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AI in the Workplace: Uncovering Its Impact on Employee Well-being and the Role of Cognitive Job Insecurity

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Abstract: We created a model on the basis of Social Identity Theory in which the identity threat provided by artificial intelligence (AI) raises employees' feelings of job insecurity, which in turn has a detrimental impact on the employees' well-being. This way of thinking rests on the notion that there will be less of a need for people to work in the future because of advances in artificial intelligence. The findings are supported by data obtained from a representative sample of 253 employees over a predetermined period of time. These employees were drawn from a wide variety of industries and businesses in Pakistan. To assess the suggested model, a Confirmatory Factor Analysis was conducted, and the direct and indirect effects of the model's variables were examined using PROCESS MACRO model 4. The adverse effects of the AI Identity Threat on employee well-being have been identified. It was found that cognitive job insecurity functions as an intermediary element in the relationship between AI Identity Threat and employee welfare. The results of our study offer empirical evidence in favour of the assertion that a cognitive impression of job insecurity functions as an intermediary, thereby alleviating the detrimental effects of AI identity threats on employees' welfare. The assertion was substantiated by the results obtained from our investigation, which was undertaken to explore this inquiry. The results suggest that it would be beneficial for organisations to develop training initiatives that support employees in effectively adapting to AI technology. The objective should be to assist personnel in acclimating to emerging technologies. Furthermore, an appraisal of the implications of our research findings is required, along with prospective strategies for broadening the scope of future investigations.

Keywords: Artificial Intelligence (AI), Cognitive Job Insecurity (CJI), Employee Well-being (EW).

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INTRODUCTION

Artificial Intelligence (AI), which is characterised by its capacity to emulate human intellect, has become an indispensable driver of technological advancement. With its roots in computer science, this field of study focuses on the creation of machines capable of doing tasks that would typically need human intelligence. The aforementioned duties include learning, problem-solving, and decision-making. Artificial intelligence's (AI) development has been marked by notable breakthroughs in neural networks, natural language processing, and machine learning—all of which were initially proposed by researchers including Ma and Sun (2020). The application of artificial intelligence (AI) transcends numerous sectors, including finance and healthcare, thereby causing a fundamental paradigm shift in traditional methodologies (Chikhaoui et al., 2022; Dwivedi et al., 2019). In light of the profound transformations in cyber dangers brought about by the emergence of Artificial Intelligence (AI), identity protection is confronted with unique challenges. AI systems have transformed into tools employed in sophisticated identity theft schemes owing to their formidable data processing capabilities. The increasing threat in question exploits personal information, leading to unauthorised access and fraudulent activities. AI has a twofold purpose in the realm of identity security: it fortifies defensive mechanisms while concurrently granting malicious entities enhanced functionalities (Zamponi & Barbierato, 2022). The mitigation of the AI-driven identity danger necessitates the integration of robust countermeasures into digital security policies to safeguard personal and company data (Cheatham et al., 2019).

Significant disruptions in labour markets have resulted from the advent of Artificial Intelligence (AI), which poses a challenge to traditional employment paradigms. The rapid automation and machine learning-driven industry transitions facilitated by artificial intelligence have sparked apprehensions regarding the displacement of jobs.

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According to research by Lawrence et al. (2017) and Frey & Osborne (2013a), AI and robotics are capable of automating a substantial chunk of current occupations, hence altering the workforce's composition. The previously described advancement presents an obstacle to the traditional comprehension of labour, thus necessitating a reevaluation of occupational obligations and skill sets (Brynjolfsson et al., 2018). In light of these advancements, innovative strategies are required to guarantee a workforce that is resilient and adaptable.

Cognitive job insecurity, a pervasive issue in modern work contexts, refers to individuals' concerns and perceptions regarding the stability and future of their employment. When workers are confronted with the uncertainty surrounding their ongoing employment, this form of insecurity has detrimental effects on their emotional well-being and productivity at work. Sverke et al. (2002) and Greenhalgh and Rosenblatt (1984) underscore the negative consequences of cognitive job insecurity, which further impairs employee well-being and organisational commitment and job satisfaction. Conquering various perspectives is a significant challenge, given that they are often influenced by broader economic events and organisational changes (Hellgren et al., 1999; Vander Elst et al., 2016).

