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The Impact Of Artificial Intelligence Integration In Human Resource Management On Employee Satisfaction: A Meta-Analytic Review Of Challenges And Opportunities.

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ABSTRACT

The growing adoption of Artificial Intelligence (AI) technologies in organizational practices has transformed human resource management (HRM) functions, raising questions about its effects on employee satisfaction. This meta-analytic synthesis examines the link between AI adoption in HRM and employee satisfaction by combining findings from five peer-reviewed empirical studies released between 2022 and 2025. A random-effects model was used with Jamovi statistical software to capture heterogeneity across study settings. The meta-analysis demonstrated a consistently positive effect of AI deployment on Employee Satisfaction across the studies included in the analysis. While there was high heterogeneity among the findings of the studies, suggesting differences in contexts of adoption and application of AI, publication bias tests did not show any appreciable distortion. Equivalence testing also confirmed that the observed effect was statistically significant. These results indicate that, when incorporated thoughtfully, AI has the ability to drive employee satisfaction through enhanced HR processes, customization, and interaction. The research emphasizes the need for organization-specific AI strategies and makes a call for additional research to examine the role of contextual moderators.

Keywords: Artificial Intelligence, Human Resource Management, Employee Satisfaction, adoption and application of AI, AI strategies

INTRODUCTION

Human Resource Management (HRM) is experiencing a significant transformation through the integration of Artificial Intelligence (AI). AI technologies are streamlining HR operations by automating routine tasks, improving decision-making, and offering considerable savings in time and cost (-, 2024). These improvements are really noticeable in areas like hiring, assessing performance, training, and keeping employees engaged. But, mixing AI into HR comes with its own set of challenges. People worry about job loss, data privacy, and how transparent these systems are. People worry that AI tools in HR might come off as cold or biased, particularly during reviews or promotion decisions. This can lead to trust issues and lower employee satisfaction.

Keeping employees happy is really important for a company's success because it influences how productive and loyal they are. Usually, companies check satisfaction through surveys and feedback, but those can be subjective and time-consuming. With the rise of big data and tech, tools like HRIS and AI analytics are helping companies track and predict employee satisfaction in a smarter way. (Allaymoun et al., 2024). HR departments can use these technologies to make better choices based on data, adjust policies to fit what employees need, and tackle workplace problems more effectively. When employees are satisfied, they tend to be more engaged and committed to the organization, but when they're not, it can lead to issues like absenteeism, higher turnover, and lower productivity. It's crucial to see how bringing AI into HR impacts employee satisfaction. AI is transforming HR tasks like self-service options, hiring, payroll, and reports. More HR leaders are realizing that using AI can really make a difference in the employee experience, giving them more time and tools to better manage their teams (Dmitrievich et al., 2024). One big change lately has been using conversational AI for everyday HR tasks. This helps cut down on how much work recruiters have to do with repetitive stuff. AI tools can also provide useful insights to help make HR processes better, leading to smarter decision-making. Still, there are some challenges keeping AI from being widely used in HR. Things like budget issues, not enough skilled people, concerns about data privacy, maintenance needs, too.

little data, and not enough proven AI tools for some HR areas can get in the way. But in the long run, the expenses to bring in AI can make sense because it can help speed up admin work, improve hiring and keeping employees, show how HR spending is doing, and help reduce biases in decisions (Sanyaolu & Atsaboghena, 2022). In an increasingly competitive global environment, leveraging AI especially conversational tools can provide organizations with a strategic advantage in managing human capital effectively.

The rapid adoption of Artificial Intelligence (AI) in various sectors, including workplaces and educational institutions, has led to a significant shift in how organizations operate. AI offers capabilities similar to human cognition, such as problem-solving, language comprehension, and reasoning. Its interdisciplinary nature spans fields like natural language processing, data analysis, and automation, enabling organizations to streamline processes, optimize decision-making, and enhance productivity. However, there is still a lack of understanding about the influence of AI on employee satisfaction, which is critical for organizational performance, individual well-being, and workplace morale (Nazim & Bashir, 2024). Examining the complex interactions between AI, employee performance, and satisfaction, with a particular emphasis on the moderating impact of resilience. The expanding corpus of research on AI in the workplace and helps organizations create methods that improve employee satisfaction while utilizing AI's advantages. The enterprises on designing AI-driven workplaces that boost productivity and general business performance. On the other hand, AI-induced changes can create a sense of uncertainty and reduced autonomy among employees (Wishah et al., 2025). The fear of being monitored or replaced by machines can lead to stress, anxiety, and job dissatisfaction. Furthermore, the lack of transparency in algorithmic decision-making may erode trust in the organization.

