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Exploring Job Satisfaction in the Age of Artificial Intelligence (AI) Tools: An Empirical Study Using Technology Acceptance Model

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Abstract

The study examines the influence of Artificial Intelligence (AI) tool use on job satisfaction. The methodology adopted here is a cross-sectional survey design, complemented by a literature review. Regression analysis was conducted on MS-Excel and JMP Software for quantitative testing of the hypothesis. The result reveals a significant positive relationship between the usage of AI tools and Job satisfaction with $\beta = 0.366$, $p = .0002$, and a variance of 21% (R^2). This suggests that a higher frequency of AI tool usage is associated with greater job satisfaction, supporting our assumption that usage contributes to perceived workplace benefits. This study also confirms the full mediating role of perceived impact of AI tools with ($\beta = - 0.025$, $p = <.0001$) for AI tool usage and Job satisfaction. The study highlights the importance of employee perceptions regarding AI tool usage in enhancing job performance, efficiency, work creativity, productivity, and, consequently, job satisfaction. Employee perception has worked as a psychological bridge between the technology usage and the behavioral outcome, i.e, Job satisfaction. This argument and results are supported by the theoretical model – Technology Acceptance Model. The study also touched on the challenges of job insecurity and job displacement due to the adoption of the latest technologies. Study suggests organizations to see adoption of AI more than using and implementing into professional settings & design AI adoption and implementation strategies via training, open communication, and support. These findings hold significance for practitioners and academics aiming to harness AI tools and acceptance in organizational settings effectively. Future researchers could explore more on moderators' effect on the study and tailor strategies for optimizing AI tools' benefits across different departments, industries, and sectors.

Keywords: Artificial Intelligence, AI, Job Satisfaction, Technology Acceptance Model, TAM, AI Tools, Perceived AI impact

Introduction

Artificial Intelligence (AI) plays a transformational role across industries. It plays a pivotal role in reshaping the future of the workforce, job satisfaction, decision-making, and employee experiences. Artificial Intelligence (AI) is a collection of advanced digital systems that enable machines to independently acquire knowledge and address complex cognitive tasks without requiring direct human control. In essence, AI equips machines with the capacity to mimic human-like learning and problem-solving, enabling them to operate autonomously in diverse contexts (Filomena Almeida et. al. 2025). Integration of AI helps automate routine tasks and enhance complex problem-solving capabilities. Every

industry is incorporating AI technology and tools to make informed decisions and increase the efficiency and quality of routine tasks.

Artificial intelligence has considerable potential to enhance productivity and sustainability across all industries. As discussed by Gayathri and Bella (2024), Artificial intelligence enables the automation of routine and repetitive tasks, allowing employees to concentrate on more creative and cognitively demanding aspects of their roles. By relieving them from monotonous work, AI fosters greater engagement and job satisfaction through meaningful contributions. In today's rapidly evolving digital landscape, the drive for efficiency and innovation remains central to AI's transformative impact on the workplace. Artificial Intelligence has reached remarkable heights, empowering industries with a wide array of tools and bots that enhance task efficiency, ensure high-quality outcomes, and respond to queries within fractions of a second.

In the context of Industry 4.0, AI technologies are increasingly embedded across organizational functions, offering both performance gains and psychological challenges for employees. These tools enhance operational efficiency and decision-making, yet their pervasive use also introduces technostress and demands for continuous adaptation (Malik et al., 2021). Hence, it is really important to study the impact it has on the job satisfaction of the employees.

As discussed by Haque et al. (2025), Job satisfaction is defined as the degree to which employees feel positively about their job roles, responsibilities, and workplace conditions, particularly in relation to AI integration and its impact on retention and performance. Additionally, job satisfaction is framed as a multidimensional construct influenced by AI adoption in Industry 4.0 environments, where both positive experiences (e.g., autonomy, creativity) and negative outcomes (e.g., technostress, job insecurity) shape employee perceptions (Malik et al., 2021).

Job satisfaction is an important element for any organization to maintain a happier and healthier workforce. It is one of the major actors that plays a dependable role in determining the productivity of the workforce and the organization. Job satisfaction is an influential factor that directly affects employee retention, productivity, happiness quotient, overall organizational success, and growth. Job Satisfaction has a wider aura as it could be perceived differently by different employees. Although it encompasses various dimensions, including work environment, peer-subordinate relationships, job roles, salary, recognition, learning, and growth opportunities. As per Bhargava, Bester, & Bolton (2020), job satisfaction is conceptualized as a key psychological outcome influenced by the implementation of Robotics, Artificial Intelligence, and Automation (RAIA), reflecting how employees perceive changes in their work environment and personal value within the organization.

AI is a double-edged sword; it helps increase job satisfaction and motivates the employees, but on the other hand, it creates fear & introduces risks such as technostress, job displacement, and skill obsolescence. As the implementation of the latest technologies increases, the magnitude of workforce disruption has also increased. A recent example of the situation is the mass layoffs that happened in Indian based information technology multinational companies.