Productivity in the workplace is highly dependent on the mental, physical, and emotional health and satisfaction of the workforce as a whole. This all-encompassing concept beyond the domain of occupational health and integrates factors like work-life balance, job satisfaction, and the physical environment of the worksite. Wright & Cropanzano (2004) and Warr (2006) emphasise the correlation between well-being and organisational outcomes, including increased productivity and lower absenteeism. In contrast to regarding employee wellbeing as a purely human resources concern, the progressive corporate culture recognises it as a vital asset, hence fostering the creation of innovative work environments (Grant et al., 2007). Ensuring the development of a supportive work environment is vital for the sustained prosperity of an organisation. Employee well-being, which is vital to the health of an organisation, is endangered by a number of issues, such as job insecurity, stress in the workplace, and an imbalance between work and personal life. Empirical evidence has established that these types of risks significantly impact the mental and physical welfare of staff members, leading to diminished levels of productivity and job contentment (Rothmann, 2008). At present, organisations are faced with the increasing challenge of identifying and addressing these risks so as to cultivate a supportive and healthy work environment. Research (Thompson & Choi, 2006) that investigates the positive or negative effects of organisational culture on employee well-being demonstrates the importance of strategic interventions.

Research Objectives

- This study aims to investigate how the AI identity threat affects workers' health and safety.
- The purpose of this study is to look into the link between AI identity threat and employee well-being, and how cognitive job insecurity may mediate that relationship.

LITERATURE REVIEW

Social Identity Theory

As per Tajfel's analysis, an individual's social identity is characterised by "the acknowledgment of their participation in specific social groups and a personal commitment in their inclusion within this community" (Turner & Tajfel, 1979). Furthermore, social identities illustrate in a critical manner how the in-group and relevant out-groups differ in a given social setting (Hogg, 2016). From the employees' standpoint, AI identity is perceived as an out-group that poses a danger to their social identity, which they uphold through their in-group affiliations. Diverse intergroup contexts encompass group behaviour that can be described in a variety of ways as efforts to evade or circumvent situations that threaten one's self-respect, to reframe those events to benefit the ingroup, or to reduce ambiguity (Brown, 2000).

AI Identity Threat and Employee Well-being

Purpose of this research is to assess impact of AI identity threat on workforce mental health with the intention of gaining a deeper comprehension of these dynamics. These conflicts are exacerbated by the introduction of artificial intelligence (AI) in the workplace, which performs jobs that have traditionally been carried out by humans, thereby challenging the established identities and roles of individuals within the organisation (Turner & Tajfel, 1979). As the prevalence of AI technologies in the workplace increases, individuals may encounter stress associated with their

emotions and sense of self as they strive to acclimate to these novel technologies (Coombs et al., 2020). Social groups furnish its members with a collective identity that assesses, delineates, and ranks them in accordance with the beliefs, values, and conduct that they espouse, as stated by SIT (Hogg, 2016). One potential consequence of superordinate re-categorization campaigns is that they may be perceived as an identity threat, which could result in strong opposition (Hogg, 2007). Employees' mental and emotional health are negatively impacted by the existence of AI identity threats in the workplace (Gull et al., 2023). There exists a potential for friction to arise among employees who have developed a sense of identification with their positions due to use of artificial intelligence at work (Carter & Grover, 2015). Employees who harbour concerns that the emergence of artificial intelligence could compromise their professional or personal integrity might exhibit reluctance in adopting the technology (Craig et al., 2019). Mitigating AI impersonation attacks directly contributes to the establishment of a secure working environment, thereby benefiting the organisation and the psychological well-being of its personnel. Significantly impacted by the pervasive use of technology in the workplace is the welfare of employees, which is substantially impacted by the increasing prevalence of AI in the workplace (Jia et al., 2023). Based on this, we therefore suggest that:

Hypothesis 1: Artificial intelligence identity threat and employee well-being are inversely related.

