistic exceeded 1.96, confirming the significance of the calculated coefficient. Because the relationship was direct, it can be concluded that artificial intelligence–induced stress directly affected the stress-coping strategies of employees at the Yazd City Gas Company. In other words, as artificial intelligence–induced stress increased, employees' use of stress-coping strategies also increased.

Table 7 also indicates that the effect of stress-coping strategies on individual creativity, with a path coefficient of 0.468, was statistically significant. The *t*-statistic exceeded 1.96, confirming the significance of the calculated coefficient. Because the relationship was direct, stress-coping strategies directly affected the individual creativity of employees at the Yazd City Gas Company. In other words, improvements in stress-coping strategies were associated with increased individual creativity.

The mediating role of stress-coping strategies in the effect of artificial intelligence–induced stress on employees' individual creativity was examined using the Sobel test. The Sobel test statistic was 3.725, which exceeded 1.96, and the significance level was 0.000, which was lower than 0.05, indicating that the indirect relationship was statistically significant. Because the direct relationship between artificial intelligence–induced stress and individual creativity was not significant in the model, stress-coping strategies performed a full mediating role, with an indirect effect of 0.236. Consequently, at the 95% confidence level, artificial intelligence–induced stress affected the individual creativity of employees at the Yazd City Gas Company through stress-coping strategies.

Regarding the moderating role of management commitment in the effect of artificial intelligence–induced stress on stress-coping strategies, Table 7 shows that the test statistic for the interaction between artificial intelligence–induced stress and management commitment was 0.146. This value was lower than 1.96, confirming the nonsignificance of the calculated coefficient. Therefore, management commitment did not moderate the effect of artificial intelligence–induced stress on the stress-coping strategies of employees at the Yazd City Gas Company.

4 Discussion

The results of the present study showed that artificial intelligence–induced stress did not have a direct and significant effect on employees' individual creativity. This finding indicates that the experience of anxiety and psychological pressure arising from artificial intelligence technologies does not necessarily lead directly to a reduction in employee creativity and that the relationship between these two variables is more complex than a simple linear effect. Employees may simultaneously experience two different reactions when encountering emerging technologies. On the one hand, concerns regarding occupational replacement, technological complexity, and role ambiguity may reduce their cognitive resources. On the other hand, exposure to innovative technologies may stimulate learning, skill development, and experimentation with new ideas. This finding is consistent with the results of Tong et al., who demonstrated that artificial intelligence anxiety, when not regulated through coping and self-regulatory mechanisms, does not necessarily have a significant direct effect on creativity (Tong et al., 2025). The present results are also consistent with the findings of Eren et al., who reported that artificial intelligence anxiety cannot directly predict certain behavioral and creative outcomes and that mediating variables play a decisive role in this relationship (Eren et al., 2025).

The absence of a significant direct effect of artificial intelligence–induced stress on individual creativity can be explained by the dual nature of artificial intelligence technologies. Artificial intelligence can simultaneously be perceived as both a threat and an opportunity. Employees who view this technology as a threat to their job security may experience greater anxiety, whereas those who consider it a tool for developing professional capabilities and facilitating work activities are likely to exhibit more adaptive responses (Kim et al., 2025). From the perspective of psychological resource theory, when stress remains at a controllable level, it may increase employees' motivation and cognitive effort to solve problems and generate novel ideas. However, when psychological pressure exceeds a certain threshold, it can suppress creativity (Manosso et al., 2022). This finding is also consistent with the results of Yin et al., who emphasized that artificial intelligence has dual effects on employees' innovative behaviors and can simultaneously increase creative self-efficacy and technological anxiety (Yin et al., 2024).

Another finding showed that artificial intelligence–induced stress had a direct and significant effect on stress-coping strategies. This result suggests that employees actively employ cognitive and behavioral strategies to manage psychological pressure when confronting

technological changes and concerns related to artificial intelligence. As the anxiety and concern associated with technology increase, employees are more likely to activate coping mechanisms. This finding is consistent with Mao's results, which showed that artificial intelligence anxiety activates employees' coping strategies (Mao, 2021). Tong et al. similarly reported that employees exposed to artificial intelligence–induced stress employ strategies such as seeking social support, positive reappraisal, and learning new skills to reduce its adverse effects (Tong et al., 2025).

This finding can also be explained using Lazarus and Folkman's theory of coping, according to which individuals confronted with stressful situations attempt to maintain psychological equilibrium by cognitively appraising the circumstances and employing coping strategies. In artificial intelligence–based work environments, employees face threats such as job insecurity, role ambiguity, and learning pressure, which encourage them to employ coping mechanisms (Liang, 2019). Yazdanmehr et al. also showed that employees use different strategies to control psychological pressure when confronting technology-related stress, depending on their perceptions and available resources (Yazdanmehr et al., 2023). In the same context, Garriott and Nisle emphasized that individual and organizational support can play an important role in the selection of adaptive coping strategies (Garriott & Nisle, 2018).

