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Research Paper

A Correlational Study on Attitudes Towards Artificial Intelligence (AI) and Anxiety in Employees Working in IT Industry

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ABSTRACT

In an era marked by rapid technological advancement, Artificial Intelligence (AI) stands as a transformative force behind every digital interaction (Sindermann, Sha, Zhou, 2021). Despite its prominence, the psychological effects on those who develop these technologies remain underexplored. As AI technologies proliferate across industries, concerns about job security and potential obsolescence of human roles have intensified, contributing to increased anxiety among IT employees in India (Malik, Tripathi, Kar, & Gupta, 2021). The current study addresses this gap by examining the interplay between attitudes toward AI and anxiety levels among IT professionals in India—a sector renowned for its AI innovation yet grappling with rising employee anxiety. The current research utilizes a mixed approach. The quantitative data is obtained from 110 employees from various IT sectors from Indian metro cities. The age range of the employees is from 25 to 35 years. The data is analysed using Pearson's correlation coefficient via SPSS software. The findings reveal that a negative attitude toward AI leads to higher anxiety among the employees. The results confirm the hypothesis, revealing that employees with negative attitudes toward AI are more prone to experience anxiety ($p<0.05$). To gain more insights, intensive interviews are procured from 10 IT employees. Semi structured interview method is used to elicit the responses. Thematic analysis is conducted to extract dominant themes. These findings underscore the urgent need for Indian IT organizations to address the psychological impact of AI on their workforce. It is imperative for employers to implement supportive measures and create a healthier work environment, including providing up-skilling opportunities and training programs to facilitate better adaptation to technological changes. Such steps are crucial for mitigating anxiety and fostering a resilient workforce in the evolving landscape of AI.

Keywords: *Attitude Towards Ai, Anxiety, IT Sector, Indian Context, Psychological Impact*

Artificial Intelligence (AI) has emerged as a transformative force, significantly impacting various domains, from language translation and medical diagnostics to self-driving cars and virtual assistants (Russell & Norvig, 2009). Defined as human-made systems designed to emulate cognitive abilities, AI has advanced rapidly, integrating machine learning algorithms that enhance predictive capabilities and automate complex

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tasks (Russell & Norvig, 2010). This progress, while remarkable, has also introduced concerns regarding data privacy, security, and ethical implications (Sindermann, Sha, Zhou, 2021).

The Indian Information Technology (IT) industry, recognized globally since the 1990s, has played a crucial role in technological development. Government initiatives such as Digital India and Skill India have facilitated AI-driven growth, fostering innovation and workforce expansion (Vempati, 2016). However, this rapid advancement has also led to significant challenges, particularly in employment security. Studies estimate that automation could replace nearly 38% of existing jobs by 2030 (Sindermann, Sha, Zhou, 2021). Large corporations like Amazon, Facebook, and Google have already begun integrating AI-driven automation, leading to job redundancies and workforce displacement.

This shift has contributed to increased anxiety among IT professionals, driven by concerns over job security, skill redundancy, and performance expectations. Employees experience stress due to the uncertainty surrounding AI's growing influence, with some expressing skepticism and fear regarding its long-term implications (Malik, Tripathi, Kar, & Gupta, 2021). The psychological impact of AI on professionals remains an area requiring in-depth exploration, particularly in the Indian context.

LITERATURE REVIEW

Existing research indicates a correlation between negative attitudes toward AI and heightened anxiety levels. A study by Kwak, Ahn, and Seo (2022) on nursing students demonstrated that AI ethics awareness was inversely related to anxiety, highlighting the role of perception in determining psychological responses. Similarly, studies on AI adoption in job recruitment suggest that anxiety negatively influences candidates' willingness to engage with AI-driven hiring systems (van Esch, Black, & Arli, 2021). Another study by Lemay, Basnet, and Doleck (2020) found that AI anxiety spans multiple dimensions, including fears of job replacement and socio-technical illiteracy.