So, AI as technology and tools are delving into the nerves of the major industries, it is high time to examine and study the impact on job satisfaction of the employees. As explained in a study done by Naresh Kumar Bathala et al. (2024), studying AI's impact on Job satisfaction is essential because satisfaction is closely tied to employee well-being, influencing mental health, productivity, and engagement. Employees who feel supported during the technological transition phase are more likely to remain motivated and mentally healthy. Moreover, Job satisfaction is known as a key driver of retention, and talent management helps

organizations reduce turnover and retain skilled employees. As AI technology is evolving, organizations must adapt the latest techniques and change management strategies to understand the perception of AI on employees' mindsets to stay competitive in the market. Thus, examining AI's impact on job satisfaction provides organizations with strategies to balance innovation with human needs, ensuring sustainable workforce management.

By incorporating the Technology Acceptance Model (TAM), the research offers a solid conceptual framework that directs the investigation of AI's effect on employee satisfaction. This study aims to investigate the nexus between AI adoption and employee satisfaction, measuring the influential impact of perceived AI on job satisfaction in organizational settings. This multidisciplinary approach contributes to the advancement of organizational behavior and technology theory (Nazim and Bashir, 2024).

This study aims to quantitatively assess the effects of AI tool usage on job satisfaction, drawing on survey data and statistical modeling. It builds on prior research that highlights both the positive and negative dimensions of AI adoption, offering a nuanced understanding of how employees perceive and respond to AI-driven changes in their work environment.

Research Question: *What is the effect of AI tool usage on employee job satisfaction?*

Literature Review

Innovations in AI Technologies & Job Satisfaction

The study by Gayathri and Bella (2024) investigates how recent innovations in artificial intelligence—such as automation, robotics, and virtual reality—impact employee job satisfaction and performance. The authors examine the relationship between AI-driven workplace changes and employee well-being, focusing on both technological and human resource dimensions. The paper emphasizes that AI tools can enhance productivity, reduce workload, and improve job satisfaction when implemented strategically. However, the impact varies depending on organizational context, employee readiness, and the nature of AI technologies deployed. Using survey data and structural equation modeling, the authors found that automation of repetitive tasks ($p = 0.003$) and reduced workload ($p = 0.006$) significantly enhance job satisfaction, while feedback and recognition mechanisms positively influence productivity ($p = 0.001$). However, other factors like skill enhancement and managerial engagement showed limited or non-significant effects. The study concludes that AI tools, when strategically implemented, can improve employee well-being and efficiency, provided organizations address transparency, training, and ethical concerns (Gayathri & Bella, 2024). This highlights the need for thoughtful integration strategies in the organizations, positioning AI as a complement to—rather than a substitute for—human roles and capabilities. These insights echo prior research showing that high-quality AI services can improve employee satisfaction, with job level and role acting as key moderating variables (Nguyen & Malik, 2021). As per the study done by Md Emdadul Haque et al.(2024), the most influential factors driving job satisfaction reported are health insurance benefits (66%), work-life balance (62%), good leadership (57%), and company culture (57%). Additionally, career advancement opportunities (54%) and recognition (54%) were also reported to have contributed significantly to job satisfaction. Another argument presented by Madara Pratt et.al. (2020) motivation is considered a key competitive advantage in modern workplaces. It is going beyond superficial measures such as wages, training, and benefits, which Herzberg (2003) identified as myths of motivation. According to this study, true motivation stems from deeper psychological forces, the need for recognition, self-respect, responsibilities, and meaningful participation in worthwhile projects. Using the concept of Herzberg's two-factor theory, which distinguishes

motivational factors that drive genuine satisfaction (e.g., achievement, growth, and recognition) and hygiene factors that prevent dissatisfaction (eg, salary, policies, etc). Without catering to the motivators, organizations risk high turnover, which is both costly and disruptive. As per the authors, an increase in motivational factors and teamwork predicts a high estimate of employees' satisfaction, and on the other hand, when motivation factors are less, and employees work individually on their own, the satisfaction rate decreases. Another important observation of this study is that when employees get minor motivational benefits and work in a team, the probability of satisfaction increases slowly but not enough to bar set. Another study highlights the integration of Artificial Intelligence (AI) into workplace as transformative step in enhancing employee motivation, which directly contributes to job satisfaction. Through personalization, AI aligns task and learning opportunities with individual career goals, fostering intrinsic motivation and a strong sense of purpose. Automation of routine tasks liberates employees from monotonous work, enabling engagement in more simulating and rewarding activities that increase the likelihood of job satisfaction. AI also strengths collaboration by improving communication, sharing knowledge and team coordination increasing inclusivity and connectedness. However, author has mentioned challenges like job displacement, data privacy concerns, and biases must be managed strategically by introducing strong change management policies, effective communication by management and valuing the employees while implementing the AI. Ultimately balancing AI opportunities with its risks can create a workplace where motivation thrives, leading to greater fulfillment and sustained job satisfaction (Sukirno & Bagdauletov, 2024).

As concluded by Naresh Kumar Bathala et al. (2024), AI tools in the software industry present both opportunities and challenges for job satisfaction among employees. AI is transforming job roles by automating routine tasks and directing software professionals to concentrate on strategic and creative tasks. This allows them to grow and innovate. The authors concluded that AI improves job performance and efficiency and contributes to a sense of accomplishment among employees. Authors also pose a concern about job security and employees' fear of being replaced by AI technology. Effective organizational support, including training and development programs, is crucial in mitigating these concerns and maintaining job satisfaction.

