

Artificial Intelligence Anxiety and Unemployment Anxiety among University Students: The Moderating Role of Emotional Intelligence

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Abstract: The rapid advancement of artificial intelligence has raised concerns about employment security and future career opportunities among university students. The present study examined the relationship between AI anxiety and unemployment anxiety and investigated the moderating role of emotional intelligence among university students in Bihar. A quantitative cross-sectional correlational research design was employed, and data were collected from 321 university students aged 18–25 years using the Artificial Intelligence Anxiety Scale, Wong and Law Emotional Intelligence Scale, and HeWi's Unemployment Anxiety Scale. Data were analyzed using descriptive statistics, Pearson's correlation, independent-samples t-test, and Hayes' PROCESS macro (Model 1). The findings revealed that AI anxiety and unemployment anxiety were not significantly correlated at the bivariate level. However, moderation analysis showed that the overall regression model was statistically significant, $F(3, 317) = 13.44, p < .001$, explaining 11.3% of the variance in unemployment anxiety ($R^2 = .113$). The relationship between AI anxiety and unemployment anxiety became significant only after emotional intelligence and the interaction term were included in the model, indicating a significant moderating effect. Higher emotional intelligence weakened the positive association between AI anxiety and unemployment anxiety, suggesting its protective role. Compared to their male peers, female participants exhibited significantly elevated scores on AI anxiety. These findings highlight the importance of emotional intelligence as a psychological resource and underscore the need for emotional intelligence training and career guidance interventions to help students adapt to evolving technological and occupational environments.

Keyword: Artificial Intelligence Anxiety; Unemployment Anxiety; Emotional Intelligence

1. Introduction

Artificial intelligence (AI) has emerged as one of the most transformative technological developments of the contemporary era, influencing various domains including education, healthcare, communication, and employment. AI-based systems are increasingly capable of performing complex cognitive tasks such as learning, decision-making, problem-solving, and pattern recognition, resulting in significant changes in the way individuals study, work, and interact with technology (Stryker & Kavlakoglu, 2024). Although artificial intelligence offers substantial benefits in terms of efficiency, innovation, and accessibility, its rapid advancement has also generated psychological concerns regarding uncertainty, loss of control, ethical challenges, and future employment opportunities (Gupta et al., 2023).

One important psychological consequence associated with increasing AI integration is artificial intelligence anxiety (AI anxiety). Anxiety generally refers to an emotional state characterized by apprehension, worry, and anticipation of potential

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future threats. When these concerns are specifically associated with artificial intelligence and its consequences, they constitute AI anxiety. Johnson and Verdicchio (2017) conceptualized AI anxiety as feelings of fear and apprehension arising from concerns that AI systems may operate beyond human control. Later, Li and Huang (2020) identified AI anxiety as a multidimensional construct involving concerns related to privacy violations, algorithmic bias, job replacement, learning difficulties, ethical issues, lack of transparency, and potential risks associated with advanced AI systems. Chen et al. (2024) investigated AI anxiety among undergraduate students and identified four major dimensions: learning anxiety, AI configuration anxiety, job replacement anxiety, and sociotechnical blindness.

Among the different dimensions of AI anxiety, concerns related to employment and job displacement are particularly important for university students. As young individuals prepare to enter increasingly competitive labour markets, students may perceive artificial intelligence as both an opportunity for career advancement and a potential threat to future employment stability. Rapid technological changes have increased uncertainty regarding the skills required in future occupations, creating concerns about employability and career security. Therefore, AI anxiety may extend beyond concerns about technology itself and influence broader psychological perceptions regarding future professional outcomes.

Artificial intelligence's effects on jobs have grown to be a significant global concern. It is anticipated that developments in automation and artificial intelligence technologies would change occupational structures by eliminating some repetitive activities and concurrently generating new job opportunities. However, people entering the workforce are more uncertain due to the potential for job displacement and shifting skill needs. For university students, who are in the transitional phase between their academic training and a professional job, this uncertainty may be especially pertinent.

This uncertainty regarding future employment can contribute to unemployment anxiety. Unemployment anxiety refers to the psychological state characterized by fear, worry, and apprehension regarding difficulties in obtaining or maintaining employment in an uncertain labour market (Ishtaya & Shaheen, 2025). Unlike actual unemployment, unemployment anxiety reflects anticipated concerns about future employability, career stability, financial security, and adequacy of personal skills. For university students, this anxiety may be intensified because they must navigate the transition from education to employment while adapting to rapidly changing occupational demands. Çengel et al. (2023) reported that AI anxiety among university students reflects broader concerns regarding technological transformation rather than merely individual fear of technology. Their findings suggested that AI anxiety includes concerns related to employment, human autonomy, and social changes associated with intelligent systems.