AI Identity Threat and Cognitive Job Insecurity

The increased prevalence of artificial intelligence (AI) and automation within the professional sphere has substantially contributed to the heightened apprehensions around job security. According to the influential research of Frey and Osborne (2013), automation poses a threat of displacement to around half of the labour force in developed nations. This forecast significantly amplifies cognitive job insecurity, since employees are fearful of being replaced by intelligent robots. Further substantiation for this assertion is offered by Brougham and Haar (2017), who demonstrate that employees' concern regarding job security is positively correlated with their understanding of the AI functionalities that are relevant to their sector. Similar to this, Arntz et al. (2019) argue that employees may experience substantial job insecurity simply by considering the possibility of job automation, irrespective of its actual implementation. This sentiment of scepticism regarding cognitive professions is notably more pronounced in sectors that have a higher propensity for automation; this demonstrates the clear correlation between AI advancements and cognitive job insecurity. However, the relationship between work uncertainty and AI identity risk is complex and multifaceted. Sverke et al. (2002) underscore the significant impact that personal attributes, such as age, proficiency, and flexibility, have on the manner in which this association is mediated. Employees that demonstrate a higher degree of skill variety and adaptability are more inclined to perceive advancements in artificial intelligence as a means to alleviate job instability.

Additionally, this association is influenced by organisational factors. According to Bhargava et al. (2020) organisations that spend resources proactively towards employee training and development have the potential to alleviate job instability to a certain degree (2020). Cognitive job insecurity can be alleviated through the implementation of governmental initiatives and organisational strategies that prioritise skill development, as suggested by Chiacchio et al. (2018), who endorse this viewpoint. Our hypothesis posits that the existing body of literature strongly supports a positive correlation between cognitive job insecurity and AI identity threat.

Hypothesis 2: Artificial intelligence identity threat and Cognitive Job Insecurity are directly related.

Cognitive Job Insecurity and Employee Well-being

The notion that there exists an inverse relationship between cognitive job insecurity and employee well-being is substantiated by an abundance of scientific research. In accordance with this correlation, Sverke et al. (2002) provide evidence that mental health is severely compromised by cognitive job insecurity—the impression of impending job loss—which takes the form of burnout, stress, and worry. This perspective aligns with the prior investigations carried out by Greenhalgh and Rosenblatt (1984), which highlights the adverse effects of job uncertainty on employees' mental and physical well-being.

This is additionally supported by the findings of Buitendach and De Witte (2005), who demonstrate that cognitive job insecurity is associated with decreased levels of job and life satisfaction, suggesting a more extensive influence on total welfare. Further supporting these results, recent research by Shoss (2017) indicates that extended periods of job insecurity exposure can lead to persistent psychological discomfort, which negatively impacts the

long-term well-being of employees. Furthermore, an investigation conducted by Hellgren et al. (1999) explores the underlying mechanisms of this correlation. The authors propose that cognitive job insecurity significantly impairs employees' perception of control and predictability within the workplace, resulting in increased levels of stress and decreased levels of job engagement. In brief, the existing body of literature consistently establishes evidence of an inverse relationship between cognitive job insecurity and employee well-being. This underscores the significant psychological ramifications associated with the perception of job instability. Consequently, we put forth the following proposition:

Hypothesis 3: Cognitive Job Insecurity and employee well-being are inversely related.

Cognitive Job Insecurity as a mediator

The relationship between AI identity threat and employee well-being, which is mediated by cognitive job insecurity, has garnered increasing scholarly attention. Gull et al. (2023) examined the role of job insecurity as a mediator in this complex relationship in their study. The escalating integration of artificial intelligence (AI) across several sectors has generated apprehensions over work stability. This has led to the emergence of cognitive job insecurity, wherein individuals worry potential job loss due to technological advancements. The apprehension voiced is valid, since Frey and Osborne (2013) provide evidence that AI and automation pose a substantial threat to a substantial portion of the workforce. The potential displacement under consideration has repercussions on employees' economic reorganisation as well as their psychological health, given the unpredictability of their future job. Cognitive work instability goes beyond ordinary concern around the possibility of being fired from one's employment. The psychological consequences of this are emphasised by Sverke et al. (2002), who observe that personnel experience elevated levels of stress and anxiety. It is crucial to distinguish between real job loss and the perceived danger of job loss in order to fully understand the impact of insecurity on employee well-being. An in-depth analysis of this topic is provided by Greenhalgh and Rosenblatt (1984), who investigate the association between job instability and chronic stress, a state that has detrimental effects on both physical and mental health.