Perception of AI Tools & Technologies

Past studies argue that the perceptions of the potential for artificial intelligence (AI), robotics, the internet of things, automation, and technology to eliminate traditional jobs or create new ones vary from industry to industry. Technology is believed to affect several jobs and render positions outmoded, as computers are becoming smarter, more creative, and more sophisticated. With the increasing need for low costs, fast production, and consistency in the quality of products and supply chains, companies are becoming more dependent on the latest technologies like Artificial Intelligence.

Employee perception and attitudes towards AI play a significant role in shaping job satisfaction outcomes. Positive attitudes towards AI, viewing it as a tool for empowerment rather than replacement, are associated with higher levels of satisfaction. Addressing employee concerns through transparent communication and involvement in the AI implementation process by the organization is essential for fostering a supportive work environment. (Naresh Kumar Bathala et al.,2024). Organizations adopting AI surely invest in training and upskilling the employees and giving them opportunities to grow. When the employees perceive that their skills are improving, they are also becoming more valuable in the job market, which will boost their job satisfaction. AI learning platforms will recommend personalized training and

development programs based on career goals and employees' performance, increasing their engagement and satisfaction (Gayathri and Bella, 2024). While most participants recognized AI's contribution to increased productivity and reduced stress, concerns persist about maintaining human expertise and job security amid rising automation.

Malik et al. (2021) argue that the nature of AI applications can significantly impact employee perception of job satisfaction due to their attitudes towards AI and job security perception. This has necessitated the pressure to measure the AI service quality of various AI applications and their impact on employees' AI satisfaction and job satisfaction to aid decision-making for AI adoption.

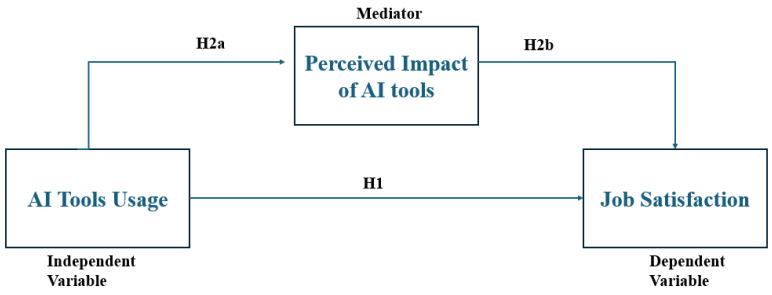
A study done by Bhargava. A et. al. (2020) offer a preliminary exploration of employee perceptions regarding Robotic and Artificial Intelligence Applications (RAIA) and their implications for job security, satisfaction, and employability. While participants generally acknowledged the transformative nature of RAIA, individual differences shaped nuanced interpretations—suggesting that technological change is perceived similarly, but not uniformly.

The Technology Acceptance Model (TAM), proposed by Davis (1989), is one of the influential frameworks explaining how individuals evaluate and adopt technological innovations in organizational settings. TAM emphasizes two key determinants – perceived usefulness and perceived ease of use, which shape the employees' attitude towards technology and ultimately influence actual usage behavior. In the workplace settings, these perceptions shape how employees engage with technological innovations, including the AI tools, and thereby affect broader organizational outcomes such as performance, efficiency, and satisfaction. TAM provides a valuable lens to examine how employees' beliefs about AI's utility and usability translate into enhanced performance and job satisfaction.

The study done by Filomena Almeida et.al. (2025) shows that when people think AI tools are useful and easy to use, they develop positive attitudes toward them. These attitudes act as a bridge, develop a positive perception which leads to stronger intentions to adopt the new technology, AI in our case, and implement it for efficient work. A positive attitude shows how someone feels about using AI will develop the perception in mind and increase the likelihood of AI adoption. Training and positive experiences can help build these attitudes, making adoption easier. This supports the Technology Acceptance Model (TAM), which highlights usefulness and ease of use as key factors shaping attitudes and, ultimately, the decision to use technology in organizations.

Recent studies done by Nazim & Bashir (2024) highlight that AI integration significantly improves employee performance by automating routine tasks, enabling data-driven decision-making, and fostering innovation. Regression analysis in this context revealed that AI explains 40.7% of performance variance, underscoring its substantive role in shaping employee outcomes.

Conceptual Framework & Hypothesis



Conceptual Model

Building on the conceptual model, several hypotheses are proposed to examine the relationship between AI, Job satisfaction, and the perceived impact of AI tools.

- **H1**: Higher frequency of AI tools usage is positively associated with job satisfaction.
- **H2a**: Higher frequency of AI tools usage is positively associated with the perceived impact of AI tools.
- **H2b**: Perceived impact of AI tools is positively associated with job satisfaction.
- **H3**: The relationship between AI tools usage and job satisfaction is mediated by the perceived impact of AI tools.

