# The Role of Artificial Intelligence in Modern Human Resources Information Systems for Ongoing Performance Management

**Kamwale Banda**

**Graduate School of Business, University of Zambia, Zambia**

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## ABSTRACT

This study examined the role of artificial intelligence (AI) in enhancing modern Human Resource Information Systems (HRIS) for ongoing performance management within organizations. Traditional HRIS have primarily functioned as static data storage systems and have been limited in their ability to provide real-time analytics for continuous performance monitoring and improvement. AI was investigated as a transformative solution capable of introducing predictive analytics, automation, and advanced data processing into HRIS. Given the mixed and sometimes conflicting findings in existing literature, the study sought to provide empirical evidence on the effectiveness of AI-powered HRIS, particularly in the context of continuous performance management. The main objective was to assess how AI can convert HRIS into proactive tools that support real-time employee engagement, development, and performance enhancement. The study also evaluated organizational and user-related factors influencing the effectiveness of AI-enabled HRIS. A mixed-methods research approach was adopted, combining quantitative and qualitative techniques to capture both measurable outcomes and human-centered experiences related to AI adoption. A cross-sectional survey design was employed, targeting HR professionals, managers, and employees from public and private sector organizations in Lusaka District, Zambia. Stratified random sampling ensured adequate representation across organizational roles and sectors. Data were collected through structured questionnaires and semi-structured interviews. Quantitative data were analyzed using descriptive and inferential statistics, including regression analysis, while qualitative data were examined using thematic analysis. The findings revealed varying levels of AI integration in HRIS, with moderate to advanced adoption evident in many organizations. AI-powered HRIS were found to significantly improve the efficiency of performance management. However, challenges related to technical support and system usability constrained optimal utilization. The study concluded that while AI holds substantial potential to revolutionize HRIS, addressing technical and design limitations is essential to fully realize its benefits.

## INTRODUCTION

Human Resources Information Systems (HRIS) have undergone significant transformation since their inception, evolving from basic administrative tools to comprehensive platforms that play a pivotal role in managing and evaluating employee performance (Quaosar & Rahman, 2021). Historically, HRIS emerged as computerized systems primarily designed to automate repetitive administrative tasks like payroll processing, record-keeping, and attendance management. During the 1980s and 1990s, organizations began integrating HRIS with other enterprise resource planning (ERP) systems, gradually embedding features for tracking employee data and managing workforce analytics (Silva & Lima, 2017). Over time, these systems evolved to accommodate performance management functions, enabling organizations to monitor employee progress, conduct annual reviews, and set goals. Yet, the early HRIS systems primarily functioned as passive record-keepers rather than active tools for ongoing performance management.

The development of HRIS for performance management continued into the 2000s, with systems designed to streamline performance evaluations and goal-setting processes. These enhancements allowed HR departments to standardize appraisal processes and align individual objectives with organizational goals (Johnson, et al., 2016). However, while these systems improved administrative efficiency, they were limited in their ability to provide real-time feedback and actionable insights. Advances in information technology gradually allowed

HRIS platforms to incorporate more sophisticated tools, such as real-time feedback mechanisms, automated performance tracking, and data-driven analytics. Nonetheless, despite these enhancements, many traditional HRIS systems struggled to transition fully from static performance appraisals to the dynamic, ongoing management of employee performance.

The integration of HRIS for ongoing performance management has been essential for organizations and society at large. Effective performance management systems contribute to employee engagement, productivity, and organizational success, all of which are critical for economic stability and growth. By providing structured frameworks for evaluating and developing talent, HRIS platforms help align individual contributions with organizational goals, ensuring that employees are not only aware of their objectives but are also equipped with the feedback and tools they need to succeed (Panjaitan, 2023). In this way, HRIS contributes to a healthier workplace environment, as employees who feel that their work is recognized and valued are more likely to be satisfied and motivated in their roles.

Beyond organizational benefits, HRIS-driven performance management has implications for broader societal well-being. As companies are better equipped to support and develop their employees, the economic and social impacts are reflected in more stable employment, skill development, and improved quality of life for the workforce (Tardi, et al., 2024). Moreover, with the capability to manage diverse workforces across global locations, HRIS enhances inclusivity and diversity, allowing companies to better address the needs of a modern, varied workforce. By promoting fair and transparent appraisal practices, HRIS platforms support merit-based progression, fostering environments that value competence over discrimination and contribute to overall social equity.