The results also demonstrated that stress-coping strategies had a direct and significant effect on employees' individual creativity. This finding indicates that employees who use adaptive coping strategies are better able to preserve their cognitive and emotional resources and are consequently more prepared to think creatively and propose novel ideas. This result is consistent with the findings of Liu and Liu, who reported that psychological resources and coping skills can reduce the negative effects of occupational stress on creativity (Liu & Liu, 2020). Nasaj et al. also demonstrated that coping strategies can strengthen innovative behaviors under conditions of artificial intelligence anxiety (Nasaj et al., 2025).

The explanation of this finding suggests that adaptive coping strategies, particularly problem-focused strategies, help employees seek new solutions and adapt to circumstances rather than focusing exclusively on threats. Such a process can strengthen divergent thinking and creativity (Yuan, 2022). Furthermore, employees who use social support, positive reappraisal, and effective emotional regulation experience less psychological exhaustion and retain greater mental energy for innovation and creativity (Mao, 2021). This result is also consistent with Gao's findings, which identified psychological empowerment as an important factor in promoting employee creativity in artificial intelligence–based environments (Gao, 2021).

Another important finding was the confirmation of the mediating role of stress-coping strategies in the relationship between artificial intelligence–induced stress and employees' individual creativity. This result indicates that artificial intelligence–induced stress affects employee creativity through the manner in which employees cope with psychological pressure. In other words, when employees employ adaptive coping strategies, even technology-related anxiety can be transformed into an opportunity for growth, learning, and creativity. This finding is fully consistent with the results of Tong et al., who confirmed the mediating role of coping strategies in reducing the negative effects of artificial intelligence anxiety on employee creativity (Tong et al., 2025). Mao similarly reported that adaptive coping strategies can alter the pathway through which technological anxiety affects creativity (Mao, 2021).

From a theoretical perspective, this finding indicates that employees' responses to intelligent technologies are not determined solely by the level of stress they experience; rather, the manner in which they manage this stress is more important. Employees with greater psychological adaptability can transform technological pressures into intrinsic motivation and efforts to learn (Kim & Lee, 2025). Kumar et al. also showed that continuous training, the acquisition of new skills, and the establishment of supportive structures can strengthen employees' adaptation to artificial intelligence technologies (Kumar et al., 2024). Therefore, effective coping strategies not only prevent the negative effects of stress but can also establish a foundation for creativity and innovation within organizations.

The findings also indicated that the moderating role of management commitment in the relationship between artificial intelligence–induced stress and stress-coping strategies was not confirmed. This finding suggests that, within the population under study, management commitment did not alter the strength of the effect of artificial intelligence–induced stress on employees' coping strategies. This result is inconsistent with the findings of Tong et al., who demonstrated that managerial support and commitment can reduce the negative effects of artificial intelligence anxiety (Tong et al., 2025).

The rejection of this hypothesis may be attributable to the structural and cultural characteristics of the organization

under investigation. In some organizations, employees may not experience management commitment in a practical and tangible manner, and managerial support may therefore be unable to play an effective role in reducing technological stress. Employees may also rely more heavily on their personal resources and individual skills than on organizational support when coping with stress. This finding can be partially explained by the results of Neumann et al., who argued that the mere existence of managerial policies is insufficient for the successful adoption of artificial intelligence and that the quality with which managerial support is implemented is more important (Neumann et al., 2024). Furthermore, Dubey et al. emphasized that management commitment is effective only when employees consistently observe it in managers' actual behavior (Dubey et al., 2018).

5 Conclusion

Overall, the findings of the present study demonstrated that employee creativity in the age of artificial intelligence depends less on the level of technological stress than on the manner in which that stress is managed and employees' ability to employ effective coping strategies. These findings emphasize the importance of developing coping skills, providing technological-resilience training, and establishing supportive organizational environments. The results are also consistent with emerging perspectives in technology management and organizational behavior that emphasize the necessity of simultaneously considering the technological and psychological dimensions of digital transformation (Khairy et al., 2025; Panda & Swamy, 2025).

One limitation of the present study was its reliance on self-report measures for data collection, which may have been influenced by response bias. The study was also cross-sectional; therefore, it was not possible to examine changes in employees' attitudes and behaviors over time. Restricting the statistical population to the employees of a single service organization may also limit the generalizability of the findings to other organizations and industries. In addition, certain individual and organizational variables that may influence employee creativity were not examined.