In line with the Technology Acceptance Model, H1 suggests that a higher frequency of AI tool usage enhances job satisfaction, as repeated interaction reinforces perceptions of usefulness and strengthens positive attitudes toward technology (Bhargava, Bester, & Bolton, 2020; Haque et al., 2025). Hypothesis 2a discusses that frequent usage is positively associated with the perceived impact of AI tools, reflecting TAM's pathway where sustained exposure improves perceptions of utility and quality, supported by the study done by Nguyen & Malik (2021) and Budhwar et al. (2022). Building on this, **H2b** argues that perceived impact directly enhances job satisfaction, consistent with TAM's assertion that usefulness translates into favorable attitudes and outcomes. Finally, **H3** highlights mediation, proposing that the relationship between AI usage and satisfaction operates through perceived impact, echoing TAM's indirect effects where perceptions bridge usage and satisfaction as discussed in the study by Bhargava et al. (2020) Nazim & Bashir (2024). Collectively, these hypotheses map seamlessly onto TAM, demonstrating how frequency of use, perceptions of impact, and satisfaction are interlinked.

Research Methodology

1. Research Design

This study adopts a quantitative, cross-sectional survey-based design to examine the effects of artificial intelligence (AI) tools usage on employee job satisfaction. The cross-sectional nature of the study enables the capture of perceptions and experiences at a single point in time, providing a snapshot of how AI integration influences workplace dynamics. The study relied on a structured questionnaire as a primary data collection tool hosted on Google Forms and was distributed over digital platforms, including LinkedIn, Facebook, and WhatsApp, leveraging the researcher's professional network to reach a diverse pool of respondents across industries. Participants were informed about the purpose of the study, the

voluntary nature of their involvement, and the confidentiality measures in place to safeguard their information. Informed consent was obtained from each participant at the beginning of the survey.

2. Data Source & Collection

The target population comprised working professionals with exposure to AI tools in their respective job roles. Participants were selected using random sampling. Inclusion criteria required respondents to have some professional experience and familiarity with AI-enabled systems or tools in their workplace. The final sample included a mix of employees from IT, manufacturing, health, education, and financial service sectors, representing varied job roles such as developers, analysts, managers, test engineers, students, teachers, digital marketers, sales, HR professionals, and technical leads. At the end of the month data collection period, a total of 63 responses were received, of which 1 response had to be discarded due to non-relevance to the scope of the study. So total, 62 valid responses have been received. A summary of participant demographic characteristics is presented in Table -1.

3. Survey Design & Measurement Instruments

Primary data was collected using a **structured questionnaire** as a primary data collection tool hosted on Google Forms and was distributed over digital platforms, including LinkedIn, Facebook, and WhatsApp. The questionnaire included questions that are measured using 5-point Likert-scale items designed to measure constructs such as AI tool usage, job satisfaction, perceived efficiency, workload reduction, & skill enhancement due to AI tool usage.

Survey Design and Measurement Instruments

The survey design was guided by principles of clarity, brevity, and psychometric rigor to ensure reliable data collection across diverse organizational contexts.

Survey Structure: The survey comprised four logically sequenced sections:

- **Section A: Demographic Profile**

This section captured essential background variables, including age group, gender, industry sector, job role, and years of professional experience. These variables enabled subgroup analysis and facilitated exploration of moderating effects across organizational levels and geographies.

Variable	**Options**				
Age Group	Less than 21 Years	21 - 30 Years	31-40 Years	41-50 Years	More than 50 years
Gender	Male	Female	Prefer not to say		
Industry	Manufacturing	Information Technology	Educational	Health & Pharmaceuticals	Other
Job Role	Development	Administration	Operations	Managerial	Other
Years of Experience	Less than 1 year	1 -3 years	4 - 6 years	7 - 10 years	More than 10 years

- **Section B: AI Tool Usage**

This section explored participants' frequency and willingness to use AI tools in their daily routine. Items were developed based on prior literature on technological change and workforce resilience.

Section- B		Items
AI Tool Usage	AI1	I use AI tools (e.g., ChatGPT, Copilot) regularly in my work.
	AI2	AI tools help me complete tasks more efficiently.
	AI3	I feel confident using AI tools for work-related tasks.
	AI4	AI tools have s the quality of my work output.
	AI5	My organization supports and encourages the use of AI tools.

- **Section C: Perceived Impact of AI Tools**

Items in this section assessed participants' attitudes toward AI tools in the workplace. Questions focused on perceived usefulness, trust in AI systems, concerns about data privacy and system failures, and the perceived role of AI in decision-making and task automation.

Section C		Items
Perceived Impact of AI Tools	PI1	AI tools enhance my creativity and problem-solving.
	PI2	AI tools reduce my cognitive workload.
	PI3	AI tools contribute positively to my professional development.
	PI4	AI tools increase my confidence in decision-making.
	PI5	AI has increased my sense of job security.

- **Section D: Job Satisfaction**

To measure overall job satisfaction, the survey employed the **Short Index of Job Satisfaction (SIJS)** developed by Brayfield and Rothe (1951) and later validated by Quinn and Shepard (1974). The SIJS is a five-item Likert-type scale that captures affective and cognitive evaluations of one's job. Sample items include "I am satisfied with the nature of my work" and "Overall, I am satisfied with my job".