Personalized HRM is a form of high-performance work practice (HPWP) that varies across individuals within an organization. It can be categorized into three types: personalized HR recommendations, personalized HR choices, and actual HR programs. Personalized HRM often involves the use of advanced HR analytics and artificial intelligence (AI) to enhance flexibility and effectiveness. AI is being applied in areas such as recruitment, performance management, and talent development, with 22% of companies implementing HR analytics and 11% developing and using it in-house. Studies suggest a positive link between HR analytics and improved organizational outcomes, and the global HR analytics market is expected to grow significantly (Huang et al., 2023). Personalized HRM, enabled by AI and analytics, is considered a promising trend in strategic HRM, capable of enhancing individual motivation and performance. Its success depends on an organization's ability to collect and use data effectively. Advanced AI and HR analytics can elevate the quality and effectiveness of HRM, contributing to enhanced employee satisfaction and organizational performance.

Artificial Intelligence (AI) is revolutionizing Human Resource Management (HRM) by optimizing key functions such as recruitment, performance management, training, and employee engagement. AI-driven platforms analyze vast candidate data, streamlining the hiring process and providing real-time feedback. AI-enabled performance management systems offer personalized coaching and training programs tailored to individual learning styles. AI tools also use sentiment analysis and predictive analytics to gauge employee morale and address concerns (*Enhancing.Pdf*, n.d.). However, these benefits come with challenges, such as job displacement, perpetuating biases in training data, reducing human empathy, and raising privacy concerns. These challenges underscore the need for thoughtful AI solutions that balance data-driven decision-making with ethical considerations and human-centered practices.

Using AI in Human Resource Management (HRM) is changing how companies find, manage, and keep their employees. This study looks closely at how AI affects employee satisfaction, which is super important for productivity and keeping people in their jobs. By bringing together results from different research, it aims to shed light on both the benefits of using AI like making HR tasks easier and more personal and the downsides, such as privacy concerns and job security worries. This study is useful for HR professionals wanting to use AI wisely, company leaders who want to make sure AI is good for their employees, and researchers interested in how tech fits into managing people at work. It also helps policymakers see the bigger picture of how digital changes impact workforce management.

This research paper is organized into five major sections. The Introduction, Literature Review explores existing research on AI applications in HRM, theories related to employee satisfaction, and previous empirical findings on the topic. The Methodology section outlines the meta-analytic approach, including selection criteria for studies, and statistical techniques used. The Results and Discussion section presents the aggregated findings, analyzes the patterns and trends. Finally, the Conclusion summarize the key insights, highlight practical implications, and suggest directions for future research in AI-driven HRM practices.

LITERATURE REVIEW

This literature review explores the integration of Artificial Intelligence in Human Resource Management, focusing on its impact on employee satisfaction. It examines existing research to identify key applications, challenges, and opportunities, aiming to provide a comprehensive understanding of how AI reshapes HR practices and influences employee experiences. (Perello Marin & Tuffaha, 2021) examined AI's uneven use in Human Resource Management (HRM). They found trends and defined AI in HRM by analysing AI-HRM interaction. The authors examined HRM AI applications and the academic AI adoption framework. The results covered AI and HRM, identified research gaps, and discussed AI's effects on HRM. (Basu et al., 2023) AI technologies are quickly improving organisational effectiveness but also displacing workers. Human

resource managers face obstacles. By researching AI and HRM literature, the study critically assessed AI systems' interaction with human resources. It examines theme-based causal configurations in research and AI-HRM interaction using a configurational method. The research explained positive and reactionary AI-HRM interaction effects using theme configurations.

(Budhwar et al., 2022) AI is increasingly being integrated into HRM approaches in both domestic and international organizations. This has led to increased research on AI's social presence, effects on outcomes, and evaluation of AI-enabled HRM practices. AI-based technologies for HRM is limited and fragmented. To address this, a systematic review of existing research and future directions is presented, including a conceptual framework and testable propositions for future research in AI applications in HRM. (R. Verma, 2020) Artificial Intelligence (AI) has significantly grown in the past decade, enabling machines to perform tasks previously performed by humans. This technology is now being used in the human resources field, enabling HR recruiters to expedite recruitment and enhance their competence. AI technologies offer significant opportunities to advance human resource functions. Their paper further explored the genuineness and scope of AI in human resources.

