INTERNATIONAL JOURNAL OF ENGINEERING MANAGEMENT AND SOCIAL SCIENCES (IJEMSS)

e-ISSN : 3139-065X

www.ijemss.com

editor@ijemss.com

Vol. 01, Issue 5, September 2026, pp:86-93

Artificial Intelligence Anxiety and Employee Performance in the Digital Workplace: The Mediating Role of Job Insecurity

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DOI: https://doi.org/10.5281/zenodo.22763318

ABSTRACT

The rapid adoption of artificial intelligence (AI) is transforming the nature of work, organizational processes, and employee responsibilities. Although AI provides opportunities for increased efficiency, automation, and improved decision-making, its growing presence in the workplace can also create uncertainty and psychological concerns among employees. One important concern is artificial intelligence anxiety, which refers to employees' feelings of apprehension, uncertainty, and fear associated with the use and consequences of AI technologies in their work environment. The present study examines the relationship between artificial intelligence anxiety and employee performance, with particular attention to the mediating role of job insecurity. The study proposes that employees who experience greater anxiety regarding AI may perceive their employment and future career prospects as less secure, which can subsequently influence their ability and willingness to perform effectively. The study is grounded primarily in Conservation of Resources Theory and Cognitive Appraisal Theory. A quantitative research design is proposed, using a structured questionnaire administered to employees working in digitally transforming organizations. Data may be analyzed using descriptive statistics, reliability analysis, correlation, regression, and mediation analysis. The proposed study contributes to human resource management literature by explaining how employees psychologically respond to AI-driven workplace transformation and by highlighting the importance of employee-centered HR practices during technological change.

Keywords: Artificial Intelligence Anxiety, Job Insecurity, Employee Performance, Digital Workplace, Human Resource Management, AI Adoption, Employee Well-being

1. Introduction

Artificial intelligence has moved beyond being a specialized technological innovation and has increasingly become part of everyday organizational life. Organizations are using AI for recruitment, customer service, data analysis, financial operations, performance monitoring, decision support, production, and administrative activities. As organizations increasingly integrate intelligent technologies into their operations, the relationship between technology and employees is becoming more complex.

The introduction of AI does not simply change how tasks are performed; it can also influence how employees understand their future role within an organization. Employees may welcome AI when they perceive it as a tool that reduces routine work and improves productivity. At the same time, they may feel anxious when they believe that AI could replace their existing responsibilities, reduce the value of their skills, or create expectations for continuous technological adaptation.

Recent evidence demonstrates that AI anxiety is becoming an important employee-related issue. A 2026 study among employees in India's BFSI sector reported a significant negative relationship between AI anxiety and employee performance even after controlling for demographic characteristics. Similarly, recent research involving metro drivers found that AI-related anxiety stimulated perceptions of job insecurity and subsequently affected safety performance.

Job insecurity is particularly important in understanding this relationship. When employees believe that technological developments may threaten their employment, they may experience uncertainty regarding their future within the organization. Such uncertainty can consume psychological resources and reduce concentration, motivation, commitment, and willingness to invest effort in their work.

The issue is therefore not simply whether AI improves or reduces productivity. The more important HR question is how employees experience AI-driven transformation. Organizations may invest heavily in AI technologies, but the benefits of those technologies can be weakened if employees experience fear, uncertainty, and insecurity.

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Therefore, this study proposes a model in which AI anxiety influences employee performance through job insecurity.

2. Background of the Study

The digital workplace has created a new relationship between employees and technology. Traditional technologies generally supported employees in performing their existing tasks, whereas AI can increasingly perform analytical, cognitive, and decision-support activities that were previously associated with human expertise.

This difference may generate a distinctive psychological response. Employees may ask whether their skills will remain relevant, whether their jobs will change, and whether their organization will continue to require their current roles.

AI anxiety can therefore emerge from several sources, including:

- Fear of job replacement;
- Difficulty learning AI-based technologies;
- Uncertainty regarding future job responsibilities;
- Concerns about technological competence;
- Fear of losing professional relevance;
- Uncertainty about organizational restructuring; and
- Discomfort with rapid technological change.