Research suggests that young adults and university students are particularly vulnerable to employment-related anxiety due to increasing competition, uncertain career prospects, and changing skill requirements. The transition from academic to professional life involves significant psychological adjustment, and concerns about future employment may negatively affect students' emotional well-being and career confidence (Yasar & Turgut, 2020). In the context of artificial intelligence, concerns regarding automation and technological replacement may further contribute to perceptions of employment insecurity.

Recent empirical evidence suggests a relationship between AI-related concerns and employment anxiety. Yang et al. (2024) demonstrated that unemployment is consistently linked with increased psychological distress, including anxiety and depressive symptoms, across different countries and populations. Uçar et al. (2024) found that AI anxiety was positively associated with unemployment anxiety among university students, suggesting that concerns about artificial intelligence may contribute to fears about future job prospects. Similarly, Hoşgör and Coşkun (2025) reported that students experiencing higher levels of AI anxiety also demonstrated greater concerns related to employment uncertainty. These findings suggest that technological anxiety may influence psychological perceptions of future employment; however, individuals may differ in the extent to which they experience these effects.

Emotional Intelligence as a Psychological Resource

Emotional intelligence (EI) refers to the ability to perceive, understand, regulate, and effectively utilize emotional information in oneself and others (Mayer & Salovey, 1997). According to the ability model of emotional intelligence, EI involves a set of cognitive abilities that enable individuals to process emotional information, regulate emotional responses, and use emotions adaptively in decision-making and problem-solving (Mayer et al., 2004). These abilities are particularly important in situations involving uncertainty, stress, and perceived threats because they influence how individuals interpret and respond to challenging experiences.

University students frequently encounter multiple sources of uncertainty related to academic performance, career decisions, and future employment opportunities. In such contexts, emotional intelligence may serve as an important psychological resource by promoting emotional regulation, adaptive coping, and resilience. Individuals with higher emotional intelligence are generally better able to manage negative emotional experiences, maintain psychological balance, and respond effectively to stressful situations. Previous research has demonstrated that emotional intelligence is associated with improved coping abilities, psychological adjustment, and reduced vulnerability to emotional distress (Mayer et al., 2004).

The relevance of emotional intelligence becomes particularly important in the context of technological and occupational uncertainty. Artificial intelligence represents a rapidly changing environment in which individuals must continuously adapt to new skills, changing job requirements, and uncertain career pathways. Emotional intelligence may influence how individuals evaluate and respond to these changes. Students with higher emotional intelligence may be better equipped to regulate fear and uncertainty associated with AI advancement and develop adaptive responses toward future employment challenges.

The relationship between emotional intelligence and anxiety can be understood through Cognitive Appraisal Theory proposed by Lazarus and Folkman (1984). According to this theory, psychological responses to stressful events depend not only

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on the nature of the stressor but also on how individuals evaluate the situation and their perceived ability to cope with it. In the context of AI-related uncertainty, individuals may differ in their appraisal of artificial intelligence as either a threatening force or an opportunity for adaptation. Emotional intelligence may influence this appraisal process by enhancing emotional regulation and promoting more adaptive interpretations of uncertain situations.

Furthermore, the Stress-Buffering Model proposed by Cohen and Wills (1985) suggests that psychological resources can reduce the negative effects of stressful experiences. From this perspective, emotional intelligence may function as a protective factor by reducing the extent to which AI-related concerns contribute to unemployment anxiety. Students with higher emotional intelligence may acknowledge technological and employment-related uncertainties but possess better emotional resources to manage these concerns effectively.

Peláez-Fernández et al. (2023) found that emotional intelligence contributed to better psychological adjustment during unemployment through resilient coping and self-esteem. Gómez-Hombrados and Extremera (2023) examined emotional intelligence among unemployed individuals and found that higher emotional intelligence was associated with better psychological adjustment, reduced depressive symptoms, and improved coping strategies. Pulgar et al. (2025) examined predictors of unemployment anxiety among young adults and reported that emotional intelligence was negatively associated with unemployment anxiety. Their findings indicate that emotionally intelligent individuals may experience lower employment-related anxiety because they possess stronger emotional regulation abilities and coping resources.