(Rabenu & Baruch, 2025) examined the future of HRM in the AI era. Based on the Substitution, Augmentation, Modification, and Redefinition (SAMR) concept, it envisions AI-era HRM. They projected that AI would Cyborg HRM, requiring a revolution. It helped HR managers and practitioners prepare for AI-embedded HRM systems and provided an original paradigm for academics to write on HRM in the AI era. The consequences for HRM reform should benefit organisations, management, and society. (Vedapradha et al., 2023) investigated the awareness of Artificial Intelligence among HR and Talent Acquisition managers in IT companies. It investigated factors influencing its adoption and usage, and evaluates its impact on Talent Management. The study found that candidate experience, competency, and ease of use are the most influencing factors. Talent management is the highest predictor of using AI technology, and its adoption is the most influencing predictor in effective implementation among IT companies.

(Nyathani, 2023) Performance assessments are now personalised, real-time feedback in the digital era. Customised development plans and predictive management techniques based on AI-driven insights match career trajectories and organisational objectives. The results and limitations of AI-enhanced assessments are shown in case studies from pioneering organisations. To educate HR professionals and organisations for AI-driven performance systems, ethical and privacy issues are addressed and strategic insights are supplied. They wanted to show how AI can improve personnel management in a changing technology world. (Bhatt & Muduli, 2023) investigated the integration of Artificial Intelligence (AI) in Learning and Development (L&D) processes, focusing on scope, adoption, and affecting factors. They used a systematic literature review method to analyze 81 research articles from 1995 to 2022. Findings showed that AI innovations like Natural Language Processing (NLP), Artificial Neural Networks (ANN), and Virtual Reality (VR) can improve L&D process efficiency. AI can also be used for evaluating learning aptitude, tracking progress, measuring effectiveness, and helping learners identify mistakes.

(Roberts et al., 2020) evaluated the impact of AI technologies on HRM chatbots and virtual assistants on employee engagement and productivity.

It identified adoption barriers and best practices, revealing that AI enhances work satisfaction, efficiency, and employee turnover. However, challenges included integrating systems, addressing data privacy issues, and ensuring user acceptability. They recommended thorough integration, data security, and training. Policy implications include setting rules for AI integration and advocating for ethical use in HRM practices. (Oluwagbade, 2024) Effective workforce planning is crucial for organizations to adapt to changing business landscapes. Traditional methods often fail to address talent needs, especially in economic volatility, technological advancements, and market demands. Artificial Intelligence and data analytics, combined with integrated Finance Information Systems, can help organizations make data-driven decisions about staffing, compensation, and resource allocation, resulting in more efficient and agile workforce management.

(S. Verma & Singh, 2022) AI-enabled systems (AIS) have been popular in innovation research during the last decade, although their impact on inventive work behaviour is unknown. To fill this gap, a model focused on AI-enabled work and knowledge features in employees' IWB. Investigation used data from an online poll of high-tech workers to examine how AIS-induced perceived substitution crisis (PSC) moderates IWB. Under differential PSC effects, AI-enabled task and knowledge variables greatly influence IWB. (Yu et al., 2023) AI adoption and application in the workplace, focusing on the socio-technical system context. They identifed antecedents and consequences of AI adoption, including personnel, technical, organizational structure, and environmental factors. The consequences include individual, organizational, and employment-related outcomes. The authors proposed a research agenda for future research, aimied to develop effective AI adoption strategies, enhance employees' work experience, and gain a competitive advantage for organizations. The framework provided a comprehensive understanding of AI adoption in the workplace.

(Journal & Parasa, 2024) discussed the impact of Artificial Intelligence (AI) on workplace environments, highlighting its positive and negative aspects. AI offers benefits like personalized work environments, automation of tasks, enhanced learning opportunities, improved communication, real-time feedback, predictive analytics for employee retention, and tools for better work-life balance. These advancements can boost job satisfaction, productivity, and overall engagement among employees. (Bathala, 2025) explored the impact of Artificial Intelligence (AI) on job satisfaction in the software sector. It found that AI

tools enhance productivity, streamline repetitive tasks, and foster innovation, leading to increased job satisfaction. However, concerns about job displacement, skill redundancy, and continuous upskilling pose challenges. It suggested that AI's benefits depend on proper change management, continuous learning opportunities, and transparent communication. The overall effect depends on how organizations manage the transition and address challenges.