Cognitive job insecurity plays a substantial moderating role in the association between external work dangers and employee well-being. Sverke et al. (2002) provide evidence that the perceived threat of job loss can lead to heightened levels of stress and anxiety, even in the absence of actual job termination. These psychological states have a direct impact on an individual's well-being. This is additionally corroborated by Buitendach and De Witte (2005), who assert that such apprehension has detrimental effects on both psychological well-being and job satisfaction. Hellgren et al. (1999) propose that cognitive work insecurity establishes a psychological connection between potential job dangers and internal stress responses, hence impacting the overall welfare of personnel.

The role of cognitive job insecurity as an intermediary between AI identity threat and employee well-being is a particularly noteworthy aspect. As organisations advance in the integration and development of AI technology, people become increasingly concerned about the possibility that their job functions could be automated. Brougham and Haar (2017) underscore the fact that this matter extends beyond unskilled or manual labour and affects a wide range of individuals in many sectors. The employee welfare is negatively impacted due to a heightened apprehension concerning the stability of work, which is attributed to the perceived threat posed by artificial intelligence. However, technological advancements have diverse impacts on cognitive job insecurity across different sectors and regions. According to Arntz et al. (2019), the extent of the influence is dependent on the specific attributes of the work and the necessary set of abilities. In addition, specific personal attributes, like psychological resilience, flexibility, and skill level, significantly influence how workers perceive and react to the threat posed by artificial intelligence. CJI mediates the key interaction between AI identity danger and EW in a complex manner, according to the literature. While advancements in artificial intelligence (AI) may generate concerns over job stability, the extent to which they impact employee welfare is predominantly dependent on personal perspective and the specific conditions of their employment.

Hypothesis 4: Artificial intelligence identity threat and employee well-being are mediated by cognitive job insecurity.

Theoretical Framework

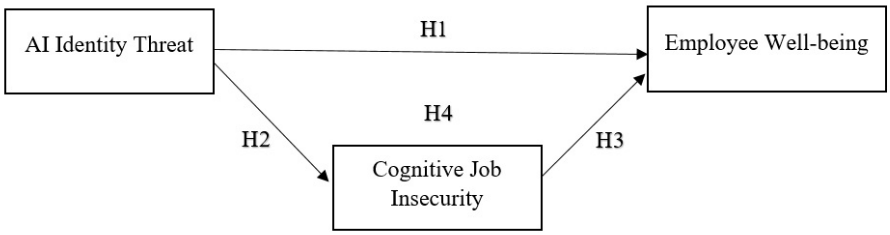

Figure 1: Model of the study

METHODOLOGY

Participants and Procedure

The composition of the study sample in Pakistan encompassed labourers from several sectors. The sectors under question comprised the education, finance, and freelance industries. An investigation was undertaken to ascertain the degree of employees' acquaintance with artificial intelligence (AI) in the professional environment. In this experiment, convenience sampling, a non-probability sampling technique, was utilised. Convenience sampling is considered more favourable than alternative sampling approaches owing to its time-saving and cost-effective characteristics (Stratton, 2021). Individuals who possessed expertise in the field of artificial intelligence were so surveyed. One of the many benefits of this approach is that it facilitates the investigation of the topic at hand (Blumberg et al., 2014).

A total of 253 people from several organisations in Pakistan, including banking, education, telecommunications, and freelancing agencies, who were knowledgeable about the application of artificial intelligence were surveyed to obtain the data. The optimal method for determining the sample size for exploratory factor analysis is to utilise the sample-to-item ratio, which considers the overall number of study items. The least acceptable ratio for a single question is five responses (Gorsuch, 1988; Hatcher & O'Rourke, 2013; Suhr, 2006). The investigation was carried out utilising a time-lagged design. At time 1, AI Identity Threat data was gathered. Responses for Cognitive Job Insecurity were gathered at time two, which was four weeks subsequent to time one. Employee Well-Being data was collected at time three (4 weeks after Time 2). Three months were devoted to the collecting and compilation of data in total. We collected data using an internet link, and at each time point, we identified respondents by their email addresses. At T2, we exclusively contacted respondents who had already answered at T1. Similarly, at T3, we only contacted respondents who had completed surveys at both T1 and T2. The poll achieved a final participation rate of 70%, with a total of 360 participants being reached via the web link. Approximately 20.6 percent of survey respondents were female employees, while 79.4 percent were male employees. With regard to the educational achievement of the participants, the following percentages were as follows: 33.6 percent of the employees possessed bachelor's degrees, 46.2 percent master's degrees, 17 percent doctoral degrees, and 3.2 percent professional doctorates. Furthermore, 25.3% of the responders with the highest ratio had an average of one to three years of job experience, while 22.9 percent have four to six years of experience. A significant proportion of the participants, specifically 49.8 percent of the overall sample, were engaged in technical work. Among the several groups analysed, the respondents whose monthly income ranged from PKR 26,000 to PKR 50,000 exhibited the greatest ratio. These 37.2% of the sample was comprised of these respondents.