Despite their potential benefits, current HRIS solutions often fall short in supporting ongoing performance management. Many of these systems still rely on outdated methodologies, which prioritize periodic appraisals over continuous, real-time feedback (Mishra, 2024). Traditional HRIS platforms are limited in their adaptability, making them unable to accommodate the dynamic, fluid requirements of modern workplaces. As organizations adopt more flexible, project-based work models, conventional HRIS platforms struggle to provide the flexibility needed to track progress, evaluate performance, and make adjustments in real-time (Rivera, et al., 2021). This disconnect between HRIS capabilities and workplace needs has led to inefficient performance management processes that fail to motivate and develop employees effectively.

Furthermore, the lack of integration between HRIS and other data sources limits the ability of HR professionals to gain a holistic view of employee performance. Many systems lack real-time data analysis, which is essential for spotting trends, identifying potential issues early on, and responding to changes in employee performance (Wang, 2024). Without actionable insights, HR professionals are unable to make data-driven decisions, leading to a reliance on subjective judgments. As a result, there is a pressing need to reimagine HRIS with capabilities that support continuous feedback, personalized development plans, and predictive analytics.

Artificial Intelligence (AI) has become a transformative force across various domains, and its integration into HRIS has gained significant research attention, particularly concerning its role in performance management (Vaddepalli, 2023). AI's potential to enhance data processing, automate decision-making, and provide insights in real-time offers a promising avenue for HRIS to overcome the limitations of traditional systems. Modern HRIS platforms powered by AI can handle large volumes of data from multiple sources, process it quickly, and generate insights that allow HR managers to make informed decisions (Nawaz, et al., 2024). AI-driven HRIS tools, such as machine learning algorithms and natural language processing, enable the continuous monitoring of employee performance, allowing for real-time feedback and tailored coaching, which is critical for ongoing performance management.

The shift towards AI-driven HRIS reflects the need for a more dynamic approach to managing employee performance. AI's predictive capabilities can help HR managers identify patterns in employee behavior, anticipate performance issues before they arise, and recommend personalized interventions. Additionally, AI-driven systems can automate routine administrative tasks, freeing up HR professionals to focus on strategic initiatives that add value to the organization. This paradigm shift towards AI in HRIS has opened new

research frontiers, as organizations seek to understand how AI can redefine performance management practices.

Research in contemporary literature provides both conventional and unconventional findings regarding the role of AI in HRIS for ongoing performance management. Studies have largely shown that AI-powered HRIS can enhance the accuracy and effectiveness of performance management processes. For instance, a study by Johnson and Brown (2022) found that AI integration in HRIS significantly improved the timeliness and relevance of performance feedback, as it enabled HR managers to assess real-time data on employee performance. Using a mixed-methods approach, they observed that AI's ability to process large volumes of data quickly allowed managers to make more objective decisions about performance appraisals, thereby reducing bias in evaluations.

On the other hand, some studies have reported more unconventional findings. For example, Williams and Lee (2023) conducted a survey-based study on AI in HRIS, which found that, while AI-driven systems were effective at processing data, they lacked the emotional intelligence required to interpret qualitative aspects of performance, such as interpersonal skills and cultural fit. Their study highlights that while AI offers efficiency in data analysis, it may overlook nuances that are critical for comprehensive performance evaluations. This finding suggests that AI may need to be supplemented by human oversight to capture the full scope of employee performance.

A few researchers have also raised concerns about the ethical implications of AI in HRIS. A study by Smith et al. (2023) explored potential biases in AI algorithms used for performance management, finding that AI tools could inadvertently reinforce existing biases if trained on biased data. Their qualitative analysis underscored the importance of designing AI algorithms that are transparent and free from bias, as biased performance evaluations can negatively impact employee morale and trust in the organization. These varied findings underscore the complexities associated with using AI in HRIS and highlight the need for further research to address these challenges.