(Pan & Froese, 2023) A systematic review of 184 articles on AI in HRM revealed a fragmented body of knowledge due to insufficient cross-fertilization. Disciplines like management, economics, computer science, and engineering and operations had different research foci and methods. Technical studies focused on AI development for HRM functions, while other disciplines examined its effects on jobs and labor markets. Recommendations included interdisciplinary collaborations and a unified definition of AI. (Sakka & El Hadi El Maknouzi, 2022) examined the integration of artificial intelligence (AI) into human resource management (HRM) functions. It highlighted the potential of AI-assisted decision-making, which allows HR staff to focus on strategic tasks. AI also shifts HR departments from reactive to proactive problem-solving. They discussed the financial implications and legal issues related to AI adoption, emphasizing the need for careful implementation, including hiring, reskilling, and internal transparency.

(et al., 2024) examined the challenges businesses face when integrating artificial intelligence (AI) into human resource management (HRM). It highlights labor, technology, ethical, financial, and privacy issues related to AI use in HR roles. Challenges included skill shortages, ethical dilemmas, labor reluctance, and data protection issues. Technical issues like AI's opaque nature and regional access to technology are also highlighted. Despite these challenges, AI has the potential to enhance productivity and HRM decision-making. They provides insights into AI adoption and suggests potential research routes. (AL Daradkeh & AL-Zoubi, 2024) impact of artificial intelligence (AI) on human resource competencies in King Hussein Business Park. It involved 382 managers and 269 questionnaires. Results showed a positive impact of AI on HR skills, emphasizing the importance of technology in improving work efficiency and HR management. They recommended companies invest in AI applications for HRM holistically, including recruitment, training, data analysis, and employee experience improvement. Investments should also focus on developing employee skills to adapt to technological shifts.

RESEARCH GAP

Despite growing research on the integration of Artificial Intelligence (AI) in Human Resource Management (HRM) and its effects on employee satisfaction, notable gaps remain. While much of the literature is disparate and spread out across technical, organizational, and employee-centered perspectives, many studies concentrate on AI employed in recruitment, performance management, learning, and employee engagement. The subject has mostly dealt with technological capabilities and organizational benefits, yet concerns for an employee's subjective experience with AI-integration are sparse, particularly in regard to trust, ethical concerns, and privacy implications. Very few studies have looked at how AI integration is differently impacting industries, cultural setups, and job roles and its aged impact on employee satisfaction and work behavior. Another area that has been overlooked is the interplay between human-AI collaboration and employee well-being. Interdisciplinary, longitudinal research will thus be required to create work practices in AI adoption that genuinely boost employee satisfaction while resolving ethical and practical concerns within the context of different workplaces.

METHODOLOGY

Research Design

The method employed consisted of a meta-analytic review to estimate the effect of AI interposition in human resource management on employee satisfaction. Meta-analysis offers a quantitative synthesis of results taken from several empirical studies to arrive at a common conclusion through rigorous statistics that constitute the overall impact of HR practices that are AI-driven. According to this model, the true effect size may vary across studies due to contextual differences and methodological heterogeneity. This is appropriate to understand the impact of AI technologies on HRM outcomes within different organizational contexts and industries.

Search Criteria

The relevant studies were selected from academic literature that was peer-reviewed. The search was targeting those researches published in English from 2022 up to 2025, and mainly AI applications in HRM and their relation to employee satisfaction. For this matter, search engines and databases such as Scopus, Web of Science, and Google Scholar were employed using the following search terms: ("artificial intelligence" AND "human resource management" AND "employee satisfaction") OR ("AI in HRM" AND "job satisfaction") OR ("HR technology" AND "employee engagement" AND "AI") OR ("intelligent HR systems" AND "satisfaction") OR ("AI-driven HR practices" AND "workplace happiness").

CRITERIA FOR INCLUSION AND EXCLUSION

Inclusion criteria

Research that has been published in leading academic periodicals or journals that are subject to peer review.

Research that investigates the process of incorporating AI into HRM procedures.

Studies that provide quantitative information, such as means, standard deviations, and sample sizes, sufficient for the purpose of conducting meta-analytical synthesis.