However, emotional intelligence may also increase awareness of future challenges. Individuals with greater emotional awareness may be more sensitive to changes in their environment and more capable of recognizing potential risks associated with technological advancement and labour market transformation. Therefore, emotional intelligence may not simply eliminate anxiety but may influence the way individuals experience and regulate anxiety. This suggests that emotional intelligence may play a moderating role rather than only a direct protective role in the relationship between AI anxiety and unemployment anxiety.

Therefore, the present study aims to examine the relationship between artificial intelligence anxiety and unemployment anxiety among university students in Bihar, while evaluating the moderating role of emotional intelligence. Based on the theoretical framework and existing literature, the following hypotheses were formulated:

- **H1:** AI anxiety will be significantly associated with unemployment anxiety.
- **H2:** AI anxiety will significantly predict unemployment anxiety.
- **H3:** Gender will significantly influence AI anxiety and unemployment anxiety among university students.
- **H4:** Emotional intelligence will moderate the relationship between AI anxiety and Unemployment anxiety.

2. Materials and Methods

Design

The study employed a quantitative, cross-sectional, correlational research design to examine the relationship between artificial intelligence anxiety and unemployment anxiety, and a moderation analysis framework to investigate the moderating role of emotional intelligence among university students.

Sample

A total of 321 university students participated in this study, recruited from four universities in Bihar: Central University of South Bihar, Patna University, Patliputra University, and Magadh University, using Purposive Sampling Techniques. The sample consisted of 165 males (51.4%) and 156 females (48.6%) participants. Of the total sample, 167 (52.0%) were undergraduate students and 154 (48.0%) were postgraduate students. In terms of academic stream, 160 participants (49.8%) were from the arts stream, and 161 participants (50.2%) were from the science stream.

Inclusion and Exclusion Criteria

Participants were eligible if they were between 18 and 25 years of age, full-time undergraduate or postgraduate students at a university in Bihar, used AI-based technologies (e.g., ChatGPT, Microsoft Copilot, or other generative AI tools) for at least the previous three months, had English proficiency, and provided informed consent. Participants were excluded if they gave incomplete or careless responses, were enrolled in part-time or distance education programs, or reported a diagnosed psychological or psychiatric disorder.

Measures

Personal Data Sheet

A self-developed personal data questionnaire was used to collect participants' demographic information, including age, gender, academic program (undergraduate/postgraduate), academic stream (arts/science), and university affiliation.

Artificial Intelligence Anxiety Scale (AIAS)

Artificial intelligence anxiety was measured using the Artificial Intelligence Anxiety Scale (AIAS) developed by Wang and Wang (2019). The scale consists of 21 items assessing anxiety related to artificial intelligence across four dimensions: learning anxiety, job replacement anxiety, sociotechnical blindness, and AI configuration anxiety. Responses are recorded on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating greater AI anxiety. The original scale demonstrated excellent internal consistency (Cronbach's $\alpha = .964$) and strong criterion validity ($r = 0.864$, $p < .001$).

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Unemployment Anxiety Scale (HUAS)

Unemployment anxiety was assessed using HeWi's Unemployment Anxiety Scale (HUAS) developed by Hemalatha and William Dharma Raja (2024). The scale contains 26 items measuring unemployment anxiety across four dimensions: skills and qualifications, self-confidence, experience, and psychological well-being. Responses are rated on a 5-point Likert scale from 1 (Strongly agree) to 5 (Strongly disagree), with higher scores reflecting greater unemployment anxiety. The original authors reported good reliability, with a split-half reliability coefficient of .822.

Emotional Intelligence Scale (WLEIS)

Emotional intelligence was measured using the Wong and Law Emotional Intelligence Scale (WLEIS) developed by Wong and Law (2002). The scale comprises 16 items assessing four dimensions: self-emotion appraisal, others' emotion appraisal, use of emotion, and regulation of emotion. Items are rated on a 7-point Likert scale from 1 = totally disagree to 5 = totally agree, with higher scores indicating greater emotional intelligence. The scale has demonstrated strong psychometric properties, with Cronbach's alpha values ranging from 0.79 to 0.86, indicating acceptable to high internal consistency reliability.

Procedure

Data were collected using a structured questionnaire administered via a Google Form. Before participation, the purpose of the study was clearly explained, and informed consent was obtained electronically from all respondents. Participation was voluntary, and confidentiality of responses was assured. Only those individuals who met the eligibility criteria and demonstrated adequate understanding of English-language items were included in the final dataset.