Section D		Items
Job Satisfaction	JS1	I am satisfied with the nature of my work.
	JS2	I am satisfied with my opportunities for growth and advancement.
	JS3	I feel valued and appreciated for the work I do.
	JS4	I am satisfied with my work-life balance.
	JS5	Overall, I am satisfied with my job.

Measurement Instruments

All items were measured using a **five-point Likert scale** ranging from "Strongly Disagree" (1) to "Strongly Agree" (5), allowing for distinct responses while maintaining statistical robustness. The use of standardized scales ensured comparability and facilitated reliability testing through MEAN, Standard deviation, correlational analysis, factor, Cronbach's alpha, and regression analysis. The Short Index of Job

Satisfaction (SIJS) scale, a validated tool with five items assessed on a Likert scale for 5 items, was used to measure job satisfaction. This measure of job satisfaction included positive items like "I am satisfied with the nature of my work." And "I feel valued and appreciated for the work I do". It evaluated the mindset and the enthusiasm of the employees towards the job they are working on. In general, greater job satisfaction was reflected by higher scores on this scale.

Ethical Considerations

Participants were informed about the purpose of the study and assured of the confidentiality of their responses. Informed consent was obtained before participation.

Data Analysis

Data were analyzed using Microsoft Excel and JMP software. Descriptive statistics were utilized to summarize the distribution of demographic variables and response distributions. This included calculating percentages, frequencies for various demographic variables (see Table 1), and means, standard deviations for numerical variables, AI tool usage, perceptions, and job satisfaction variables (see Table 2), and correlational analysis of the survey items for the correlational analysis among themselves (see Table 3). Reliability and regression testing have been done to check the relevance of the latent and to check the hypothesis. Construct reliability was verified using Cronbach's alpha, and a Fit Y by X test was conducted to explore the relationship between AI tools usage and job satisfaction.

Results

Table 1 presents the demographic profile of the 62 valid survey respondents. The sample comprised 41 male participants (66%) and 21 female participants (34%), indicating a higher representation of males. Most respondents belonged to the 31–40 age group (55%, n = 34), followed by those aged 21–30 years (40%, n = 25). The majority were employed in the Information Technology sector (77%, n = 48), with Development roles being the most common job function (47%, n = 29). In terms of experience, the majority are holding experience more than 10 years (40%, n = 25), 23% (n = 14), while 6% (n = 4) reported less than 1 year of experience.

Table 1: Descriptive Analysis of Categorial Individual Factors (demographic factors)

Table -1	**Total Valid Responses 62**		
Demographic Variables	**Category**	**Frequency(N)**	**Percentage**
Gender	Male	41	66%
	Female	21	34%
Age Group	Less than 21 years	0	0%
	21-30 years	25	40%
	31-40 years	34	55%
	41- 50 years	3	5%
	More than 50 years	0	0%
Industry	Manufacturing	1	2%
	Information Technology/IT	48	77%
	Educational	6	10%
	Health & Pharmaceuticals	2	3%
	Others	5	8%

Job Role	Development	29	47%
	Administration	1	2%
	Operations	4	6%
	Managerial	14	23%
	Others	14	23%
Years of Experience	Less than 1 year	4	6%
	1-3 years	12	19%
	4-6 years	9	15%
	7-10 years	12	19%
	More than 10 years	25	40%

Descriptive statistics (Table 2) were computed for three key constructs: AI Tools Usage, Perceived Impact of IT Tools, and Job Satisfaction. The collective mean score for AI Tools Usage was 3.86 (SD = 1.04), indicating moderately high engagement with AI-based technologies across employees. Individual item scores ranged from 3.81 to 3.89, suggesting consistent perceptions of AI utility.

For Perceived Impact of IT Tools, the overall mean was slightly lower at 3.56 (SD = 1.12), reflecting a more varied assessment of IT tools' effectiveness. Item-level means ranged from 3.02 to 3.85, with the lowest score observed for PI5 - AI has increased my sense of job security (M = 3.02, SD = 1.22), suggesting some reservations about specific IT functionalities.

In contrast, Job Satisfaction scores were notably higher, with a collective mean of 4.11 (SD = 0.86), indicating strong overall satisfaction among participants. The highest individual score was recorded for JS1 ("I am satisfied with the nature of my work."), with a mean of 4.21 (SD = 0.86), while the lowest was JS4 ("I am satisfied with my work-life balance."), at 4.01 (SD =0.89). These findings suggest that participants generally experience positive affect and fulfillment in their work environments

Table 2: Descriptive Statistics (Mean & Standard Deviation) of items

Table 2	**Items**		**MEAN**	**Standard Deviation**
AI Tools Usage	AI1	I use AI tools (e.g., ChatGPT, Copilot) regularly in my work.	3.87	1.14
	AI2	AI tools help me complete tasks more efficiently.	3.89	1
	AI3	I feel confident using AI tools for work-related tasks.	3.84	1.05
	AI4	AI tools have improved the quality of my work output.	3.87	1.04
	AI5	My organization supports and	3.81	1.16

		encourages the use of AI tools.		
	Collective		**3.86**	**1.04**
Perceived Impact of IT Tools	PI1	AI tools enhance my creativity and problem-solving.	3.74	1.05
	PI2	AI tools reduce my cognitive workload.	3.65	1.06
	PI3	AI tools contribute positively to my professional development.	3.85	1.06
	PI4	AI tools increase my confidence in decision-making.	3.56	1.19
	PI5	AI has increased my sense of job security.	3.02	1.22
	Collective		**3.56**	**1.12**
Job Satisfaction	JS1	I am satisfied with the nature of my work.	4.21	0.86
	JS2	I am satisfied with my opportunities for growth and advancement	4.03	0.88
	JS3	I feel valued and appreciated for the work I do.	4.1	0.87
	JS4	I am satisfied with my work-life balance.	4.02	0.89
	JS5	Overall, I am satisfied with my job.	4.18	0.81
	Collective		**4.11**	**0.86**