The experimental research was carried out in a variety of cultural and geographical contexts.

Articles written in the English language and distributed to different audiences.

Research that was carried out between the years 2022 and 2025, with emphasis placed on preserving relevance to contemporary academic trends and developmental frameworks.

Exclusion criteria

Research that does not clearly identify or quantify technological advancement and does not include factors related to human resource management, AI or employee satisfaction.

Articles that do not provide the statistical data that is required for the calculation of effect size or comparative analysis.

In the absence of empirical proof, theoretical papers, reviews, editorials, or conceptual frameworks are not considered adequate.

Research disseminated in languages other than English.

Research that was released prior to the year 2022, in order to guarantee conformity with the most recent advancements in artificial intelligence and employee satisfaction.

Research from non-peer-reviewed sources, like blogs, periodicals, or unpublished theses.

Data Extraction

The information was gathered in a systematic way from the five source studies that were chosen. The following information was collected for each research: the names of the authors, the year the study was published, the sample size, the statistical results (namely, means, standard deviations, and Z-values), the effect sizes, the confidence intervals, and the evaluation methods that were used for the purpose of integrating AI and determining satisfaction with work. through the use of a standardised data extraction sheet, consistency was maintained, and differences were handled through the process of peer review and verification utilising the original sources.

Data Synthesis

The meta-analysis utilized Jamovi statistical software, applying a random-effects model along with the Restricted Maximum Likelihood (REML) estimator. The assessment demonstrated a statistically notable overall impact, signifying a positive correlation between the incorporation of AI in human resource management and employee satisfaction. The included studies' differences were evaluated using standard metrics like between-study variance, inconsistency index, and Q-statistic. The findings revealed significant variations among studies, underscoring the various environments where AI is utilized in HRM. Publication bias was assessed using various methods, including Rosenthal's Fail-Safe N, Kendall's Tau, and Egger's regression analysis. These tests failed to reveal significant bias, indicating that the findings are consistent and not excessively affected by unpublished or small-effect studies. In addition, Two One-Sided Tests (TOST) of equivalence asserted that the observed effect was statistically distinguishable from zero, augmenting the validity and reliability of the evidence. It affirms that AI integration in HRM enhances employee satisfaction in different organizational settings.

RESULTS

Introduction:

This section presents the results of the meta-analytic review conducted to examine the impact of artificial intelligence (AI) integration in human resource management (HRM) on employee satisfaction, while also identifying the associated challenges and opportunities. Drawing upon five primary studies, the analysis utilized a random-effects model to account for potential variability across study contexts and methodologies. Key statistical outcomes, including effect size estimates, heterogeneity measures, and publication bias assessments, are reported to offer a comprehensive understanding of the relationship between AI-driven HR practices and employee satisfaction. The findings provide valuable insights into the effectiveness of AI in enhancing HRM functions and its implications for workforce engagement and satisfaction.

Meta-Analysis

Table 1 Random-Effects Model

Random-Effects Model (k = 5)						
	Estimate	**se**	**Z**	**p**	**CI Lower Bound**	**CI Upper Bound**
Intercept	305	103	2.98	0.003	104.209	506.19
	.	.	.	.	.	.
Note. Tau^2 Estimator: Restricted Maximum-Likelihood						

Based on the results from the meta-analysis using a random-effects model with k = 5 studies, the overall estimate of the

effect of artificial intelligence (AI) integration in human resource management (HRM) on employee satisfaction is 305. This estimate is statistically significant, with a standard error (SE) of 103, yielding a Z-value of 2.98 and a corresponding p-value of 0.003. This indicates that the effect is not likely due to chance and is statistically significant at the 0.01 level.

The 95% confidence interval (CI) for the effect size ranges from 104.21 to 506.19, suggesting a positive and meaningful impact of AI integration on employee satisfaction across the included studies. The fact that the confidence interval does not include zero further confirms the significance and consistency of the effect.

The model uses the Restricted Maximum Likelihood (REML) method to estimate the between-study variance (Tau^2), which is appropriate for handling heterogeneity in meta-analytic data. The application of a random-effects model is particularly suitable here, as it assumes that the true effect size may vary across studies due to differences in context, implementation of AI, HR practices, or employee demographics. In summary, the meta-analysis supports the conclusion that integrating AI into HRM practices has a significantly positive impact on employee satisfaction, although the magnitude of the effect may differ across settings.