Statistical analysis

The data were analyzed using IBM SPSS Statistics 27. Descriptive statistics were computed to summarize the characteristics and scores of all primary study variables. Pearson product-moment correlation analysis was conducted to examine the strength and direction of relationships among the variables. An independent samples t-test was performed to compare the mean scores of male and female participants. A moderation analysis was conducted using Hayes' PROCESS Macro (Model 1) to examine whether emotional intelligence significantly moderates the relationship between AI anxiety and unemployment anxiety (Hayes, 2022).

3. Result

Variables	N	Minimum	Maximum	M	SD
Artificial Intelligence Anxiety	321	41.00	134.00	86.43	18.07
Emotional Intelligence	321	49.00	112.00	86.01	13.65
Unemployment Anxiety	321	60.00	102.00	81.17	7.57

Table 1: Descriptive Statistics of Study Variables.

Note: The scores of Artificial Intelligence Anxiety ranged from 41 to 134 ($M = 86.43$; $SD = 18.07$), Emotional Intelligence ranged from 49 to 112 ($M = 86.01$; $SD = 13.65$), and Unemployment Anxiety ranged from 60 to 102 ($M = 81.17$; $SD = 7.57$).

Table 1 presents the descriptive statistics of the study variables. The results showed that Artificial Intelligence Anxiety scores ranged from 41 to 134 ($M = 86.43$; $SD = 18.07$), Emotional Intelligence scores ranged from 49 to 112 ($M = 86.01$; $SD = 13.65$), and Unemployment Anxiety scores ranged from 60 to 102 ($M = 81.17$; $SD = 7.57$).

Variables	AIA	EI	UA
AIA	1		
EI	-.047	1	
UA	.091	.299**	1

Table 2: Pearson Product-Moment Correlation Among Artificial Intelligence Anxiety, Emotional Intelligence, and Unemployment Anxiety ($N = 321$)

Note: ** $p < .01$. AIA = Artificial Intelligence Anxiety; EI = Emotional Intelligence; UA = Unemployment Anxiety.

Table 2 presents the Pearson product-moment correlation coefficients among Artificial Intelligence Anxiety, Emotional Intelligence, and Unemployment Anxiety. The results indicated that Artificial Intelligence Anxiety was not significantly correlated with Emotional Intelligence ($r = -.047$, $p > .05$) or Unemployment Anxiety ($r = .091$, $p > .05$). However, Emotional Intelligence showed a significant positive correlation with Unemployment Anxiety ($r = .299$, $p < .01$). Therefore, the hypothesis predicting a significant positive relationship between artificial intelligence anxiety and unemployment anxiety was not supported.

Variables	Group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
AIA	Male	165	83.98	17.26				
	Female	156	88.99	18.55	-2.51	319	.013	0.28
UA	Male	165	80.25	7.74				
	Female	156	82.14	7.28	-2.25	319	.025	0.25

Table 3: Independent Samples t-Test for Gender Differences in Artificial Intelligence Anxiety and Unemployment Anxiety ($N = 321$)

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Note: AIA = Artificial Intelligence Anxiety; UA = Unemployment Anxiety; Cohen's d values represent effect sizes. $p < .05$.

Table 3 presents the results of the independent samples t -test examining gender differences in Artificial Intelligence Anxiety and Unemployment Anxiety. A significant gender difference was observed in Artificial Intelligence Anxiety, $t(319) = -2.51, p = .013$, with female students ($M = 88.99, SD = 18.55$) reporting higher scores than male students ($M = 83.98, SD = 17.26$). The effect size indicated a small difference between groups (Cohen's $d = 0.28$).

Similarly, a significant gender difference was found in Unemployment Anxiety, $t(319) = -2.25, p = .025$, with female students ($M = 82.14, SD = 7.28$) reporting higher scores compared to male students ($M = 80.25, SD = 7.74$). The magnitude of this difference was small (Cohen's $d = 0.25$). Therefore, the hypothesis predicting significant gender differences in artificial intelligence anxiety and unemployment anxiety was supported.

Predictor	B	SE	t	p	LLCI	ULCI
Constant	39.9360	11.4536	3.4868	.001	17.4014	62.4706
(AIA)	0.3251	0.1365	2.3824	.018	0.0566	0.5937
(EI)	0.4346	0.1309	3.3208	.001	0.1771	0.6921
AIA $\times$ EI	-0.0033	0.0016	-2.0854	.038	-0.0064	-0.0002

Table 4: Summary of Moderated Regression Analysis Predicting Unemployment Anxiety ($N = 321$)

Note: AIA = Artificial Intelligence Anxiety; EI = Emotional Intelligence; B = Unstandardized regression coefficient; SE = Standard Error; LLCI = Lower-Level Confidence Interval; ULCI = Upper-Level Confidence Interval. The interaction term (AIA $\times$ EI) represents the moderating effect of Emotional Intelligence on the relationship between Artificial Intelligence Anxiety and Unemployment Anxiety.