Measures

Artificial Intelligence Identity Threat. For AI Identity Threat, all items on the 12-item scale developed by Craig et al. (2019) were scored on a 5-point Likert scale: 1 (Strongly Disagree) to 5 (Strongly Agree). The following are examples of sample statements: "Using AI makes me feel as though I perform tasks inadequately" and "I feel less like the person I aspire to be."

Employee Well-being. A 12-item scale adapted from (Goldberg & Hillier, 1979) was utilised to assess employee well-being; each item was evaluated on a 5-point Likert scale: 1 (Strongly Disagree) to 5 (Strongly Agree).

Illustrative instances comprised "Recently, I have had significant sleep deprivation due to anxiety" and "Recently, I have experienced an overwhelming sense of stress."

Cognitive Job Insecurity. A scale consisting of four items, adapted from Caplan (1975), was employed to assess cognitive job insecurity. On a five-point Likert scale, each item received a rating ranging from one (indicating somewhat uncertain) to five (indicating very certain). The following are examples of sample inquiries: "To what extent do you have confidence in defining your future career trajectory and responsibilities six months from now?"

Data Analysis

Prior to evaluating the hypotheses of the study, we conducted an examination of the demographic characteristics of the sample utilising descriptive statistics. The results of a Confirmatory Factor Analysis conducted with AMOS on the measurement model of the study validated its correctness. An assessment of the dependability of the items was conducted as a component of a reliability analysis to ascertain the precision of the data collected for the research. The utilisation of Cronbach Alpha values was employed to analyse the matter of reliability. Following that, a correlation analysis was conducted to ascertain the degree of significance of the correlations and the presence of linearity between the variables under investigation. To ascertain whether the data provided support for the direct and indirect hypotheses, a regression analysis was conducted utilising PROCESS MACRO V4.2. Model 4 was employed in the process of mediation.

RESULTS

Confirmatory Factor Analysis

Three latent variables comprise the measuring model: employee well-being, cognitive job insecurity, and AI identity threat. These three variables were regarded as the most critical. The validation of the measurement model was accomplished by employing an extensive range of fit indicators. The category also includes the following terms: chi-square, comparative fit index (CFI), incremental fit index (IFI), Trucker-Lewis' index (TLI), and root mean square error of approximation (RMSEA). Chi-squared test has a critical value that is smaller than 3. A successful match is deemed to be shown by values exceeding 0.95 for CFI, IFI, and TLI (Kline, 2023). As an acceptable value for RMSEA, a value below 0.05 is accepted (Kline, 2023). In contrast to the model comprising a single factor, the measurement model presented in Table 1 demonstrates a reasonable level of model fit. This is attributable to the fact that each value is contained within an appropriate range. The values of chi-squared and CFI are 1.56 and 0.963, respectively, while TLI and IFI are 0.959 and 0.964, and RMSEA is 0.047. Due to the fact that these values indicated that the fitness of the model was satisfactory, the presented data were appropriate for hypothesis testing.

Table 1: Measurement model

Model	CMIN	DF	CFI	TLI	IFI	RMSEA
Hypothesized Model	529.95	339	0.963	0.959	0.964	0.047
One Factor Model	4884.11	629	0.368	0.29	0.352	0.339

Convergent and Discriminant Validity

The mean variance extracted value was calculated to determine the convergent and discriminant validity (Fornell & Larcker, 1981). To ensure exceptional convergent validity, the composite reliability value must above 0.70 and the AVE value must exceed 0.50. (Igbaria et al., 1995). Results are presented in Table 2.