**Research problem**

Despite the advancements in HRIS and their increasing integration with AI technologies, several challenges remain. Traditional HRIS still operate primarily as data storage platforms, lacking the real-time tracking and analytical capability required for ongoing performance management (Fletcher, 2018). The absence of dynamic insights limits HR departments' ability to provide data-driven feedback or timely interventions, often resulting in a reliance on subjective evaluations, which undermines the effectiveness of performance management (Tarique & Schuler, 2020). AI has been proposed as a solution to these challenges, offering capabilities such as data processing, automation of routine tasks, and predictive analytics that enhance HRIS functionality. However, the integration of AI into HRIS has not been without issues. Scholars have reported conflicting findings about the effectiveness of AI-driven HRIS for ongoing performance management (Bhardwaj & Bhandarker, 2019; Guenole & Feinzig, 2018). While some researchers highlight the advantages of AI, such as enhanced feedback frequency and employee engagement, others point to barriers including high costs, complexity, data privacy concerns, and resistance from HR professionals and employees. These conflicting perspectives indicate a gap in understanding AI's true impact on HRIS and necessitate further investigation. This study aims to address these gaps by examining the role of AI in modern HRIS for ongoing performance management. Specifically, it seeks to establish how AI can be used to transform HRIS from static record-keeping systems into proactive tools that facilitate real-time employee development and engagement.

The aim of this study is to explore the role of Artificial Intelligence (AI) in enhancing Human Resources Information Systems (HRIS) for ongoing performance management in contemporary organizations. As businesses seek to improve employee productivity and align performance with strategic goals, AI emerges as a key enabler in transforming traditional HRIS into intelligent, responsive, and predictive systems. The significance of this study lies in its potential to inform HR practitioners, system developers, and policymakers about the advantages and challenges of integrating AI in performance management processes. By highlighting how AI can support continuous feedback, real-time performance tracking, and data-driven decision-making, the study contributes to a deeper understanding of how technological innovation can drive human capital

development and organizational effectiveness in both public and private sectors.

### Significance, objectives and scope of the study

This study was aimed at investigating the role of artificial intelligence in modern Human Resource Information Systems (HRIS) for ongoing performance management within organizations. The overall objective was to examine how AI technologies were being integrated into HRIS and the extent to which they enhanced continuous performance monitoring, employee development, and organizational effectiveness. Specifically, the study sought to investigate the current state of modern HRIS used for ongoing performance management in organizations. It further analysed the effect of artificial intelligence adoption in HRIS on ongoing performance management outcomes. In addition, the study identified key organizational, technological, and human factors that influenced the effectiveness of modern HRIS in supporting continuous performance management practices.

To address these objectives, the study was guided by several research questions. These questions examined the existing condition of modern HRIS for ongoing performance management, explored how the use of artificial intelligence in HRIS affected performance management processes, and identified the factors that influenced the effectiveness of AI-enabled HRIS within organizations. The scope of the study was limited to public and private sector organizations located in Lusaka District, Zambia. Lusaka was selected due to its central role in economic activity and its relatively high level of technological adoption. Temporally, the study focused on the year 2024 in order to capture recent developments and challenges associated with AI-driven HRIS. The analysis concentrated on the practical application and effectiveness of AI-enhanced HRIS in managing ongoing employee performance. The study examined artificial intelligence integration in HRIS as the independent variable, while ongoing performance management served as the dependent variable. However, the study was limited by its geographical focus and the emerging nature of AI adoption in HRIS, which may have affected the generalizability of the findings.

## LITERATURE REVIEW

### Theoretical literature

Social Exchange Theory (SET) was first developed by George Homans in the 1950s and later expanded by Peter Blau in the 1960s. SET posits that social behavior is driven by the exchange of resources, where individuals aim to maximize benefits and minimize costs (Cook et al., 2013). In the context of this study, SET is used to explain how AI-driven HRIS can positively impact ongoing performance management by enhancing the reciprocal relationship between employers and employees. When AI-enabled HRIS offers personalized feedback, timely evaluations, and employee development opportunities, it signals to employees that the organization values their growth, which, in turn, leads to higher engagement and motivation (Ogbonna & Mbah, 2022).

AI-driven HRIS systems, by providing real-time performance tracking and feedback, enable employees to adjust their behaviors and enhance their contributions to organizational goals. This dynamic feedback loop aligns with SET's concept of reciprocity, where employees respond to organizational investments in their growth with improved performance and loyalty. Thus, SET provides a theoretical foundation for understanding the potential positive impact of AI-driven HRIS on ongoing performance management.

Surveillance Capitalism Theory, introduced by Shoshana Zuboff in 2019, examines how organizations leverage personal data for profit and control (Zuboff et al., 2019). In the context of AI-driven HRIS, Surveillance Capitalism Theory suggests that the extensive use of employee data for performance monitoring may create a sense of surveillance among employees, which can negatively impact their trust and autonomy. Employees may perceive AI-driven performance management tools as intrusive, leading to reduced motivation and engagement (Yaqoob & Robbins, 2024). While AI can improve performance evaluations through data analytics, it also has the potential to create a workplace culture of constant monitoring, which may lead to anxiety and reduced job satisfaction. Therefore, the Surveillance Capitalism Theory highlights the importance of balancing AI-driven data collection with ethical considerations to maintain employee trust and well-being.