Future research should employ longitudinal designs to examine changes in artificial intelligence–induced stress and employee creativity over time. Investigating the roles of variables such as psychological resilience, emotional intelligence, organizational culture, organizational trust, and leadership styles could also provide a deeper understanding of the mechanisms through which intelligent technologies influence employee behavior. Conducting comparative studies across different industries and between public- and private-sector organizations could further contribute to the development of the literature in this field.

Based on the findings, organizations should design regular training programs to improve employees' stress-coping skills and technological resilience. Establishing a supportive environment, strengthening organizational communication, involving employees in digital-transformation processes, and providing psychological counseling can help reduce artificial intelligence–related anxiety. Managers should also establish an environment founded on trust and continuous learning to facilitate employee creativity and innovation in the age of artificial intelligence.

Authors' Contributions

All authors have contributed significantly to the research process and the development of the manuscript.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We would like to express our gratitude to all individuals helped us to do the project.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

References

Benbya, H., Davenport, T. H., & Pachidi, S. (2020). Artificial Intelligence in Organizations: Current State and Future Opportunities. *MIS Quarterly Executive*, *19*(4), 4.

Bostani, T., & Ghorban-Hosseini, M. (2020). The Effect of Job Rotation on Work Engagement with the Mediating Role of Employee Empowerment in Saveh Municipality. *Accounting and Management Perspective*, *3*(24), 108-119.

Dubey, R., Gunasekaran, A., Childe, S., Thanos, P., & Helo, P. (2018). Supplier Relationship Management for Circular Economy: Influence of External Pressures and Top Management Commitment. *Management Decision*, *57*(4), 767-790.

Ebrahimnejad, N. (2021). The Effect of Job Satisfaction and Organizational Commitment on Police Occupational Misconduct. *Journal of Police Order and Security*, *13*(4), 1-26.

Eren, E., Ergulec, F., & Kara, A. (2025). The Mediating Role of Individual Innovativeness in the Relationship between Career Engagement and Artificial Intelligence Anxiety. *Education and Information Technologies*, *30*(18), 26301-26328.

Gao, J. (2021). How Does Artificial Intelligence Influence Employee Creativity? The Mediating Role of Psychological Empowerment. *Journal of Business Research*, *129*, 134-144.

Garriott, P. O., & Nisle, S. (2018). Stress, Coping, and Perceived Academic Goal Progress in First-Generation College Students: The Role of Institutional Supports. *Journal of Diversity in Higher Education*, *11*(4), 436-450.

He, W. (2020). How to Motivate Employees for Sustained Innovation Behavior in the Digital Era? The Role of Psychological Empowerment. *Journal of Business Research*, *116*, 302-312.

Hosseinzadeh Moghadam, H., Jafarzadeh, M., & Maleki, M. (2024). Examining the Relationship between Artificial Intelligence and Human Resource Functions in the Steel Industry. *Quarterly Journal of Modern Research Approaches in Management and Accounting*, *8*(94), 1-16.

Kaya, F., Aydin, F., Schepman, A., Rodway, P., Yetişensoy, O., & Demir Kaya, M. (2022). The Roles of Personality Traits, AI Anxiety, and Demographic Factors in Attitudes toward Artificial Intelligence. *International Journal of Human-Computer Interaction*, *40*(2), 497-514.

Khairy, H. A., Lee, Y. M., & Al-Romeedy, B. S. (2025). Leader STARA Competence and Green Competitiveness in Tourism and Hotel Enterprises: Leveraging Green Creativity and Human Capital. *Journal of Hospitality and Tourism Insights*, *8*(6), 2338-2358.

Kim, B. J., & Lee, J. (2025). The Dark Sides of Artificial Intelligence Implementation: Examining How Corporate Social Responsibility Buffers the Impact of Artificial Intelligence-Induced Job Insecurity on Pro-Environmental Behavior through Meaningfulness of Work. *Sustainable Development*, *33*, 4732-4756. https://doi.org/10.1002/sd.3376

Kim, J. J., Soh, J., Kadkol, S., Solomon, I., Yeh, H., Srivatsa, A. V., & Ajilore, O. (2025). AI Anxiety: A Comprehensive Analysis of Psychological Factors and Interventions. *Ai and Ethics*, *5*(4), 3993-4009. https://doi.org/10.1007/s43681-025-00686-9

Kumar, N., Jin, Y., & Liu, Z. (2024). The Nexus between Servant Leadership and Employee's Creative Deviance for Creativity inside Learning and Performance Goal-Oriented Organizations. *Management Decision*, *62*(4), 1117-1137.

Li, J., & Huang, J. S. (2020). Dimensions of Artificial Intelligence Anxiety Based on the Integrated Fear Acquisition Theory. *Technology in Society*, *63*, 101410.