Table 2: Convergent and discriminant validity

S.No	Variables	1	2	3
1	AI Identity Threat	0.761		
2	Affective Job Insecurity	0.121	0.77	
3	Employee Well-being	-0.048	-0.069	0.808
AVE	0.579	0.592	0.654	
CR	0.943	0.852	0.958	

N=253, AVE = Average Variance Extracted, CR = Composite Reliability, Sqaure root of AVE are represented in bold in parenthesis (Off diagnols are the squared correlation among latent variables)

Descriptive Statistics

A comprehensive enumeration of all the factors taken into account throughout the modeling procedure is presented in Table 3. These include, in addition to the averages and standard deviations, the minimum and maximum values for each category.

Table 3: Descriptive statistics

Variables	Sample	Min	Max	Mean	STD
AI Identity Threat	253	1	5	3.89	1.11
Cognitive Job Insecurity	253	1	5	3.66	1.12
Employee Well-being	253	1.75	5	3.76	0.77

Reliability Analysis

An examination was conducted to determine the internal consistency of each variable through the utilization of a reliability study. The Cronbach alpha value, which ranges from 0 to 1, provides an indication of the constructs' dependability. Values that are more closely spaced apart demonstrate an enhanced level of internal consistency. A list of the outcomes is presented in Table 4, which is provided below.

Table 4: Reliability analysis

Variables	Reliability	Items
AI Identity Threat	0.963	12
Cognitive Job Insecurity	0.85	4
Employee Well-being	0.955	12

Correlation Analysis

To get insight into the relationship between the variables being examined, a correlation analysis was conducted. The interrelationships among the variables are illustrated in Table 5. AI identity threat was strongly and positively connected with cognitive job insecurity (r = 0.369**, p > 0.01) and significantly and negatively correlated with employee well-being (r = -0.255**, p < 0.01). These associations were both statistically significant. Conversely, a link between cognitive job insecurity and employee well-being was identified as negative and statistically significant (r = -0.295**, p < 0.01).

Table 5: Correlation analysis

S. No	Variables	1	2	3
1	AI Identity Threat	1		
2	Cognitive Job Insecurity	0.369**	1	
3	Employee Well-being	-0.255**	-0.295**	1

Note. N = 253; * p < .05, ** p < .01

Hypothesis Testing

Direct effects :A summary of the direct effects examined in this research is provided in Table 6. The initial hypothesis posits that there is no statistically significant correlation between the AI identity threat and employee well-being. The second hypothesis posits that there exists a positive and statistically significant correlation between affective job insecurity and AI identity threat. The third hypothesis posits that there exists a negative correlation between affective job insecurity and employee well-being. The results indicated a negative and statistically significant relationship (β= -.12; $p < 0.01$ significant) between AI identity threat and employee well-being. With respect to hypothesis 2, AI identity threat exhibited a positive and significant correlation with cognitive job insecurity (β=.37; $p < 0.01$ significant); and with regard to hypothesis 3, cognitive job insecurity exerts a negative and statistically significant influence on employee well-being (β=-.16; $p < 0.01$ significant).

Table 6: Direct and mediation hypothesis

Hypothesis	B	SE	T	P LLCI	ULCI	
AI Identity Threat→Employee Well-being	-0.12	0.04	-2.63	0	0.0295	0.2056
AI Identity Threat→Cognitive Job Insecurity	0.37	0.06	6.29	0	0.2561	0.4895
Cognitive Job Insecurity→Employee Well-being	-0.16	0.04	-3.63	0	0.0736	0.2479

Indirect effects :The results pertaining to the observed indirect effects are shown in Table 7. The study examined the fourth hypothesis, which postulated that cognitive job insecurity would act as a mediator in the association between AI identity threat and employee well-being. In light of the significance of the indirect impacts, the hypothesis was confirmed. This phenomenon can be attributed to the fact that the upper and lower confidence intervals have identical signs (0.0183, 0.1022). This signifies that there were no zero values within the confidence interval. Thus, cognitive job insecurity mediates the relationship between the threat posed by AI identity and the welfare of employees.