Neutralization Theory, introduced by Gresham Sykes and David Matza in 1957, explains how individuals justify behaviors that deviate from societal norms (Shoenberger et al., 2012). Applied to the context of AI-driven HRIS, Neutralization Theory suggests that employees may rationalize the presence of AI in performance management as a necessary aspect of modern work, neither significantly benefiting nor harming their overall experience. Employees may adopt a neutral stance towards AI oversight, viewing it as a standard administrative tool rather than a transformational element in their work lives (Maruna & Copes, 2005). This neutral perception may lead employees to disengage from the feedback provided by AI systems, thereby limiting the impact of AI-driven HRIS on performance improvement. Neutralization Theory thus suggests that AI in HRIS may have a limited effect on employee behavior unless accompanied by efforts to foster positive employee engagement and demonstrate the value of AI-generated insights (Figure

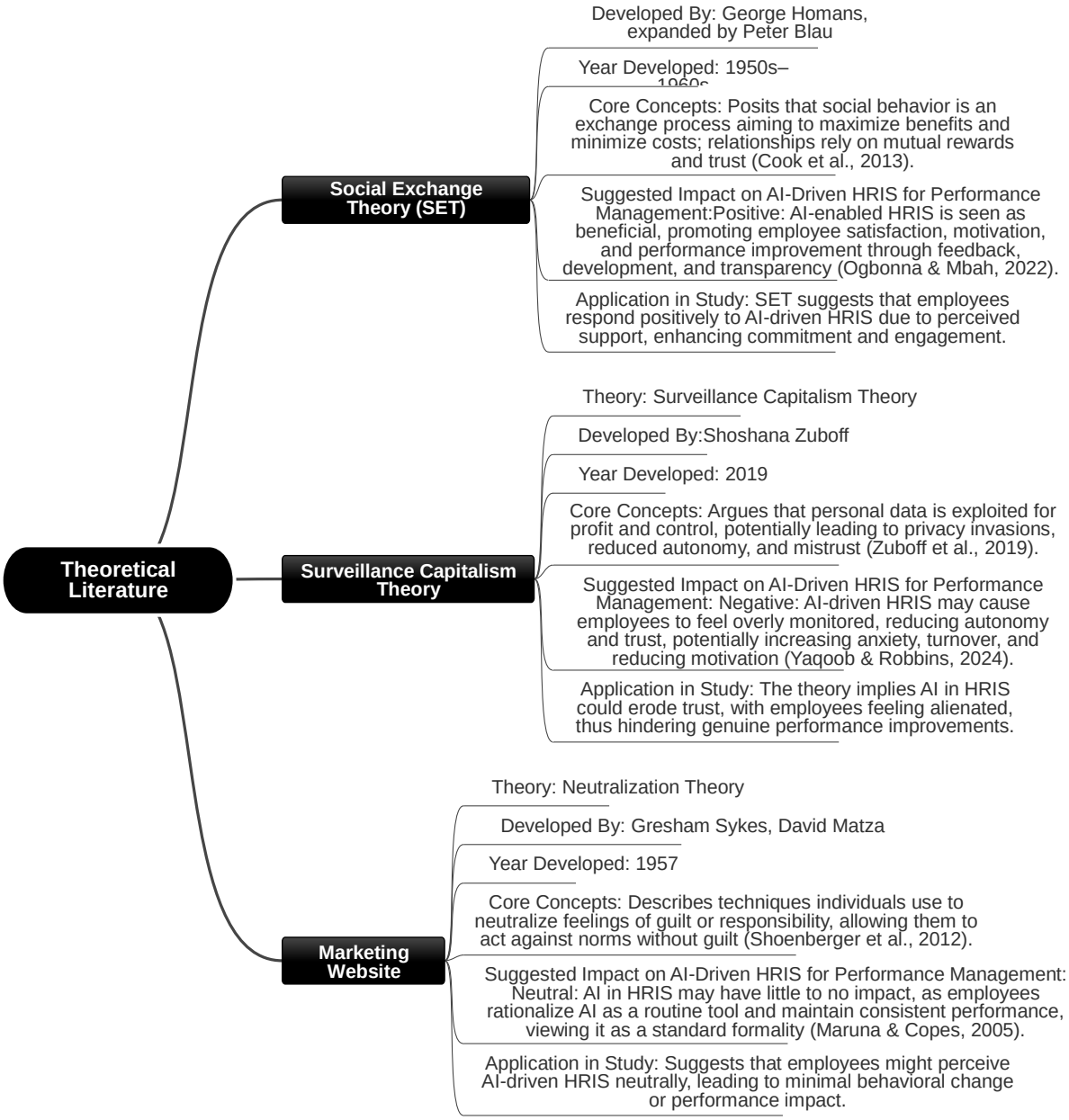


**Figure 1. Summary of reviewed theories**

## Empirical literature

Recent empirical studies have extensively examined the integration of artificial intelligence (AI) in Human Resource Management (HRM), highlighting its transformative impact on HR functions, particularly recruitment, performance management, and employee engagement. Ali and Kallach (2024) conducted a systematic literature review of 653 academic articles, focusing on AI-enhanced human resources information systems. Their analysis categorized findings into benefits, challenges, and functionalities of AI in HR. The study emphasized AI's

ability to improve efficiency, decision-making, cost management, and employer branding, particularly by automating recruitment processes, reducing human bias, and enabling strategic HR focus. Complementary technologies, such as machine learning and robotic process automation (RPA), were shown to further enhance these outcomes. However, Ali and Kallach also highlighted challenges, including data privacy, ethical considerations, and alignment with organizational culture, noting the importance of regulatory frameworks and ethical guidelines to ensure fair recruitment practices.