Table 4 represents the moderated regression analysis, which shows the overall model is significant [$F(3,317) = 13.44, p < .001$], with the combined predictors accounting for approximately 11.3% of the total variance in unemployment anxiety ($R^2 = .113$). Artificial Intelligence Anxiety significantly positively predicted unemployment anxiety ($B = 0.3251, SE = 0.1365, t = 2.38, p = .018, 95\% \text{ CI } [0.0566, 0.5937]$). Emotional Intelligence also significantly predicted unemployment anxiety ($B = 0.4346, SE = 0.1309, t = 3.32, p = .001, 95\% \text{ CI } [0.1771, 0.6921]$).

A significant interaction emerged between AI anxiety and emotional intelligence ($B = -0.0033, SE = 0.0016, p = .038$), confirming that emotional intelligence acts as a moderating variable within this relationship, indicating that emotional intelligence significantly moderates the relationship between Artificial Intelligence Anxiety and Unemployment Anxiety. The negative interaction coefficient suggests that the association between AI anxiety and unemployment anxiety decreases at higher levels of emotional intelligence. These findings supported the hypothesis that emotional intelligence moderates the relationship between artificial intelligence anxiety and unemployment anxiety.

R	R^2	F	p
.336	.113	13.44	< .001

Table 5: Model Summary of Moderated Regression Analysis Predicting Unemployment Anxiety (UA)

Note: R = Multiple correlation coefficient; R^2 = Proportion of variance explained by the model; F = F-statistic; $p < .001$

Table 5 presents the model summary of the moderated regression analysis predicting unemployment anxiety. The overall regression model was statistically significant, $F(3, 317) = 13.44, p < .001$, indicating that Artificial Intelligence Anxiety, Emotional Intelligence, and their interaction significantly predicted unemployment anxiety. The model explained 11.3% of the variance in unemployment anxiety ($R^2 = .113$).

Emotional Intelligence Level	Effect	SE	t	p	LLCI	ULCI
70.00 (-1 SD)	0.0964	0.0334	2.8859	.004	0.0307	0.1621
89.00 (Mean)	0.0343	0.0227	1.5103	.132	-0.0104	0.0789
99.00 (+1 SD)	0.0016	0.0302	0.0530	.958	-0.0578	0.0610

Table 6: Conditional Effects of Artificial Intelligence Anxiety on Unemployment Anxiety at Different Levels of Emotional Intelligence

Note: Effect = Conditional effect of Artificial Intelligence Anxiety on Unemployment Anxiety; SE = Standard Error; LLCI = Lower-Level Confidence Interval; ULCI = Upper-Level Confidence Interval. Emotional Intelligence levels represent low (-1 SD), mean, and high (+1 SD) levels.

Table 6 presents the conditional effects of Artificial Intelligence Anxiety on Unemployment Anxiety at different levels of Emotional Intelligence. The effect of Artificial Intelligence Anxiety on Unemployment Anxiety was significant at low levels of Emotional Intelligence (-1 SD; Effect = 0.0964, $SE = 0.0334, t = 2.89, p = .004, 95\% \text{ CI } [0.0307, 0.1621]$). However, the conditional effect was not significant at the mean level of Emotional Intelligence (Effect = 0.0343, $SE = 0.0227, t = 1.51, p = .132, 95\% \text{ CI } [-0.0104, 0.0789]$) or at high levels of Emotional Intelligence (+1 SD; Effect = 0.0016, $SE = 0.0302, t = 0.05, p = .958, 95\% \text{ CI } [-0.0578, 0.0610]$). These findings indicate that the relationship between Artificial Intelligence Anxiety and

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Unemployment Anxiety was significant only among participants with lower levels of Emotional Intelligence. These findings supported the hypothesis that emotional intelligence moderates the relationship between artificial intelligence anxiety and unemployment anxiety.