Table 3: The Correlational and reliability analysis was conducted to examine the internal consistency and inter-item relationships across the three constructs: AI Tools Usage, Perceived Impact of IT Tools, and Job Satisfaction. The items within each construct demonstrated strong positive correlations, indicating coherent measurement structures. The correlational matrix revealed strong positive associations within each construct, indicating coherent item clustering.

Table – 3 Correlations & Cronbach's α

Multivariate
Correlations

	AI1	AI2	AI3	AI4	AI5	PI1	PI2	PI3	PI4	PI5	JS1	JS2	JS3	JS4	JS5
AI 1	1.000 0	0.593 1	0.600 8	0.583 5	0.540 0										
AI 2	0.593 1	1.000 0	0.887 2	0.776 2	0.674 2										
AI 3	0.600 8	0.887 2	1.000 0	0.778 9	0.648 6										
AI 4	0.583 5	0.776 2	0.778 9	1.000 0	0.767 5										
AI 5	0.540 0	0.674 2	0.648 6	0.767 5	1.000 0										
PI 1						1.000 0	0.729 1	0.751 4	0.728 2	0.645 2					
PI 2						0.729 1	1.000 0	0.855 1	0.797 6	0.623 3					
PI 3						0.751 4	0.855 1	1.000 0	0.783 3	0.560 8					
PI 4						0.728 2	0.797 6	0.783 3	1.000 0	0.659 9					
PI 5						0.645 2	0.623 3	0.560 8	0.659 9	1.000 0					
JS 1											1.000 0	0.755 5	0.677 6	0.541 7	0.658 4
JS 2											0.755 5	1.000 0	0.772 0	0.515 3	0.735 9
JS 3											0.677 6	0.772 0	1.000 0	0.620 5	0.814 5
JS 4											0.541 7	0.515 3	0.620 5	1.000 0	0.665 1
JS 5											0.658 4	0.735 9	0.814 5	0.665 1	1.000 0

Reliability testing yielded a high overall Cronbach's alpha of 0.9443, affirming excellent internal consistency. Item-level alpha values remained stable when individual items were excluded (e.g., JS5 = 0.9461), suggesting that no single item disproportionately influenced scale reliability. These findings support the psychometric robustness of our measurement model and justify the aggregation of items into composite scores for subsequent analysis.

The correlations are estimated by the Row-wise method.
Cronbach's α 0.9443

Table 4 - Hypothesis Testing

Hypothesis	Predictor(s)	Outcome	Beta	R Square	P	Result Interpretation
H1	AI tool Usage	Job Satisfaction	0.366	0.21	0.0002	Significant positive association
H2a	AI tool Usage	Perceived impact of AI tools	0.869	0.68	<.0001	Highly significant
H2b	Perceived impact of AI tools	Job Satisfaction	0.430	0.32	<.0001	Significant
H3 – Mediation Model	AI tool usage + Perceive impact of AI tools	Job Satisfaction	-0.025	0.32	<.0001	Full Mediation

H1 - Higher frequency of AI tools usage is positively associated with job satisfaction. A simple linear regression analysis was conducted.

The independent variable was AI Tool Usage, and the dependent variable was Job Satisfaction. H1 tests the direct relationship between AI Tool Usage and Job Satisfaction. The regression coefficient ($\beta = 0.366$, $p = .0002$) indicates a statistically significant positive association. This suggests that a higher frequency of AI tool usage is associated with greater job satisfaction, supporting the initial assumption that usage contributes to perceived workplace benefits. This suggests that for every one-unit increase in AI tool usage, job satisfaction increases by approximately 0.36 units. The slope coefficient ($\beta = 0.366$) was positive and statistically significant ($p = .0002$), providing strong support for H1. The model explained 21% of the variance in job satisfaction ($R^2 = 0.21$), which reflects a moderate effect size in behavioral research contexts.

The scatterplot with the fitted regression line visually confirmed the positive linear relationship between AI usage and job satisfaction, with data points clustering around the line and showing an upward trend.