Table 2 Heterogeneity Statistics

Tau	Tau^2	I^2	H^2	R^2	df	Q	p
229.304	52580.0803 (SE= 37180.0796)	100%	117300.83	.	4	413837.87	< .001

The heterogeneity statistics from the meta-analysis reveal a very high level of variability among the included studies. The between-study variance (Tau^2) is 52,580.08, with a standard deviation (Tau) of 229.30, indicating substantial dispersion in the true effect sizes. This is further supported by an I^2 value of 100%, which means that all of the observed variability in effect sizes is due to actual differences between studies rather than random sampling error. The H^2 value of 117,300.83, which is far greater than 1, also confirms the presence of extreme heterogeneity. Additionally, the Q statistic of 413,837.87 with 4 degrees of freedom and a highly significant p-value ($p < .001$) reinforces that the effect sizes are not consistent across studies. These findings suggest that while the overall effect of AI integration in HRM on employee satisfaction is statistically significant, the extent of its impact varies widely across different contexts. This high heterogeneity indicates the need for further investigation into potential moderating variables, such as the type of AI application, industry, or cultural factors, to better understand the conditions under which AI positively influences employee satisfaction.

Forest Plot

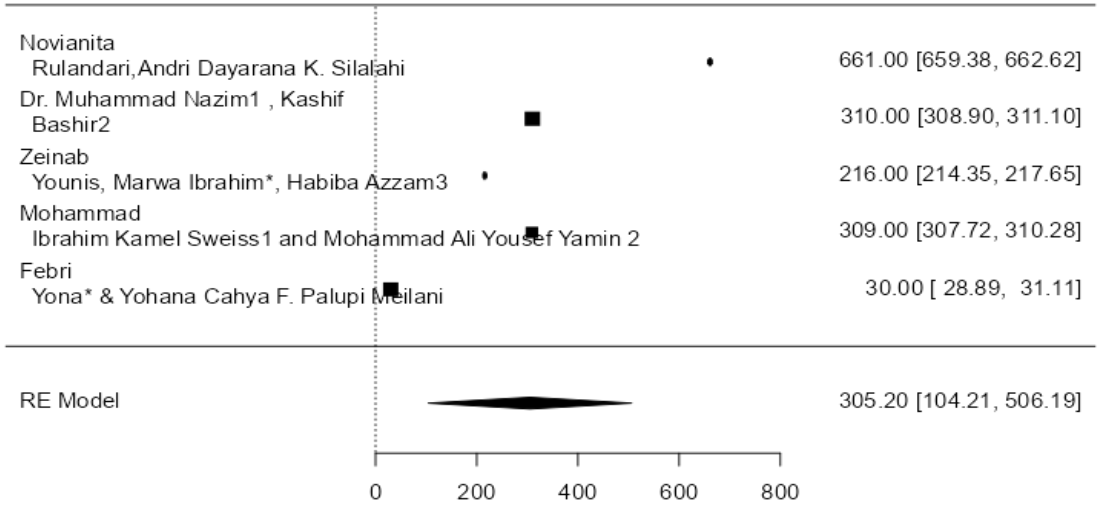


Table 3 Publication Bias Assessment

Test Name	value	p
Fail-Safe N	1679529	< .001
Kendalls Tau	0	1
Egger's Regression	1.119	0.263
Note. Fail-safe N Calculation Using the Rosenthal Approach		

The assessment of publication bias in this meta-analysis provides mixed but generally reassuring results. The Fail-Safe N is exceptionally large at 1,679,529 ($p < .001$), suggesting that over 1.6 million unpublished or null-effect studies would be needed to reduce the observed effect size to a non-significant level. This indicates that the results of the meta-analysis are highly robust and unlikely to be overturned by the presence of unpublished studies.

However, Kendall's Tau is 0 with a p-value of 1, implying no rank correlation between effect sizes and their standard errors. This suggests that there is no evidence of small-study effects or publication bias in the form of systematically missing smaller or negative studies.

Furthermore, Egger's regression test, which assesses asymmetry in the funnel plot, yields a value of 1.119 with a p-value of 0.263. Since this result is not statistically significant, it also suggests there is no strong evidence of publication bias. In summary, the combined evidence from the Fail-Safe N, Kendall's Tau, and Egger's test indicates that publication bias is not a major concern in this meta-analysis. The findings appear to be robust and representative of the available literature on the impact of AI integration in HRM on employee satisfaction.