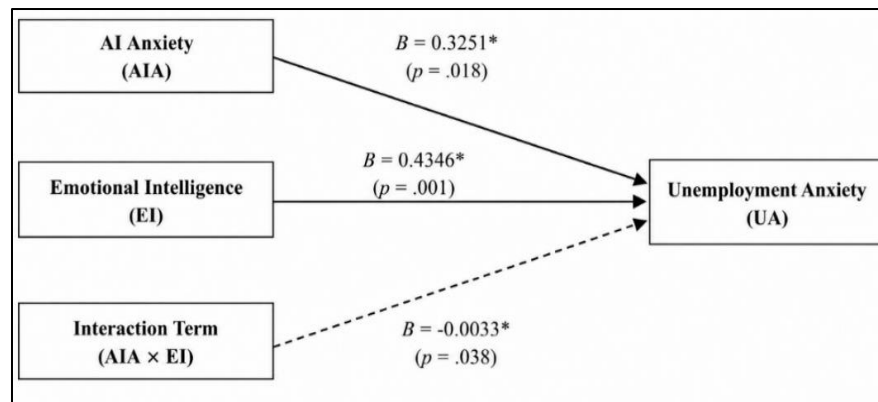


Figure 1: Moderated Regression Model Showing the Effects of AI Anxiety, Emotional Intelligence, and Their Interaction on Unemployment Anxiety

Note. AIA = Artificial Intelligence Anxiety; EI = Emotional Intelligence; UA = Unemployment Anxiety. Solid arrows indicate direct effects, and the dashed arrow represents the interaction effect (moderation effect). $p < .05$.

Figure 1 illustrates the moderated regression model examining the effects of Artificial Intelligence Anxiety, Emotional Intelligence, and their interaction on Unemployment Anxiety. Artificial Intelligence Anxiety significantly predicted Unemployment Anxiety ($B = 0.3251$, $SE = 0.1365$, $t = 2.38$, $p = .018$). Emotional Intelligence also significantly predicted Unemployment Anxiety ($B = 0.4346$, $SE = 0.1309$, $t = 3.32$, $p = .001$). The interaction between Artificial Intelligence Anxiety and Emotional Intelligence was statistically significant ($B = -0.0033$, $SE = 0.0016$, $t = -2.09$, $p = .038$), indicating that Emotional Intelligence moderates the relationship between Artificial Intelligence Anxiety and Unemployment Anxiety.

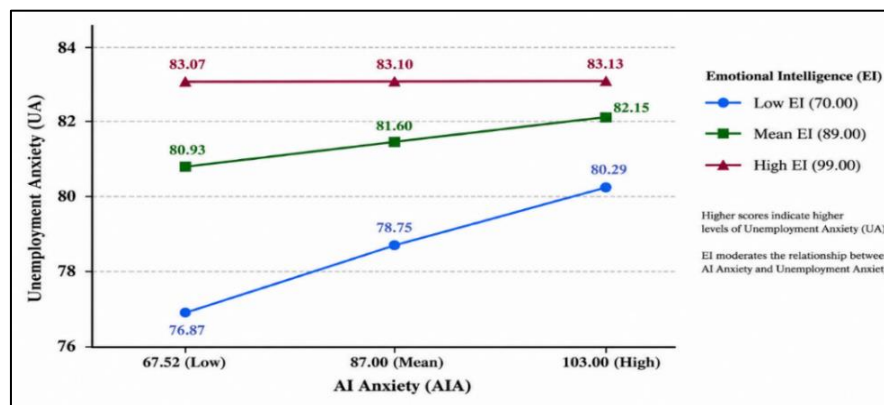


Figure 2: Conditional Effects of Emotional Intelligence on the Relationship Between Artificial Intelligence Anxiety and Unemployment Anxiety

Note. AIA = Artificial Intelligence Anxiety; EI = Emotional Intelligence; UA = Unemployment Anxiety. The lines represent the relationship between Artificial Intelligence Anxiety and Unemployment Anxiety at low (-1 SD), mean, and high ($+1$ SD) levels of Emotional Intelligence.

Figure 2 illustrates the interaction effect of Emotional Intelligence on the relationship between Artificial Intelligence Anxiety and Unemployment Anxiety. The pattern of the interaction indicates that the association between Artificial Intelligence Anxiety and Unemployment Anxiety varied across levels of Emotional Intelligence. At low levels of Emotional Intelligence (-1 SD; $EI = 70.00$), Artificial Intelligence Anxiety significantly predicted Unemployment Anxiety (Effect = 0.0964 , $SE = 0.0334$, $t = 2.89$, $p = .004$, 95% CI [0.0307 , 0.1621]). However, the relationship was not significant at the mean level of Emotional Intelligence ($EI = 89.00$) or at the high level ($+1$ SD; $EI = 99.00$).