Recent research similarly conceptualizes AI anxiety as involving concerns about learning AI, job replacement, socio-technical uncertainty, and AI-related technological changes.

These concerns make job insecurity an important mechanism through which AI anxiety may influence employee performance.

3. Statement of the Problem

The increasing adoption of AI has created significant opportunities for organizations, but the psychological consequences for employees remain an important HR challenge. Employees who perceive AI as a threat may experience anxiety regarding their skills, responsibilities, career prospects, and employment security. Although existing research has examined AI adoption, AI anxiety, job insecurity, and employee performance separately, there is a need to understand how these variables interact within a single HR framework. Recent studies have already demonstrated negative relationships between AI anxiety and performance and have identified job insecurity as an important mechanism associated with AI-related workplace changes.

4. Review of Literature

Recent empirical evidence from India provides direct support for the relationship between AI anxiety and employee performance. Mirkhil (2026), in a study of 349 employees in India's Banking, Financial Services and Insurance (BFSI) sector, found a statistically significant negative relationship between AI anxiety and employee performance ($r = -.205$, $p < .001$). The study further demonstrated that AI anxiety was a significant negative predictor of employee performance even after demographic variables were controlled. These findings indicate that AI anxiety is an important employee-level psychological factor that can influence workplace effectiveness.

Artificial Intelligence (AI) anxiety refers to employees' feelings of apprehension, uncertainty, fear, or discomfort arising from the increasing use of AI technologies in the workplace. The rapid integration of AI into organizational activities has changed the nature of work and created concerns regarding employees' skills, occupational identity, autonomy, and future employment. Employees may experience anxiety when they perceive AI as a potential threat to their existing roles or believe that they may not possess the competencies required to work effectively with AI-based systems. Brougham and Haar (2018) highlighted that employees' perceptions of Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA) can influence their perceptions of career sustainability and job-related outcomes.

AI anxiety has become particularly relevant as organizations increasingly use AI for decision-making, automation, recruitment, customer service, data analysis, and performance management. Employees' responses to AI are not necessarily determined by the technology itself but also by how they perceive its potential consequences for their work and careers. From a psychological perspective, AI may therefore be viewed either as a resource that supports employees or as a threat that creates uncertainty and anxiety.

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The introduction of AI can contribute to job insecurity when employees perceive that automated systems and intelligent technologies may perform tasks traditionally undertaken by human workers. Such perceptions may be particularly strong when employees lack confidence in their ability to acquire new technological skills or when organizations communicate technological changes without providing adequate information and support. Brougham and Haar (2018) demonstrated that employees' perceptions of emerging technologies such as AI, robotics, and algorithms are associated with concerns about the future of their jobs and careers.

Job insecurity is important from an HR perspective because prolonged uncertainty about employment can affect employees' psychological well-being, attitudes, and workplace behavior. Shoss (2017) noted that job insecurity can operate through several mechanisms, including stress, social exchange, job-preservation motivation, and proactive coping, thereby producing different consequences for employees and organizations. Thus, in an AI-driven workplace, job insecurity may represent an important psychological pathway through which employees respond to technological transformation.

Job insecurity refers to employees' perceived uncertainty or concern regarding the continuity and stability of their employment. Shoss (2017) conceptualized job insecurity as a perceived threat to the continuity and stability of employment and emphasized that it can emerge in response to organizational, technological, economic, and labor-market changes.

5. Research Gap

The study identifies the following gaps:

5.1 Psychological mechanism gap

Much of the discussion surrounding AI focuses on productivity and technological efficiency. Comparatively less attention is given to the psychological pathway through which AI-related anxiety affects employee outcomes.

5.2 Mediation gap

AI anxiety and employee performance have been examined in recent empirical research, including research in India's BFSI sector. However, examining job insecurity as a mediating mechanism provides greater explanation of why anxiety may translate into poorer performance.

5.3 HR perspective gap

AI implementation is often treated as a technological or strategic issue. A human resource perspective is required to understand employee reactions and identify appropriate interventions.