Similarly, Rana et al. (2024) investigated AI's role in streamlining HR functions such as recruitment, orientation, learning, development, and performance appraisal. Using a conceptual framework and advanced data analysis, the study found that AI enhances efficiency, flexibility, and innovation within HR departments, enabling accurate prediction of employee needs and real-time problem-solving. Nevertheless, risks related to data privacy and potential workforce reductions due to automation were acknowledged, emphasizing the need for ethical oversight alongside technological adoption. Mugisha and Extension (2024) explored AI's influence on automating HR tasks, decision-making, and strategic workforce planning. Using both qualitative and quantitative methods, they focused on Artificial Narrow Intelligence (ANI) applications and found that AI could significantly improve operational efficiency and talent management. Yet, they stressed the importance of responsible AI implementation to avoid ethical pitfalls, particularly regarding data privacy and job displacement. Li (2024) reinforced these findings, demonstrating that AI integration in HR improves recruitment efficiency, resource allocation, and talent management. Mixed-methods analysis showed that AI, combined with human oversight, enhances employee satisfaction and productivity, fostering a more responsive and employee-centered HR model.

Stroet (2017) examined AI's effect on performance management and the evolving role of line managers. Findings indicated that AI enables continuous, unbiased data collection, allowing managers to focus on coaching and employee development. This supports HR devolution theory, highlighting AI's role in reallocating responsibilities to improve engagement and performance. Cai et al. (2024) addressed the perception of fairness when AI replaces human decision-makers in resume screening. Using experimental design, the study found that applicants generally perceive AI as less fair than humans, although outcome favorability and AI expertise moderated this perception. The study suggested integrating human oversight to improve fairness and organizational sustainability. Ilyas and Qadir (2024) focused on AI in the IT sector, showing that AI adoption enhances HR operational performance, recruitment efficiency, and appraisal processes while fostering innovation and usability within HR practices. Overall, these studies collectively indicate that AI integration in HRM improves efficiency, accuracy, and strategic focus, particularly in recruitment and performance management, but requires careful ethical oversight, alignment with organizational culture, and human involvement to ensure fairness, employee satisfaction, and sustainable adoption (see table 1).