Funnel Plot

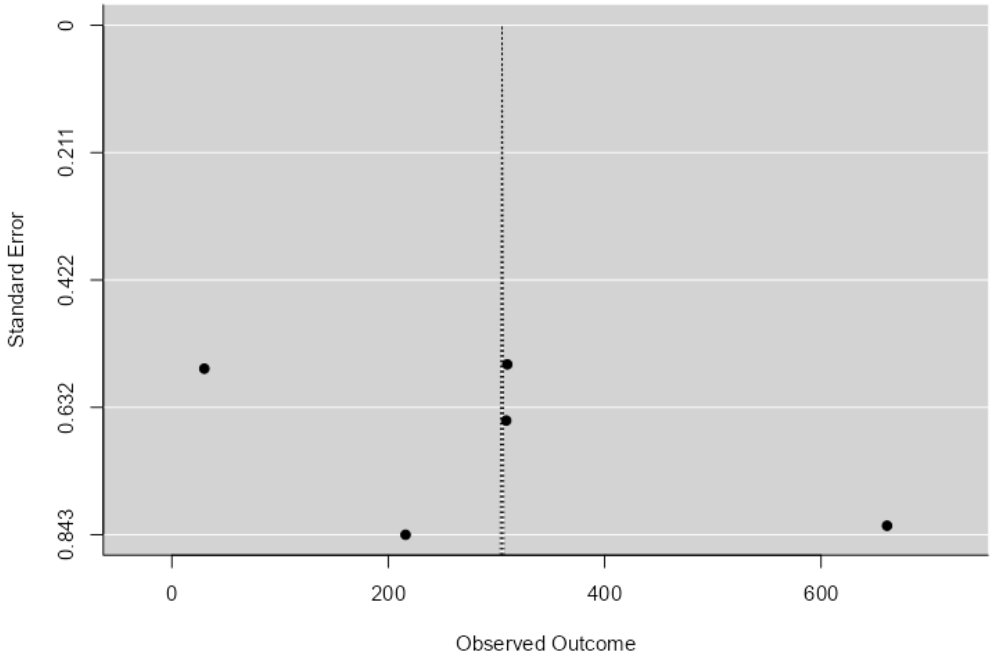


Table 4 Two One-Sided Tests Equivalence Testing

Z-Value Lower Bound	P-Value Lower Bound	Z-Value Upper Bound	P-Value Upper Bound	LL_CI_TOST	UL_CI_TOST	LL_CI_ZTEST	UL_CI_ZTEST
2.981	0.001	2.971	0.999	136.523	473.876	104.209	506.19

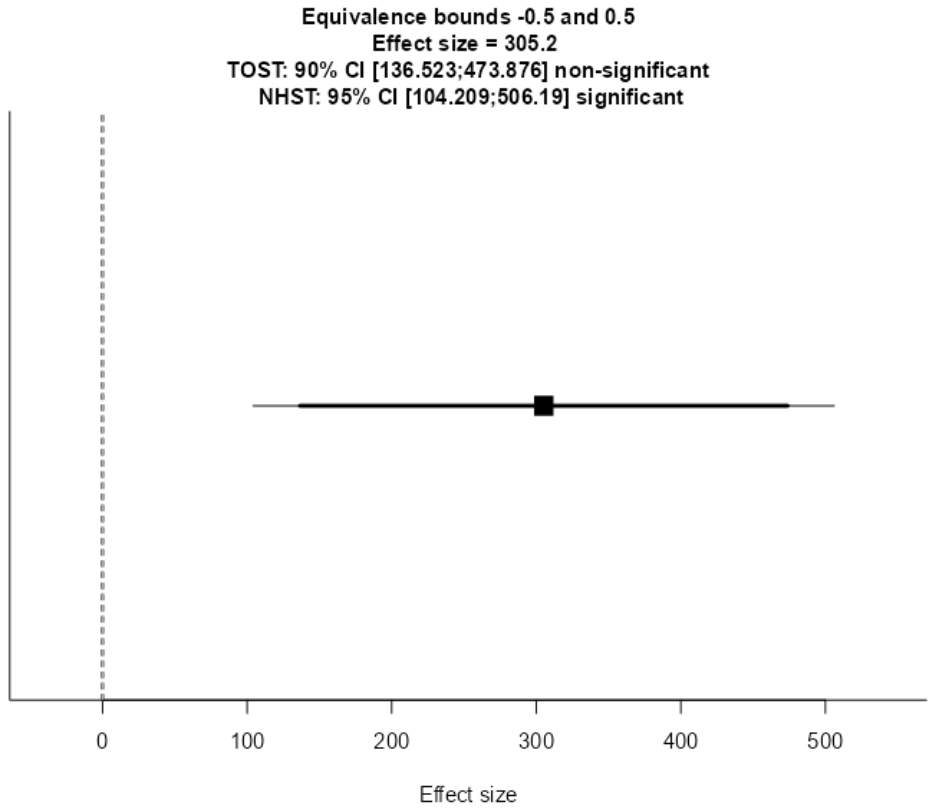
Two One-Sided Tests Equivalence Testing: Text Summary