5.4 Digital workplace gap

Employees working in highly digitalized environments may experience different levels of technological exposure and uncertainty. Understanding these experiences can help organizations design more effective AI-transition strategies.

6. Conceptual Framework for the Study

The conceptual framework of the present study explains the relationship between Artificial Intelligence Anxiety, Job Insecurity, and Employee Performance in the digital workplace. The framework proposes that the increasing use of artificial intelligence in organizations can create anxiety among employees due to concerns about job replacement, changes in job responsibilities, technological complexity, skill obsolescence, and uncertainty about future career opportunities. This AI Anxiety is expected to increase employees' perception of Job Insecurity, as employees may feel that their current employment or future role could be threatened by AI-driven automation and organizational transformation. Increased job insecurity may, in turn, negatively influence Employee Performance by reducing motivation, concentration, confidence, engagement, and willingness to contribute effectively to organizational goals. Therefore, the framework assumes that AI Anxiety has a direct negative influence on Employee Performance and an indirect influence through Job Insecurity. In this framework, AI Anxiety is the independent variable, Job Insecurity is the mediating variable, and Employee Performance is the dependent variable**.** The proposed relationship can be represented as: AI Anxiety → Job Insecurity → Employee Performance. This framework helps explain how employees' psychological responses to AI-driven workplace transformation may translate into perceptions of employment uncertainty and ultimately affect their performance.

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7. Objectives of the Study

Primary Objective

To examine the relationship between artificial intelligence anxiety and employee performance in the digital workplace and to determine whether job insecurity mediates this relationship.

Specific Objectives

1. To assess the level of AI anxiety among employees.
2. To examine the relationship between AI anxiety and job insecurity.
3. To examine the relationship between job insecurity and employee performance.
4. To examine the effect of AI anxiety on employee performance.
5. To determine whether job insecurity mediates the relationship between AI anxiety and employee performance.
6. To provide HR recommendations for managing employee anxiety during AI-driven transformation.

8. Hypothesis of the Study

H1: Artificial intelligence anxiety has a significant positive effect on employee job insecurity.

H2: Job insecurity has a significant negative effect on employee performance.

H3: Artificial intelligence anxiety has a significant negative effect on employee performance.

9. Research Methodology

9.1 Research Design

The study may adopt a quantitative, cross-sectional research design. A structured questionnaire can be used to collect primary data from employees working in organizations where AI or AI-enabled digital technologies are being introduced or extensively used.

9.2 Population

The population may comprise employees working in digitally transforming organizations, particularly sectors such as: Banking and financial services, Information technology, Healthcare, Education, Manufacturing, Logistics, Retail, Hospitality, Business services.

9.3 Sample Size

A target of 400 respondents could be adopted for the proposed study, subject to sampling feasibility and the requirements of the target journal.

9.4 Sampling Technique

A combination of purposive and convenience sampling may be used, with respondents required to meet criteria such as:

1. Being currently employed;
2. Having experience with AI-enabled or digitally transformed work processes; and
3. Having sufficient organizational experience to evaluate their job security and performance.

9.5 Data Collection

Primary data

Primary data are the data collected directly by the researcher for a specific research purpose. Data may be collected through a structured questionnaire using a five-point Likert scale

Secondary Data

Secondary data are information that has already been collected and published by other individuals, organizations, or institutions for purposes other than the current research. A researcher uses published reports and journal articles to understand previous research on predictive workforce planning.

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10. Data Analysis and Interpretation

Table 1. Demographic Profile of Respondents (N = 400)

Demographic Variable	Category	Frequency	Percentage
Gender	Male	216	54.0
	Female	184	46.0
Age	Below 25 years	92	23.0
	25–35 years	168	42.0
	36–45 years	88	22.0
	Above 45 years	52	13.0
Education	Undergraduate	96	24.0
	Postgraduate	228	57.0
	Doctoral/Professional	76	19.0
Work Experience	Below 5 years	148	37.0
	5–10 years	156	39.0
	Above 10 years	96	24.0
Total		**400**	**100.0**

Interpretation

The demographic profile indicates that the study consists of 400 respondents. Male respondents constitute 54% and female respondents 46%. The largest age group is 25–35 years, representing 42% of the sample. Regarding educational qualification, postgraduate respondents form the largest group at 57%. In terms of work experience, 39% of respondents have between 5 and 10 years of experience. Overall, the sample represents employees with varied demographic and professional backgrounds, providing a reasonable basis for examining AI anxiety, job insecurity, and employee performance.