**Table 1. Summary of reviewed empirical studies**

| Study | Objective | Methodology | Key Findings | Challenges Highlighted | Recommendations |
|---|---|---|---|---|---|
| Ali & Kallach (2024) | Examine AI's role in enhancing HR functions, focusing on recruitment processes | Systematic literature review of 653 articles; scoring approach with detailed analysis of 35 studies | AI boosts efficiency, decision-making, cost reduction, and employer branding; facilitates faster, precise recruitment | Data privacy, ethical issues, alignment with organizational systems | Establish regulatory frameworks; ethical guidelines to prevent bias; emphasize strategic HR planning |
| Rana et al. (2024) | Analyze AI's transformative impact on HR, with emphasis on recruitment, orientation, and performance appraisal | Empirical study based on conceptual framework, advanced data analysis | AI enhances HR efficiency, talent management, and real-time solutions; promotes innovation in HR | Data privacy risks, potential workforce reductions due to automation | Address ethical considerations; balance AI with workforce stability |

| | | | | | |
|---|---|---|---|---|---|
| Mugisha & Extension (2024) | Investigate AI's impact on automating HR tasks and supporting decision-making | Mixed-methods approach: qualitative and quantitative analysis | AI automates mundane tasks, supports strategic functions; facilitates data-driven HR decisions | Ethical concerns, data privacy, potential job displacement | Responsible AI implementation to align with organizational values and societal norms |
| Li (2024) | Explore AI's role in optimizing recruitment, HR allocations, and talent management | Mixed-methods approach (quantitative and qualitative) | AI improves recruitment efficiency and talent management; enhances employee satisfaction and productivity | Need for sustained human involvement to maximize AI's benefits | Implement AI with human oversight to create an employee-centered HR model |
| Stroet (2017) | Assess AI's impact on performance management and role of line managers | Systematic literature review and three case studies from expert interviews | AI enables unbiased, continuous performance data; allows line managers to focus on coaching and development | Limited generalizability due to small case study sample size | Future studies should expand cases; support line managers in adopting AI for employee growth |
| Cai et al. (2024) | Examine fairness perceptions in AI vs. human resume screening | Online experimental design with 189 and 214 participants; SPSS data analysis | Applicants view AI screening as less fair than human screening; outcome favorability, AI expertise partially improve fairness perceptions | Negative perceptions of AI-led decisions could impact organizational sustainability | Explore collaborative AI-human approaches for fairer HR decision-making |
| Ilyas & Qadir (2024) | Investigate AI's impact on HR functions in the IT sector (Bangalore) | Survey of 200 HR professionals; multiple regression analysis | AI improves recruitment and appraisal efficiency; usability and innovation enhance HR functionality | None specifically noted | Encourage AI use in HR for improved convenience and creativity in HR processes |

Despite the growing body of research on AI in HRIS, several gaps remain. First, most studies focus on the implementation of AI in specific HR functions, such as recruitment or performance appraisal, without adequately addressing the broader role of AI in ongoing performance management. This gap limits the understanding of how AI can be integrated holistically within HRIS to support continuous employee development and engagement (Kavanagh & Thite, 2009).

Second, while there is ample literature on the benefits of AI in HRIS, limited research exists on the challenges associated with its implementation, particularly in developing countries like Zambia. Issues such as data privacy, employee resistance, and the cost of AI adoption have been mentioned but not comprehensively explored. This study aims to address these gaps by focusing on the challenges and opportunities associated with AI integration in HRIS within the Zambian context.

Third, there is a lack of research on the factors influencing the effectiveness of AI-powered HRIS in managing ongoing performance. While some studies have highlighted technical and operational factors, there is limited exploration of contextual elements, such as organizational culture, user adoption, and training, that are critical to the successful implementation of AI-driven HRIS (Ruel et al., 2007). This study will explore these factors to provide a comprehensive understanding of how AI can be effectively utilized in HRIS to enhance performance management.

# CONCEPTUAL FRAMEWORK

The conceptual framework for this study is based on the premise that AI-driven HRIS can enhance ongoing performance management by improving decision-making, employee engagement, and communication. The framework includes three key AI applications: Predictive Analytics, Natural Language Processing (NLP), and Machine Learning Algorithms, which serve as independent variables. The dependent variable is ongoing performance management, measured through indicators such as decision-making effectiveness, employee engagement, and communication efficiency (see figure 2).

In this study, predictive analytics is utilized as an artificial intelligence application to identify patterns within workforce data and forecast future outcomes. By leveraging predictive analytics, human resource managers are able to anticipate workforce needs and implement proactive interventions, thereby enhancing decision-making and strategic planning within HR functions. This capability allows organizations to address potential challenges before they arise, improving overall operational efficiency.