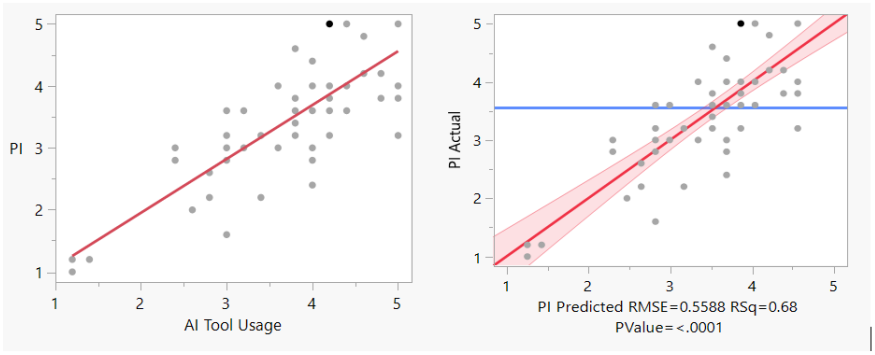
These findings suggest that individuals who report more frequent use of AI tools tend to experience higher levels of job satisfaction. The strength and significance of the relationship support the theoretical assumption that usage of AI tools may enhance job satisfaction by improving efficiency, engagement at work. This result lays the foundation for further analysis of mediating and moderating variables.

H2a: Higher frequency of AI tools usage is positively associated with the perceived impact of AI tools.

H2a examines whether AI Tool Usage predicts Perceived Impact. The result ($\beta = 0.869$, $p < .0001$) is highly significant, with a strong R^2 of 0.68, indicating that usage frequency explains a substantial portion of the variance in perceived impact. This supports the idea that frequent interaction with AI tools enhances

users' perception of their utility, perceived usefulness, perceived ease of use, and influence on work outcomes.

Regression Plot **Actual by Predicted Plot**



Summary of Fit

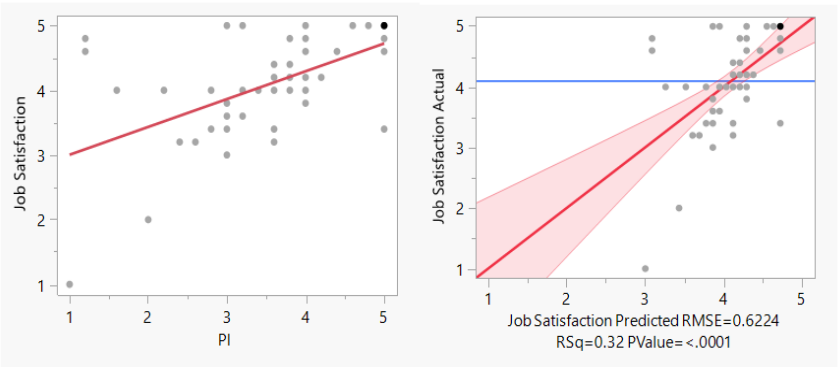
RSquare	0.684126
RSquare Adj	0.678862
Root Mean Square Error	0.558842
Mean of Response	3.564516
Observations	62

H2a Graphs

H2b: The perceived impact of AI tools is positively associated with job satisfaction.

Hypothesis 2b tests whether Perceived Impact predicts Job Satisfaction. The coefficient ($\beta = 0.430$, $p < .0001$) is again significant, with an R^2 of 0.32. This suggests that employees who perceive AI tools as impactful tend to report higher job satisfaction. Together, H2a and H2b establish the necessary conditions for mediation: the predictor (usage) influences the mediator (perceived impact), which in turn influences the outcome (job satisfaction).

Regression Plot **Actual by Predicted Plot**



Summary of Fit

RSquare	0.320702
RSquare Adj	0.30938
Root Mean Square Error	0.622412
Mean of Response	4.106452
Observations	62

H3: A multiple regression analysis was conducted to examine whether Perceived Impact of AI Tools mediates the relationship between AI Tool Usage and Job Satisfaction (H3) using an a-b-c approach. In the first step (a path), the independent variable (AI Tool Usage Frequency) significantly predicted the mediator (Perceived Impact of AI Tools), indicating that greater usage was associated with stronger perceived impact (IV → M). In the second step (c path), AI Tool Usage Frequency significantly predicted the dependent variable (Job Satisfaction), establishing the total effect (X → Y), with $\beta = 0.366$, $p = .0002$. In the third step, when both AI Tool Usage Frequency and Perceived Impact were entered simultaneously into the model, Perceived Impact remained a significant predictor of Job Satisfaction (M → DV), while the direct effect of AI Tool Usage Frequency became nonsignificant ($c' = –0.025$, $p = .32$). This pattern is consistent with full mediation, where the effect of AI Tool Usage on Job Satisfaction is transmitted entirely through Perceived Impact. The drop in significance and effect size for AI Tool Usage, combined with the sustained significance of Perceived Impact, confirms that the mediator accounts for the relationship. The R^2 for the mediation model remains at 0.32, matching the model with Perceived Impact alone, suggesting that adding AI Tool Usage does not improve explanatory power once the mediator is included. This reinforces the conclusion that Perceived Impact is the key mechanism through which usage influences satisfaction. In summary, the results support a full mediation model. AI Tool Usage enhances perceptions of impact, and these perceptions, in turn, drive job satisfaction. The direct effect of usage becomes negligible when controlling for perceived impact, indicating that it is not usage per se, but the perceived value of that usage, that matters most for employee satisfaction.

Discussions

The findings of this study support all the proposed hypotheses, validating the Technology Acceptance Model (TAM) in the context of AI tool usage and job satisfaction.