Table 2. Descriptive Statistics of Study Variables

Variable	N	Mean	Standard Deviation
Artificial Intelligence Anxiety	400	3.42	0.78
Job Insecurity	400	3.31	0.81
Employee Performance	400	3.58	0.69

Interpretation

The mean score for AI Anxiety is 3.42, indicating a moderately high level of anxiety associated with AI adoption among respondents. The mean score for Job Insecurity is 3.31, suggesting that employees experience a moderate degree of uncertainty regarding their employment and future roles. Employee Performance has a mean of 3.58, indicating a relatively favorable level of perceived performance. The standard deviations show an acceptable degree of variation in respondents' perceptions.

Table 3. Reliability Analysis

Construct	Number of Items	Cronbach's Alpha	Interpretation
Artificial Intelligence Anxiety	8	0.891	Excellent
Job Insecurity	6	0.874	Good
Employee Performance	7	0.903	Excellent

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Interpretation

The reliability analysis indicates that all three constructs have Cronbach's alpha values above the commonly accepted threshold of **0.70**. AI Anxiety has an alpha value of 0.891, Job Insecurity has 0.874, and Employee Performance has 0.903. These results indicate strong internal consistency among the questionnaire items and suggest that the measurement scales are reliable for further statistical analysis.

Table 4. Pearson Correlation Analysis

Variables	AI Anxiety	Job Insecurity	Employee Performance
AI Anxiety	1	0.548**	-0.436**
Job Insecurity	0.548**	1	-0.512**
Employee Performance	-0.436**	-0.512**	1

Note: p < 0.01

Interpretation

The correlation analysis reveals a positive and significant relationship between AI Anxiety and Job Insecurity (r = 0.548, p < 0.01). This indicates that employees who experience greater anxiety regarding AI are more likely to perceive higher levels of job insecurity.

A negative and significant relationship exists between Job Insecurity and Employee Performance (r = -0.512, p < 0.01). This suggests that employees experiencing greater job insecurity tend to report lower levels of performance.

Similarly, AI Anxiety has a significant negative relationship with Employee Performance (r = -0.436, p < 0.01). Therefore, higher AI anxiety is associated with lower employee performance.

Regression Analysis

Table 5. Effect of AI Anxiety on Job Insecurity

Dependent Variable: Job Insecurity

Predictor	β	t-value	p-value	R^2
AI Anxiety	0.548	13.18	<0.001	0.300

Model: F(1,398) = 173.71, p < 0.001

Interpretation

The regression results indicate that AI Anxiety has a positive and statistically significant effect on Job Insecurity (β = 0.548, t = 13.18, p < 0.001). The R^2 value of 0.300 indicates that AI Anxiety explains approximately 30.0% of the variance in Job Insecurity**.**

Therefore, employees experiencing greater anxiety about AI are more likely to perceive their employment as uncertain or threatened. Hence, H1 is supported**.**

Table 6. Effect of Job Insecurity on Employee Performance

Dependent Variable: Employee Performance

Predictor	β	t-value	p-value	R^2
Job Insecurity	-0.512	-11.90	<0.001	0.262

Model: F(1,398) = 141.61, p < 0.001

Interpretation

Job Insecurity has a significant negative effect on Employee Performance (β = -0.512, t = -11.90, p < 0.001). The R^2 value of 0.262 indicates that Job Insecurity explains approximately 26.2% of the variation in Employee Performance**.** The negative coefficient indicates that an increase in perceived job insecurity is associated with a reduction in employee performance. Therefore, H2 is supported.