Natural Language Processing (NLP) is another AI application integrated into Human Resources Information Systems (HRIS). NLP enables the analysis of employee feedback, engagement surveys, and other textual data, providing valuable insights into employee sentiments and organizational climate. By interpreting this information, HR managers can foster a culture of open communication, enhance employee satisfaction, and strengthen organizational engagement. Machine learning algorithms further contribute to the efficiency and effectiveness of HR processes. These algorithms support recruitment by evaluating candidate profiles, assist in assessing employee performance, and identify areas for training and development. As a result, machine learning facilitates continuous employee growth, streamlines routine HR tasks, and allows HR professionals to focus on strategic initiatives that improve workforce productivity (see figure 2).

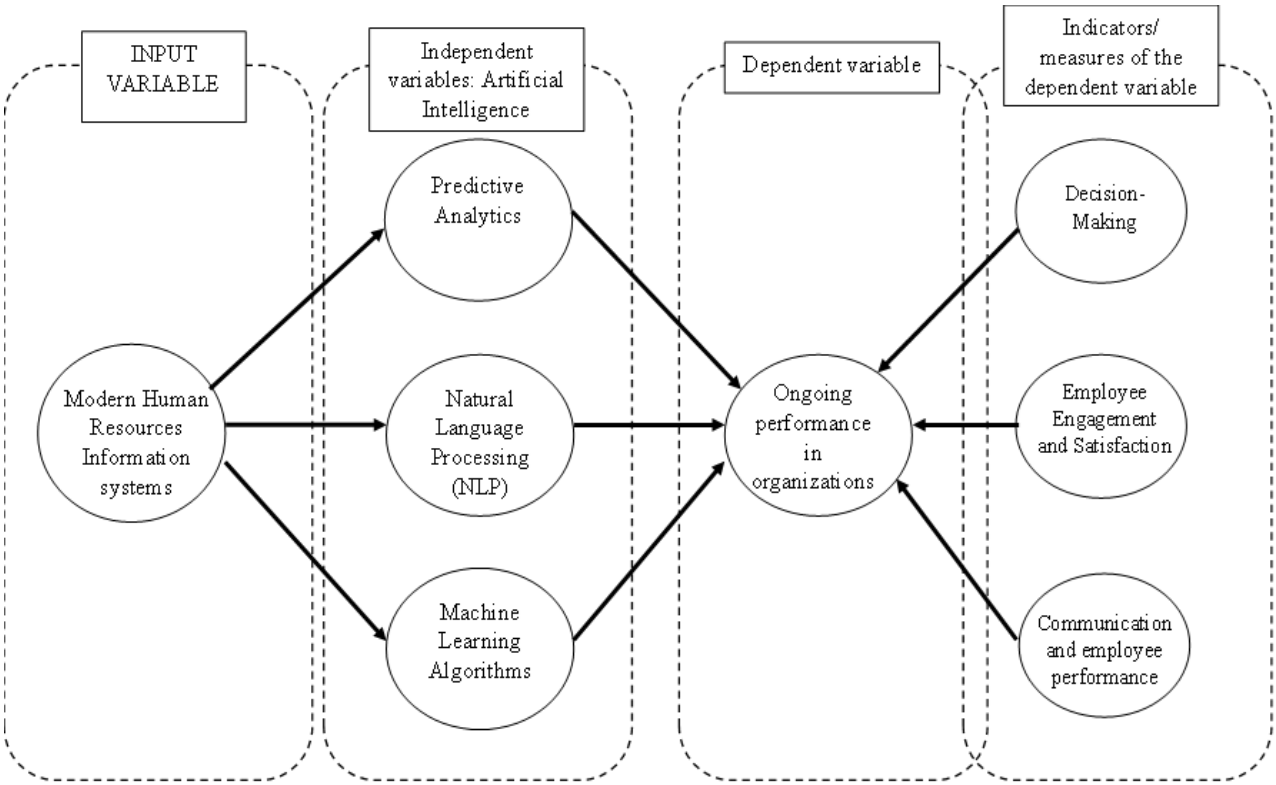


**Figure 2. Conceptual framework of the study**

# METHODOLOGY

This study will adopt a mixed-methods research approach, combining both qualitative and quantitative data collection and analysis techniques. The use of a mixed-methods approach allows for a more comprehensive understanding of the research problem by capturing numerical data alongside participants' experiences and perspectives. Quantitative data will provide insights into patterns and relationships regarding the use of

artificial intelligence (AI) in Human Resource Information Systems (HRIS), while qualitative data will offer a deeper understanding of how AI-driven HRIS influences employee engagement, motivation, and performance. By integrating these two types of data, the study aims to generate meaningful conclusions that reflect both statistical evidence and the human aspects of ongoing performance management.