Table 7: Bootstrapped indirect effect results: mediating role of cognitive job insecurity between the relationship of AI identity threat and employee well-being

	Effect	SE	BootLLCI	BootULCI
AI Identity Threat Cognitive Job Insecurity Employee well-being	0.0599	0.0211	0.0183	0.1022

N=273, B = Beta, SE = Standard Error, *P* = Significance Level, ULCI= Upper-Level Confidence Interval, LLCI= Lower Level of Confidence Interval

DISCUSSION

The study's findings characterise AI identity danger as the fear or worry that employees may experience regarding the potential fundamental replacement or modification of their positions by AI technology, hence instilling a feeling of unpredictability regarding their professional futures. This danger to one's professional identity may have substantial psychological repercussions, as it erodes one's sense of self-assurance and proficiency in their designated role. It is confirmed that the first hypothesis, that the proliferation of AI in the workplace has been linked to increased job insecurity, is accurate (Mirbabaie et al., 2021; Frey & Osborne, 2017). Because of their capability to mechanise complex and routine tasks, AI technologies pose a substantial obstacle for professions that require specialised expertise, as well as manual or repeated effort. As a result of such a pervasive threat, employees may experience anxiety and stress, both of which diminish their sense of professional worth and job security. When employees feel a threat to their resources, such as professional identity or job security, they are more likely to prioritise short-term coping techniques over long-term career advancement, according to Shah et al. (2012). This shift in focus possesses the capacity to exacerbate feelings of uneasiness and contribute to a further deterioration in general welfare.

The notion of AI identity threat is proposed by the second hypothesis, which states that in an era of expanding AI technology, employees can have concerns and uncertainty over the security of their jobs and their professional identities. Cognitive work insecurity pertains to the personal perception of an individual who struggles to maintain the consistency of employment that they seek within an unstable labour market (Greenhalgh and Rosenblatt, 1984). It is differentiated from authentic unemployment due to its underpinning in forthcoming unpredictability (Huang et

al., 2012). It is expected that the integration of AI into an expanding range of professions will intensify this sense of uncertainty. Mirbabaie et al. (2021) report that sixty percent of employees globally are at risk of unemployment due to the expansion of AI, which is expected to supplant both routine and challenging job duties (Frey and Osborne, 2017).

The present state of affairs, which is comparable to prior technological revolutions, suggests that advancements in artificial intelligence might generate a similar pattern of joblessness and the need for retraining in occupations (Nam, 2019). In light of the aforementioned circumstances, one would hypothesise that cognitive work insecurity might exhibit a positive correlation with AI identity threat, which pertains to apprehensions about the security and practicality of one's occupation amidst the progression of AI. This correlation could potentially be attributed to the apprehension surrounding the potential displacement of human positions by AI and the lack of clarity surrounding the trajectory of employment development or obsolescence in an AI-dominated future.

The third hypothesis, which posits that "Cognitive job insecurity negatively correlates with employee well-being," is substantially corroborated in the extant body of evidence. It has been associated with a number of adverse effects on employees, one of which is diminished well-being. Huang et al. (2010) and Shoss (2017) both emphasise the growing incidence of job insecurity as a result of technical advancements, globalisation, and digitalization. The above alterations lead to the creation of an unpredictable work environment, hence heightening employees' concerns regarding the stability of their employment. As a result, this state of uncertainty negatively impacts their psychological health. A state of work insecurity is regarded as a threat to these resources, leading to increased levels of stress and detrimental impacts on well-being. This perspective is substantiated by the research of Silla et al. (2008) and Schumacher et al. (2015), which illustrates how job insecurity depletes the personal resources of individuals, hence hindering their capacity to engage in proactive professional endeavours that may mitigate the insecurity. The negative impacts of affective job insecurity, which includes emotional distress and fear of potential job termination, have been examined by Huang et al. (2012), Greenhalgh and Rosenblatt (1984), and Hellgren et al. (1999). These studies have found that affective job insecurity negatively affects cognitive performance and future concentration, both of which are essential for proactive career behaviour.