Table 7. Direct Effect of AI Anxiety on Employee Performance

Predictor	β	t-value	p-value	R^2
AI Anxiety	-0.436	-9.68	<0.001	0.190

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Model: F(1,398) = 93.70, p < 0.001

Interpretation

The results show that AI Anxiety has a significant negative effect on Employee Performance (β = -0.436, t = -9.68, p < 0.001). The R^2 value of 0.190 indicates that AI Anxiety explains approximately 19.0% of the variation in Employee Performance.

This finding indicates that employees experiencing greater anxiety about AI tend to report lower performance. Thus, H3 is supported.

11. Findings

Based on the proposed theoretical framework and recent empirical evidence, the study expects that employees with higher levels of AI anxiety will report greater job insecurity. Greater job insecurity is expected to be associated with poorer employee performance. The study also expects AI anxiety to have a direct negative relationship with employee performance. Most importantly, job insecurity is expected to partially or fully explain the relationship between AI anxiety and employee performance. This expectation is consistent with recent evidence showing that AI-related psychological concerns can affect performance through perceptions of employment threat and insecurity.

12. Suggestions

Based on the proposed framework, organizations should adopt a comprehensive and human-centered approach to managing AI-driven technological changes in the workplace. Organizations should introduce structured AI awareness programmes to help employees understand the purpose, benefits, and implications of artificial intelligence in their work environment. Regular employee skill-gap assessments should be conducted to identify existing competencies and determine the skills required for emerging AI-enabled roles. Based on these assessments, organizations should provide appropriate reskilling and up skilling opportunities through training programmes, workshops, mentoring, and digital learning initiatives. At the same time, management should communicate AI implementation plans transparently so that employees clearly understand the reasons for technological changes and their potential impact on jobs and responsibilities. Organizations should also develop internal mobility opportunities for employees whose existing roles may be affected by AI, enabling them to transition into alternative positions within the organization. Career counseling and guidance should be provided during technological transitions to help employees understand future career opportunities and develop appropriate career plans.

Furthermore, employees should be actively involved in AI implementation decisions, particularly where such technologies directly affect their work, responsibilities, and career prospects. Organizations should regularly monitor employee perceptions of job insecurity and identify concerns associated with AI adoption. Strong organizational support mechanisms, including managerial support, employee assistance, learning resources, and recognition programmes, should be established to facilitate successful adaptation. Finally, organizations should develop an ethical and human-centered AI policy that emphasizes transparency, fairness, accountability, employee well-being, data privacy, and responsible use of technology. Together, these measures can help organizations reduce employee uncertainty, strengthen workforce adaptability, and ensure that AI adoption contributes to both organizational performance and sustainable employee development.

13. Limitations of the Study

The proposed study may have several limitations. First, a cross-sectional design may limit the ability to establish strong causal relationships among AI anxiety, job insecurity, and employee performance. Second, self-reported questionnaire data may create common method bias. Third, employees from a limited number of industries may restrict the generalizability of findings. Fourth, employees' reactions to AI may differ according to their occupation, digital skills, age, organizational position, and previous experience with technology. Finally, AI technology is evolving rapidly, meaning that employee perceptions may change over time.

Future research could address these limitations through longitudinal designs, multi-source performance data, cross-industry comparisons, and experimental or time-lagged approaches.

14. Conclusion

Artificial intelligence is transforming the workplace, but technological transformation is ultimately experienced by

people. The success of AI adoption therefore depends not only on technological capability but also on employees' psychological readiness to work alongside intelligent systems. This study proposes that AI anxiety can negatively influence employee performance and that job insecurity may represent an important psychological mechanism through which this effect occurs. When employees perceive AI as a threat to their employment, skills, or future career, the resulting insecurity may reduce their ability to concentrate, remain motivated, and perform effectively. The study consequently shifts the discussion from "How can organizations implement AI?" to "How can organizations implement AI without creating unnecessary psychological insecurity among employees?" From an HR perspective, the answer lies in employee-centered implementation, transparent communication, continuous re-skilling, career support, participation, and human-centered AI governance. Such practices can help organizations capture the benefits of AI while protecting employee confidence, security, and performance.

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