Liang, H. (2019). How to Cope with Stress in the Workplace: A Review and Meta-Analysis. *Journal of Organizational Behavior*, *40*(2), 177-195.

Liu, J., & Liu, Y. Z. (2020). Reducing the Harmful Impact of Work Stress on Creativity? Buffering Model of Available Resources. *Open Journal of Social Sciences*, *8*, 62-76. https://doi.org/10.4236/jss.2020.82006

Manosso, L. M., Gasparini, C. R., Réus, G. Z., & Pavlovic, Z. M. (2022). *Definitions and Concepts of Stress*. Springer.

Mao, Y. (2021). How Does AI Anxiety Affect Employee Creativity? The Mediating Role of Coping Strategies. *Journal of Business Research*, *134*, 1-10.

Miao, S., Komil Ugli Fayzullaev, A., & Dedahanov, A. T. (2020). Management Characteristics as Determinants of Employee Creativity: The Mediating Role of Employee Job Satisfaction. *Sustainability*, *12*(5), 1948.

Nasaj, M., Badi, S., Murtagh, N., & Ding, L. (2025). Collective AI Anxiety and Team Innovative Behaviour: The Role of Coping Strategies. *Construction Innovation*. https://doi.org/10.1108/CI-08-2024-0222

Neumann, O., Guirguis, K., & Steiner, R. (2024). Exploring Artificial Intelligence Adoption in Public Organizations: A Comparative Case Study. *Public Management Review*, *26*(1), 114-141.

Panda, T., & Swamy, T. N. V. R. L. (2025). Mapping the Evolution of Employee Creativity and Innovation in the Sphere of Business and Management: A Bibliometric Analysis in the Early 21st Century. *Cogent Business & Management*, *12*(1), 2503425.

Rajab Dari, H., Malmir, M., & Khoramin, M. (2021). The Relationship between Ethical Leadership and Employee Creativity: The Moderating Role of Leader-Member Exchange. *Ethics in Science and Technology*, *16*(2), 108-114.

Rezaei, F. (2024). Examining the Effect of Artificial Intelligence on Psychological Well-Being and Stress Reduction: An Analysis of the Impact of New Technology on Improving Mental Health. *Cognition, Behavior, Learning*, *1*(1), 167-181.

Shekari, H., & Hosseini, H. (2020). Investigating the Effect of Jihadi Management on Employees' Social Undermining with Considering the Mediating Role of Leader-Member Exchange in Youth and Sport Office in Yazd Province. *Organizational Behavior Management in Sport Studies*, *7*(25), 137-148.

Shekari, H., Hosseini, H., & Jalalian, N. (2025). Developing a Model of the Impact of Knowledge Risk Management on Organizational Sustainability Considering the Mediating Role of Employees' Innovative Behavior. *Dynamic Management and Business Analysis*, *4*(3), 278-295. https://doi.org/10.61838/dmbaj.5815.0403.273

Taheri Lari, M., Rafati, M., & Ajami Khales, A. (2025). The Effect of Artificial Intelligence on Organizational Transformation with the Mediating Role of Individual Creativity, Organizational Innovation, and Knowledge Management. First National Conference on Human Capital Management Challenges in Large-Scale Organizations, Mashhad.

Tong, H., Yu, J., & Shou, M. (2025). Mitigating the Effect of AI Anxiety on Employees' Creativity: A Social Cognitive Perspective. *Journal of Digital Management*, *1*, 7. https://doi.org/10.1007/s44362-025-00006-5

Wang, X. L., Lei, N., & Hou, Y. Z. (2020). How Does Human Resource Department's Client Relationship Management Affect Sustainable Enterprise Performance in the Context of Artificial Intelligence? *International Journal of Technology Management*, *84*(1), 50-69.

Yazdanmehr, A., Li, Y., & Wang, J. (2023). Employee Responses to Information Security Related Stress: Coping and Violation Intention. *Information Systems Journal*, *33*(3), 598-639.

Yin, M., Jiang, S., & Niu, X. (2024). Can AI Really Help? The Double-Edged Sword Effect of AI Assistant on Employees' Innovation Behavior. *Computers in human Behavior*, *150*, 107987.

Yohanna, F., & Suleiman, S. I. (2024). The Impact of Artificial Intelligence on Creativity, Innovation and Intellectual Property Rights in Nigeria. *Imam Ja'afar Al-Sadiq University Journal of Legal Studies*, *4*(2), 6. https://doi.org/10.64682/3104-9419.1101

Yuan, L. (2022). Individual Differences in Creativity: A Meta-Analysis. *Journal of Creative Behavior*, *56*(1), 3-20.