Sindermann et al. (2021) explored the role of personality traits in shaping AI-related fears, emphasizing neuroticism's strong association with negative AI perceptions. Their cross-cultural study between Germany and China revealed that individuals high in neuroticism were more likely to fear AI, whereas openness and agreeableness were positively associated with AI acceptance in the Chinese sample. This underscores the role of psychological predispositions in shaping AI attitudes.

Additionally, Nikolenko and Astapenko (2023) examined generational differences in AI attitudes, finding that younger individuals displayed a predominantly positive attitude towards AI, whereas older individuals expressed more anxiety and scepticism. Their findings highlight that attitudes toward AI are not uniform and may be shaped by exposure, experience, and perceived competence in using AI technologies.

Eyüp and Kayhan (2023) investigated the AI-related anxiety of pre-service Turkish language teachers and found that while learning-related anxiety was moderate, anxiety related to job replacement was significantly higher. This suggests that concerns about AI disrupting career opportunities are prevalent across different professional domains. Moreover, Malik et al. (2021) conducted a qualitative study in India to explore the impact of AI on employees and

found that job insecurity, performance pressure, and the fear of being technologically outdated were primary contributors to anxiety.

The literature collectively suggests that negative attitudes toward AI are closely linked to increased anxiety, particularly in employment-related contexts. However, existing studies have predominantly focused on Western or East Asian contexts, with limited exploration of Indian IT professionals, who are at the forefront of AI adoption. This study aims to bridge that gap by examining how AI perceptions influence anxiety levels among Indian IT employees.

Theoretical Framework

Attitudes develop through social learning mechanisms, including classical conditioning, operant conditioning, and observational learning (Pavlov, 1927; Skinner, 1938; Bandura, 1997). The social comparison theory (Festinger, 1954) suggests that individuals shape their perceptions based on interactions with peers, influencing their stance on AI. The triple vulnerability theory (Barlow, 2000, 2002) provides a framework for understanding anxiety, identifying biological, generalized psychological, and specific psychological vulnerabilities as contributing factors. The cognitive modelling approach (Russell & Norvig, 2010) posits that AI systems replicate cognitive processes, affecting human attitudes based on perceived similarities with human intelligence. These theories collectively provide a foundation for understanding how attitudes toward AI form and contribute to anxiety.

Conceptual Framework

- Artificial Intelligence: The study of computations enabling machines to perceive, reason, and act (Winston, 1992).
- Attitudes: People's evaluations of aspects of the world, shaped by learning and experience (Baron, 2006).
- Anxiety: A negative mood state characterized by tension and apprehension about future uncertainties (American Psychiatric Association, 2000).

The present study aims to address the gap in understanding the relationship between attitudes toward AI and anxiety levels among IT employees in India. Through a mixed-methods approach, it seeks to provide empirical insights into how AI-driven transformations affect psychological well-being, thereby informing organizational strategies to support employees in adapting to technological change. Understanding these dynamics is essential for fostering a resilient workforce and ensuring that AI integration benefits both technological progress and employee well-being.

METHODOLOGY

Objectives

To ascertain the relationship between the attitudes towards artificial intelligence and anxiety among the employees working in the IT sector.

Hypothesis to be tested

- **H_0:** There will be no relationship between negative attitudes towards artificial intelligence and higher levels of anxiety in the employees of the IT sector.
- **H_1:** Negative attitudes towards artificial intelligence will positively correlate to higher levels of anxiety in the employees of the IT sector.

Sample

- 110 participants that were included in the study were employees working in the IT sector. The age of the employees was between 25 and 35 years old. The snowball sampling technique was used to collect the quantitative data.
- 10 IT employees from the age range between 25 and 35 years were procured for an in-depth interview

Instruments

To assess attitudes towards artificial intelligence, the Attitude Towards Artificial Intelligence (ATAI) scale was utilized. The scale consists of five items and two scales: Acceptance (2 items) and Fear (3 items) of Artificial Intelligence. Each item will be answered on an 11-point Likert-Scale from 0="strongly disagree" to 10="strongly agree".