Specifically, H1 was confirmed with a statistically significant positive association between AI tool usage and job satisfaction ($\beta = 0.366$, $R^2 = 0.21$, $p = 0.0002$), indicating that increased frequency of AI engagement contributes meaningfully to employee satisfaction. H2a demonstrated a highly significant relationship between AI usage and perceived impact ($\beta = 0.869$, $R^2 = 0.68$, $p < 0.0001$), suggesting that employees who use AI tools more frequently are substantially more likely to perceive them as beneficial. H2b further validated that perceived impact positively influences job satisfaction ($\beta = 0.430$, $R^2 = 0.32$, $p < 0.0001$), aligning with TAM's emphasis on perceived usefulness as a driver of positive attitudes. Most notably, H3 revealed full mediation, with the direct effect of AI usage on job satisfaction becoming non-significant ($\beta = –0.025$) when perceived impact was included, confirming that employee perceptions serve as a critical psychological mechanism linking technology use to satisfaction outcomes. These results not only affirm the TAM model but also highlight the importance of fostering favorable perceptions of AI tools to maximize their impact on employee well-being.

The study aligned with the TAM's core constructs – perceived usefulness and ease of use, as employees consistently described AI tools as enhancing efficiency, reducing cognitive workload, enhancing creativity, and enabling more meaningful engagement. The mediation effect (H3) was evident in the employee's mindset and thought process, where perception impact worked as a psychological and cognitive bridge between the usage of AI technology and job satisfaction. This supports H2a and H2b, reinforcing the idea that satisfaction is shared not just by implementation and behavior but also by the process of implementation, positive acceptance of the technology through open communication, supportive external factors, and mainly by employee interpretation.

Our findings resonate with those of Nazim and Bashir (2024), who demonstrated in the academic sector that AI adoption significantly improves both performance and satisfaction when accompanied by organizational support. Their study highlighted that perceptions of AI as a facilitator of productivity and engagement are critical, aligning with our mediation results. Together, these studies advance theory by situating perception as the psychological bridge between technology usage and satisfaction. Another study by Naresh Kumar Bathala (2024) et. al. concludes that employee perceptions and attitudes towards AI play a significant role in shaping job satisfaction outcomes. Positive attitudes towards AI, viewing it as a tool for empowerment rather than replacement, are associated with higher levels of satisfaction.

Together, these results suggest that successful AI integration requires more than deployment—it demands strategic framing, employee trust, and cultural alignment. By combining statistical evidence, theoretical grounding, and qualitative insight, this study contributes a nuanced understanding of how AI tools influence job satisfaction in modern organizational contexts.

Limitations & Future Directions

This study, while offering valuable insights into the relationship between AI tools usage and job satisfaction, is subject to some limitations that require careful consideration. First, the study concerns a cross-sectional survey design, which prevents conclusions about causality. Although research has observed and proved the association between the usage of AI tools, the perceived impact of AI tools, and Job satisfaction but the order of these relationships cannot be definitively established. A longitudinal or experiment-based study would be necessary to confirm causality. Second, the use of self-reported data raises concerns about measurement accuracy as employees may have responded under personal biases or organizational expectations. Third, the sample size and composition may limit the generalizability. The sample may not fully represent the diverse industry, job roles, and cultural contexts. AI adoption varies from industry to industry, and findings from one industry or sector cannot be generalized to others. And the dynamic nature of the technology will also be a limitation. Employees' perception may vary rapidly with dynamic changes in AI tools, and hence, satisfaction level will vary, making current findings time–bound. The study did not take moderators into account for studying the strength of the observed relationships. These limitations suggest that future scholars should adopt longitudinal approaches, explore contextual moderators, and study the perceived effects across industries over the period of time. Researchers should examine how trust in AI, concerns about job displacement, and perceptions of fairness interact with satisfaction outcomes. Comparative studies across industries would help identify sectors where AI adoption is most strongly linked to employee well-being. Moreover, future research should explore the changing landscape of AI-driven changes in work design, such as task redefining, redistribution, and enhancing the overall productivity, satisfaction, and mental well-being.

Conclusion

This study advances both theoretical and practical applications of AI in organizational behavior. From a theoretical point of view, the finding confirms that job satisfaction is not only a direct outcome of AI tools usage, but it is also mediated by employees' perceived impact of AI tools. This proves that perception of AI's impact plays a pivotal role in linking the technology adoption to workplace attitudes and employee cognition, enriching the model of job satisfaction and technology acceptance. Practically the study poses that organizations cannot solely rely on adopting or implementing AI technology into the system; they must also cultivate a positive perception by training, mentoring, open communication, providing tools,

and leadership support. The organizations must go over and beyond in the implementation of the latest technology, like AI, to shape the employee experience and satisfaction at work. Satisfaction arises not only from implementation but also from believing that those tools are surely adding some value to the professional life and work. So, the study advances theoretically and practically by showing that conceptual models of satisfaction must account for technological perceptions, and that organizational leaders must design AI strategies that foster trust and utility. By linking these various dimensions, the research provides a holistic understanding of how AI can be harnessed to improve both employees' well-being and organizational performance.

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