4. Discussion

The present study aimed to examine the relationship between artificial intelligence (AI) anxiety, unemployment anxiety, and emotional intelligence among university students. The study further investigated the moderating role of emotional intelligence in the relationship between AI anxiety and unemployment anxiety. The findings revealed a complex pattern of associations among the study variables. Although AI anxiety was not significantly associated with unemployment anxiety at the bivariate level, the moderation analysis indicated that AI anxiety significantly predicted unemployment anxiety when emotional intelligence and the interaction effect were considered. Furthermore, emotional intelligence significantly moderates

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this relationship, demonstrating a buffering effect. Additionally, significant gender differences were observed, with female students reporting higher levels of both AI anxiety and unemployment anxiety compared to male students. These findings provide insights into the psychological processes underlying technology-related uncertainty and employment concerns among university students.

Artificial Intelligence Anxiety and Unemployment Anxiety

The findings indicated that AI anxiety was not significantly correlated with unemployment anxiety at the bivariate level. This suggests that concerns regarding artificial intelligence may not automatically translate into immediate fears about unemployment among university students. However, the moderation analysis revealed that AI anxiety significantly predicted unemployment anxiety when emotional intelligence and the interaction effect were incorporated into the model. This finding indicates that the relationship between AI anxiety and unemployment anxiety may be conditional rather than direct, and simple correlations may not fully capture the complexity of this association.

Previous research has generally reported a positive relationship between AI-related concerns and employment-related anxiety. For instance, Uçar et al. (2024) found that AI anxiety was significantly associated with unemployment anxiety among university students, indicating that concerns about technological advancement and potential job displacement contribute to employment uncertainty. Similarly, Hoşgör and Coşkun (2025) reported that AI anxiety was strongly related to fear of job loss due to artificial intelligence, suggesting that technological changes are increasingly perceived as potential threats to future career stability. The present findings extend this literature by demonstrating that the influence of AI anxiety on unemployment anxiety may depend on individual psychological resources, particularly emotional intelligence.

Moderating Role of Emotional Intelligence

The most important finding of the present study was the significant moderating role of emotional intelligence in the relationship between AI anxiety and unemployment anxiety. The negative interaction effect indicates that emotional intelligence weakens the positive association between AI anxiety and unemployment anxiety. Specifically, conditional effects analysis showed that AI anxiety significantly predicted unemployment anxiety among students with low emotional intelligence, whereas this relationship became non-significant among students with average and high levels of emotional intelligence. This finding suggests that emotional intelligence functions as a psychological resource that protects students from experiencing heightened employment-related anxiety in response to AI-related concerns.

This finding can be explained through Emotional Intelligence Theory proposed by Salovey and Mayer (1990), which suggests that emotionally intelligent individuals are better able to perceive, regulate, and manage emotional responses. Students with higher emotional intelligence may be more capable of regulating fear and uncertainty associated with technological change and may adopt more adaptive coping strategies when facing future career challenges. The findings are also consistent with Cognitive Appraisal Theory (Lazarus & Folkman, 1984), which proposes that psychological responses depend not only on external stressors but also on individuals' interpretation and evaluation of those stressors. Individuals with higher emotional intelligence may appraise AI-related changes as manageable challenges rather than uncontrollable threats, thereby reducing the psychological impact of AI anxiety.

Furthermore, the findings support the Stress-Buffering Model proposed by Cohen and Wills (1985), which suggests that psychological resources can reduce the negative effects of stressful experiences. In the present study, emotional intelligence appeared to buffer the impact of AI anxiety on unemployment anxiety, highlighting its importance in helping students adapt to rapidly changing technological environments.

These findings are consistent with previous research demonstrating the protective role of emotional intelligence in managing psychological distress. Gómez-Hombrados and Extremera (2023) found that emotional intelligence enhanced resilient coping and reduced psychological difficulties among unemployed individuals. Similarly, Peláez-Fernández et al. (2023) reported that emotional intelligence was associated with lower anxiety through adaptive coping mechanisms and enhanced self-esteem. Sun and Lyu (2022) further demonstrated that emotional intelligence contributes to greater self-efficacy, supporting its role in managing uncertainty and stress.

Emotional Intelligence and Unemployment Anxiety

The present study found a significant positive association between emotional intelligence and unemployment anxiety. Although this finding differs from previous research suggesting that emotional intelligence is generally associated with lower anxiety, it may reflect the role of emotional intelligence in enhancing awareness and evaluation of future challenges. According to the ability model of emotional intelligence (Mayer et al., 2004), emotionally intelligent individuals possess greater capacity to perceive and understand emotional and environmental information. Therefore, students with higher emotional intelligence may be more sensitive to emerging occupational uncertainties associated with technological advancement and may recognize potential career challenges more clearly.