A media discussion in Germany took place just before this scale was developed, concentrating on whether or not the increasing impact of AI in daily life might result in job losses and/or have some negative impacts on humanity. During this argument, it became clear that there are groups of individuals who do not publicly accept new technologies, while others utilise services like Alexa and Siri with ease and without hesitation. The notion that AI would cause numerous job losses was commonly cited in the context of reasons to dread AI. On the contrary, the belief that people may live and work more successfully by employing AI goods was examined in the context of AI adoption. In summary, the main grounds of this debate were the foundation for the proposed scale assessing the attitudes towards AI (ATAI scale) and additional items measuring the willingness to use specific AI products. (Sindermann, Sha, Zhou., 2021)

To measure anxiety levels, the State-Trait anxiety inventory (STAI) was employed. This inventory consists of **20 self-report items** designed to assess both state anxiety (STAI-S), which reflects an individual's anxiety at a particular moment, and trait anxiety (STAI-T) which evaluates a person's general predisposition to anxiety. Each item was rated on a 4-point Likert scale, ranging from 1="not at all" to 4="very much so". (Spielberger,1983). To assess the anxiety the state trait anxiety inventory, State form (STAI-S) was used.

For deeper insights, semi structured Interview questionnaires were created to obtain in-depth responses from 10 employees.

Procedure

To facilitate change and analysis, the data was collected and quantified. The data was adjusted, categorized, tallied, and presented as individual scores for each participant. The collected data for attitude towards artificial intelligence and anxiety was analysed using the Pearson product moment correlation using SPSS as the software to obtain significance correlation and conclusion regarding the research.

The responses from semi structured interviews were obtained and transcribed. The qualitative data was then analysed using thematic analysis.

RESULTS

Descriptive Statistics (Table 1)

	Mean	Std. Deviation	N
Attitude Toward AI	26.742	7.7845	110
Anxiety	48.032	4.5642	110

Correlations (Table 2)

		Attitude Toward AI	Anxiety
Attitude Toward AI	**Pearson Correlation**	**1**	**.210***
	Sig. (2-tailed)		**.028**
	N	**110**	**110**
Anxiety	**Pearson Correlation**	**.210***	**1**
	Sig. (2-tailed)	**.028**	
	N	**110**	**110**

. Correlation is significant at the 0.05 level (2-tailed).

The objective of the study was to ascertain the relationship between the attitudes towards artificial intelligence and anxiety among the employees working in the IT sector.

As illustrated in table 1, the scores of attitudes towards artificial intelligence among the employees working at the IT industry through ATAI scale was analysed. After the analysis was carried out, it was found that the mean of the group for attitude towards artificial intelligence among employees was 26.742, and the standard deviation was 7.7845.

Similarly, the scores of levels of anxiety among the employees working in the IT industry through STAI was analysed. After the analysis was carried out, the mean obtained of the group for anxiety was 48.032, and the standard deviation was 4.5642.

Furthermore, table 2 presents the correlation between the two variables and was also analysed using the Pearson product moment correlation. After the analysis, it was found that the correlation between the two variables was +0.210, which means a positive correlation between the two variables($p<0.05$).

DISCUSSION

According to the data analysis the hypothesis stating that “There is no relationship between negative attitudes towards artificial intelligence and higher levels of anxiety in the employees of the IT sector” was disapproved. The hypothesis stating that “negative attitude towards artificial intelligence is positively correlated to higher anxiety levels among IT employees” was approved.

The literature review indicated how negative attitudes towards artificial intelligence are positively related to higher levels of anxiety.