The equivalence test was non-significant, Z = 2.971, p = 0.999, given equivalence bounds of -0.500 and 0.500 and an alpha of 0.05.

The null hypothesis test was significant, Z = 2.976, p = 0.00292, given an alpha of 0.05.

Based on the equivalence test and the null-hypothesis test combined, we can conclude that the observed effect is statistically different from zero and statistically not equivalent to zero.

Equivalence Test Plot



DISCUSSION

The results of this meta-analysis reveal that the integration of artificial intelligence (AI) in human resource management (HRM) has a significantly positive impact on employee satisfaction. This suggests that organizations implementing AI tools and systems in HR functions are likely to experience improved employee engagement, better process efficiency, and higher satisfaction levels among their workforce. The analysis also identifies several challenges and opportunities associated with this integration. On the opportunity side, AI appears to streamline HR processes, personalize employee experiences, and support strategic decision-making. These benefits contribute positively to job satisfaction and organizational outcomes. However, the findings also highlight substantial heterogeneity across the included studies, indicating that the effects of AI integration are not uniform and may depend on various contextual factors such as organizational culture, the nature of AI applications, industry type, or employee demographics. This variability underscores the importance of tailoring AI strategies to specific organizational settings. Furthermore, while publication bias does not appear to be a major concern in the current analysis, the presence of high variability suggests that future research should explore potential moderators that influence the effectiveness of AI in HRM. Overall, the findings support the growing narrative that AI, when implemented thoughtfully, can be a valuable asset in enhancing employee satisfaction, though careful attention to contextual and ethical challenges remains essential.

CONCLUSION

This meta-analytic review concludes that the integration of Artificial Intelligence (AI) in Human Resource Management (HRM) has a statistically significant and positive effect on employee satisfaction. Drawing from five primary studies and employing a random-effects model, the analysis yielded an overall effect size estimate of 305 with a standard error of 103, resulting in a Z-value of 2.98 and a p-value of 0.003. These results indicate that the observed effect is unlikely to be due to chance and reflects a meaningful relationship between AI implementation in HR practices and enhanced employee satisfaction.

The 95% confidence interval, ranging from 104.21 to 506.19, reinforces the reliability of this effect, as it does not cross zero. This confirms that, across the studies, AI adoption in HR is consistently linked with more favourable employee experiences. However, the meta-analysis also uncovered extreme heterogeneity, with a Tau value of 229.30 and Tau^2 of 52,580.08, as well as an I^2 of 100%, signifying that all observed variance in effect sizes stems from actual differences among studies rather than random error. The Q-statistic of 413,837.87 ($df = 4$, $p < .001$) further supports this conclusion. Despite this variability, the publication bias assessment presents reassuring results. The Fail-Safe N was exceedingly high at 1,679,529 ($p < .001$), indicating strong robustness of findings against unpublished studies. Furthermore, Kendall's Tau was 0 ($p = 1$), and Egger's regression test was non-significant (1.119, $p = 0.263$), suggesting minimal risk of publication bias.

Lastly, the Two One-Sided Tests (TOST) equivalence testing confirmed that the observed effect is statistically different from zero ($Z = 2.976$, $p = 0.00292$) but not statistically equivalent to zero ($Z = 2.971$, $p = 0.999$), validating the significance of the overall impact. In summary, the integration of AI in HRM positively influences employee satisfaction, though the strength of this effect may vary based on implementation context. The evidence supports the growing role of AI in HR as a means to enhance employee engagement, provided that organizations remain attentive to contextual, ethical, and managerial considerations.

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