This interpretation is also consistent with Cognitive Appraisal Theory (Lazarus & Folkman, 1984), which suggests that psychological responses depend on how individuals evaluate potential stressors and their perceived ability to cope with them. Emotionally intelligent students may recognize artificial intelligence and employment uncertainty as significant challenges; however, their emotional regulation abilities may enable them to manage these concerns more effectively. Thus, emotional intelligence may increase awareness of potential threats while simultaneously reducing the likelihood that such concerns develop into excessive anxiety.

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Higher emotional intelligence may be associated with greater recognition of employment-related challenges, while its regulatory component protects against psychological distress. This interpretation is supported by the present moderation findings, which demonstrated that emotional intelligence weakened the relationship between AI anxiety and unemployment anxiety.

Gender Differences in Artificial Intelligence Anxiety and Unemployment Anxiety

The findings revealed significant gender differences in both AI anxiety and unemployment anxiety, with female students reporting higher levels compared to male students. This finding suggests that female university students may perceive greater uncertainty regarding technological changes and future employment opportunities. Previous studies have similarly reported higher levels of AI anxiety and employment-related concerns among female students (Uçar et al., 2024; Hoşgör & Coşkun, 2025).

These differences may be understood through social and contextual factors influencing perceptions of career security. Concerns regarding labour market inequality, occupational opportunities, and perceived employment instability may contribute to greater uncertainty among female students. Therefore, gender differences in technology-related anxiety should be considered within broader social and occupational contexts rather than interpreted solely as individual differences.

5. Conclusion

The present study examined the relationship between artificial intelligence anxiety, unemployment anxiety, and emotional intelligence among university students, with particular emphasis on the moderating role of emotional intelligence. The findings demonstrated that the relationship between AI anxiety and unemployment anxiety is not a simple direct association but is influenced by individual psychological resources.

Although AI anxiety was not significantly correlated with unemployment anxiety at the bivariate level, moderation analysis revealed that AI anxiety significantly predicted unemployment anxiety when emotional intelligence and the interaction effect were considered. The significant negative interaction effect indicated that emotional intelligence weakened the association between AI anxiety and unemployment anxiety. Students with higher emotional intelligence appeared better able to manage AI-related concerns and employment uncertainty, highlighting emotional intelligence as an important psychological resource during technological transitions.

The study also revealed significant gender differences, with female students reporting higher levels of AI anxiety and unemployment anxiety compared to male students. These findings highlight the importance of considering individual and social factors when examining psychological responses to artificial intelligence and future employment uncertainty.

Overall, the study contributes to the emerging literature on AI-related psychological concerns among Indian university students by demonstrating the protective role of emotional intelligence. The findings suggest that developing emotional regulation and adaptive coping abilities may help students navigate the psychological challenges associated with rapid technological advancement.

Implications of the Study

The present study has important theoretical and practical implications. Theoretically, the findings extend existing research on AI anxiety by demonstrating that its relationship with unemployment anxiety depends on individual psychological resources. By identifying emotional intelligence as a significant moderator, the study contributes to understanding how students psychologically adapt to technological uncertainty.

From a practical perspective, educational institutions may consider integrating emotional intelligence development programs, AI literacy initiatives, and career counselling services to help students cope with concerns related to automation and future employment. Training focused on emotional regulation, resilience, adaptability, and coping skills may enhance students' ability to manage uncertainty in changing occupational environments.

The findings also highlight the importance of gender-sensitive support programs, as female students reported higher levels of AI anxiety and unemployment anxiety. Universities may develop targeted counselling and career guidance interventions to address these concerns effectively.

Limitations and Future Directions

There are some limitations in the study. First, it is difficult to determine the causal linkages between unemployment anxiety, emotional intelligence, and AI anxiety due to the cross-sectional methodology. Further longitudinal research could shed more light on how these characteristics change and interact over time. Second, response biases may have affected the study's use of self-report measures. Third, the results could not be applied to other demographics and areas because the sample was limited to Bihar University students.

Future studies could look at these connections amongst a variety of samples, such as working professionals, students from various parts of India, and those who have firsthand experience with changes in the workplace brought about by AI. Future research may also examine other psychological factors like coping mechanisms, resilience, job adaptability, and self-efficacy. Strategies for lowering anxiety associated with AI and employment may also be developed through intervention-based research that looks at the efficacy of career counseling programs and emotional intelligence training.

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