Research conducted by Oksana Nikolenko and Evgeniya Astapenko examined the attitude of young people to the use of artificial intelligence. There were 75 young people aged 20 to 35 who responded. The comparison group included 50 respondents aged 40 to 50 years old. The goal of this research was to investigate young people's attitudes toward the employment of artificial intelligence. As research methodologies, theoretical sources were analysed, and

the author's questionnaire was used to investigate young people's attitudes toward the employment of artificial intelligence. The questionnaire consists of ten open and closed-ended questions. The study is based on a remote survey (using a Google form) of students from various training sectors. The acquired data was subsequently processed using the methods of mathematical statistics Student's T-criterion. As a result of processing the data, significant disparities were observed in the feelings experienced by respondents in various groups when confronted with AI. The results show that the predominant number of 62% of respondents have positive feelings, 20% feeling a neutral attitude and only 2% experienced anxiety. 10% experienced negative emotions like anger and irritation, and 5% experienced mixed feelings like delight as well as anxiety. While on the other hand, the results of the respondents between the ages 40 to 50 show that 10% of respondents have negative emotions like anger or irritation, while 42% experience anxiety. Mixed feelings like delight and anxiety are experienced by 30%, and a neutral attitude is experienced by 14% (Nikolenko & Astapenko, 2023).

Another study by Bircan Eyüp, Selvanur Kayhan aimed to determine the anxiety and attitudes of pre-service Turkish language teachers towards artificial intelligence and to examine the relationship between the two. The study's sample group, which used a correlational survey approach, included 232 pre-service Turkish language teachers studying at 14 different universities across Turkey's provinces. The study's data were gathered using the 'Personal Information Form,' the 'Artificial Intelligence Anxiety Scale,' and the 'General Attitudes toward Artificial Intelligence Scale. The SPSS 23.0 package application was utilized for data analysis. According to the findings, pre-service Turkish language teachers' positive and negative attitudes toward artificial intelligence were moderate, while their anxiety was lower in the learning dimension but higher in the dimensions of job replacement, sociotechnical blindness, and artificial intelligence configuration. (Bircan & Kayhan, 2023)

The above quantitative data can also be supported by qualitative analysis. Findings from thematic analysis have revealed certain common themes.

A significant topic that was derived from thematic analysis was job security concerns. Many professionals feel a lack of job security as AI capabilities expand. The fear that their specific roles might become obsolete has brought up a significant amount of stress and uncertainty. This theme can be further supported where one participant stated that "AI may take many jobs."

Another theme that emerged was worries regarding skill gap, as AI evolves, there is a concern about keeping up with the necessary skills. Participants feel that companies must invest in upskilling their workforce to adapt to new technologies. Emphasizing continuous learning can help professionals stay relevant in the changing landscape. This theme can be further supported where another participant stated that, "Organizations must introduce policies to upskill their employees instead of letting them go due to AI."

The theme of performance pressure was also notable. With the integration of AI tools, there is a heightened expectations for performance and efficiency, leading to anxiety about meeting these new benchmarks. One participant highlighted this theme by stating that "We need to put limits, regulations over AI before bringing it into the hands of the common people."

Individuals are trying to adapt to these changes by upskilling themselves to remain competitive in the workforce. Furthermore, AI today can be compared to the early stages of the invention of the wheel—its long-term impact on humankind far outweighs the initial scepticism surrounding it. As an inevitable step in technological evolution, AI has the potential to enhance human productivity by providing support and direction. Instead of fearing its impact on the workforce, embracing and adapting to AI is essential for continued progress.

However, for those who feel particularly overwhelmed or anxious about these advancements, employers can play a crucial role by offering training programs and learning opportunities. Rather than replacing employees, organizations should focus on equipping them with the necessary skills to thrive in an AI-driven future.

CONCLUSION

To summarize, the hypothesis stating that "Negative attitudes towards artificial intelligence are positively correlated to higher levels of anxiety in the employees of the IT sector" is accepted.

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Conflict of Interest

The author(s) declared no conflict of interest.

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