Job insecurity is a prominent concern in modern work contexts, with cognitive job insecurity holding particular significance. A sense of identity peril has resulted from the rapid implementation of AI and automation, which has increased employee worry regarding the sustainability of their positions (Sverke et al., 2002). This identity danger stems from the perception that their knowledge may become unnecessary as artificial intelligence technologies advance. Psychological job insecurity is distinguished by concerns about the changing nature of work and the potential mismatch between current skills and future job requirements, in addition to apprehension surrounding the possibility of job loss (Jiang & Lavaysse, 2018).

The relationship between the AI identity threat and employee well-being is thus modulated by CJI, as postulated in the final hypothesis. Cognitive job insecurity manifests when individuals perceive a threat to their professional identity produced by artificial intelligence; it is characterised by emotions of ambiguity and a lack of control over their professional destiny. Their mental health may be significantly impacted by such insecurity, which may manifest as stress, anxiety, and a loss in job satisfaction (De Witte et al., 2016; Sora et al., 2018). The cognitive assessment of job uncertainty—specifically, whether employees regard this unease as a hindrance or a challenge—has an impact on their response to the AI identity threat. As a result, this assessment aids in the mediation process. By regarding this unease as a challenge, individuals might be inspired to participate in educational pursuits and initiate behaviours that have the potential to mitigate negative impacts on their overall welfare. Conversely, regarding it as a hindrance could potentially heighten emotions of anxiety and negatively impact one's general state of being (László et al., 2010).

CONCLUSION

The overall objective of the study was to identify situations in which the identification risk posed by AI could compromise the safety of personnel. Additionally, the potential mediation role of job insecurity in the intricate interaction between the two components was investigated. The results of our study reveal that the presence of AI identity risks in the workplace negatively impacts the mental and emotional health of employees. Nevertheless, cognitive work ambiguity appeared as a significant mediator between AI identity danger and well-being, as predicted. Cognitive job insecurity was more prominent among individuals who were concerned that their career

options would be eliminated by AI. These workers were scared that AI would eventually replace them. In the end, it is vital to appreciate the potential human repercussions that may result from the further development and integration of AI technology across businesses. This study adds to the expanding corpus of data that AI integration has significant psychological, economic, and societal consequences.

Implications, Limitations and Future Research Directions

Theoretical contributions : By introducing AI as a novel factor that, when implemented in the workplace, poses a threat to social identities, this study adds to the body of knowledge in Social Identity Theory. What this means is that AI could endanger people's social identities. Specifically, the investigation aims to identify the processes that cause these impacts to occur. Employees' attempts to reorganise their social identities in reaction to the challenges they see from AI technology may be better understood with the help of this study. The study may provide this new perspective. One could possibly obtain a better understanding of this subject as a result of the research.

Practical implications : The results of this research can be interpreted in a number of different ways, each of which has significant repercussions that might be derived from them. The findings make it possible to draw these conclusions about the implications. The findings show that organisations should establish training programmes to assist employees in adjusting to AI technology, hence lowering identity threat and job insecurity. These programmes would help people adapt to AI technologies. These programmes would assist workers in adjusting to artificial intelligence technologies in the workplace. These kinds of programmes could be made available to employees working for businesses as a means of assisting them in transitioning to the new AI technology.

Limitations and future directions : Despite the fact that the previous research had some shortcomings, it does lay the groundwork for future scholars to investigate additional lines of investigation. To begin, it is based on a self-report questionnaire, which, despite the fact that the Common Method Variance (CMV) was eliminated (Podsakoff et al., 2003), still has the potential to have some degree of bias. In addition, compared to other research of the same nature, it is based on a very limited sample size (Podsakoff et al., 2012). It is also likely that the findings do not apply to other groups due to differences in the organisational culture, educational background, and geographical location of those groups.

In the future, the research might head in a number of different paths. For example, research ought to make use of a longitudinal technique in order to establish a connection between the two variables and investigate the effects that they have over the long run. The generalizability of these results could be investigated in further research with a bigger and more representative population in the future. It would be beneficial to broaden the scope of the study to include other potential mediators so as to obtain a more complete picture (such as job satisfaction and organisational commitment). In conclusion, it may be beneficial to conduct in-depth interviews or focus groups with workers to learn about their particular viewpoints. This is because doing so can throw light on the phenomenon that is being studied in a manner that is more nuanced.

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