A cross-sectional survey research design will be employed for this investigation. This design is suitable as it enables the collection of data from a sample at a specific point in time, providing a snapshot of the current state of AI integration in HRIS across different organizations. This approach is particularly useful for assessing the impact of AI on performance management and understanding the variations in implementation across multiple organizations. Data will be gathered from several public and private sector organizations within Lusaka District, Zambia, to ensure sample diversity and enhance the generalizability of the findings.

The study population will comprise HR professionals, managers, and employees from a variety of organizations in Lusaka District. Including participants from both the public and private sectors will provide a balanced view of AI adoption and its implications for HR practices. The estimated total population is approximately 500 HR professionals and managers working in Lusaka-based organizations. A stratified random sampling technique will be employed to select participants, ensuring that different subgroups within the population are adequately represented. Participants will be stratified based on their roles—HR professionals, managers, or employees—and the type of organization, whether public or private. Within each stratum, participants will be randomly selected, and the sample size will be determined using the Yamane formula to ensure statistical validity.

Quantitative data will be collected through structured questionnaires designed to capture the extent of AI integration in HRIS, perceived benefits and challenges, and its impact on ongoing performance management. A Likert scale will be employed to measure participants' opinions on aspects such as employee engagement, decision-making effectiveness, and the use of data-driven feedback. Qualitative data will be gathered through semi-structured interviews with HR managers and key informants. These interviews will allow for an in-depth exploration of participants' experiences and perspectives, focusing on factors that influence the effectiveness of AI-driven HRIS, including organizational culture, employee attitudes, and the perceived value of AI insights. Interviews will be conducted either face-to-face or via video conferencing, depending on participant availability.

Quantitative data analysis will involve both descriptive and inferential statistics. Descriptive statistics will summarize demographic characteristics and provide an overview of AI integration, while inferential statistics, including correlation and regression analysis, will examine relationships between AI integration and performance management outcomes such as engagement, productivity, and decision-making effectiveness. SPSS software will be used to ensure accuracy and reliability. Qualitative data will be analyzed using thematic analysis, where interview transcripts will be coded to identify recurring themes related to AI use and its impact. NVivo software will facilitate the organization and systematic examination of qualitative data.

Ethical considerations will be strictly observed, including obtaining informed consent, ensuring confidentiality, and protecting participants' privacy. All data will be securely stored, anonymized during analysis, and accessed only by authorized personnel. Ethical approval will be sought from the University of Zambia Ethics Committee. The validity of the study will be ensured through expert reviews of the research instruments and a pilot test, while reliability will be established by standardizing questionnaires and applying Cronbach's alpha to assess internal consistency. Despite the comprehensive nature of the mixed-methods approach, limitations such as response bias and reliance on self-reported data are acknowledged, with triangulation through multiple methods employed to enhance the credibility of findings.

# RESULTS

### Demographic analysis

The study's findings indicate a highly educated sample, with the majority of participants holding a bachelor's degree (60.4%), followed by those with a master's degree (20.1%). Participants with diplomas and certificates accounted for 12.7% and 4.5% of the sample, respectively, while PhD holders represented the smallest proportion at 2.2%. Overall, 80.5% of respondents possessed at least a bachelor's degree, reflecting a

predominantly well-educated group and minimal participation from individuals at the educational extremes. Regarding organizational affiliation, 42.5% of participants were employed in the private sector, making it the most represented category. Employees from non-governmental organizations (NGOs) constituted 33.6% of the sample, highlighting significant civil society involvement, while public sector employees made up 23.9%. This distribution demonstrates a diverse representation of organizational types, with private sector personnel predominating.

The size of participants' organizations also varied, with 36.6% working in large organizations of 500 or more employees. Medium-sized organizations employing 50–99 individuals accounted for 32.1%, while smaller organizations with fewer than 50 employees and those with 100–499 employees represented 19.4% and 11.9%, respectively. These results illustrate a broad distribution of organizational sizes, with larger and medium-sized entities most prominent.

In terms of organizational roles, the majority of participants (46.3%) held managerial positions, followed closely by human resource (HR) professionals at 39.6%. Non-managerial employees formed the smallest group at 14.2%. This indicates a strong focus on leadership and HR roles within the sample, with fewer participants occupying non-managerial positions, suggesting that insights were primarily drawn from individuals with significant organizational responsibilities (see figure 3)

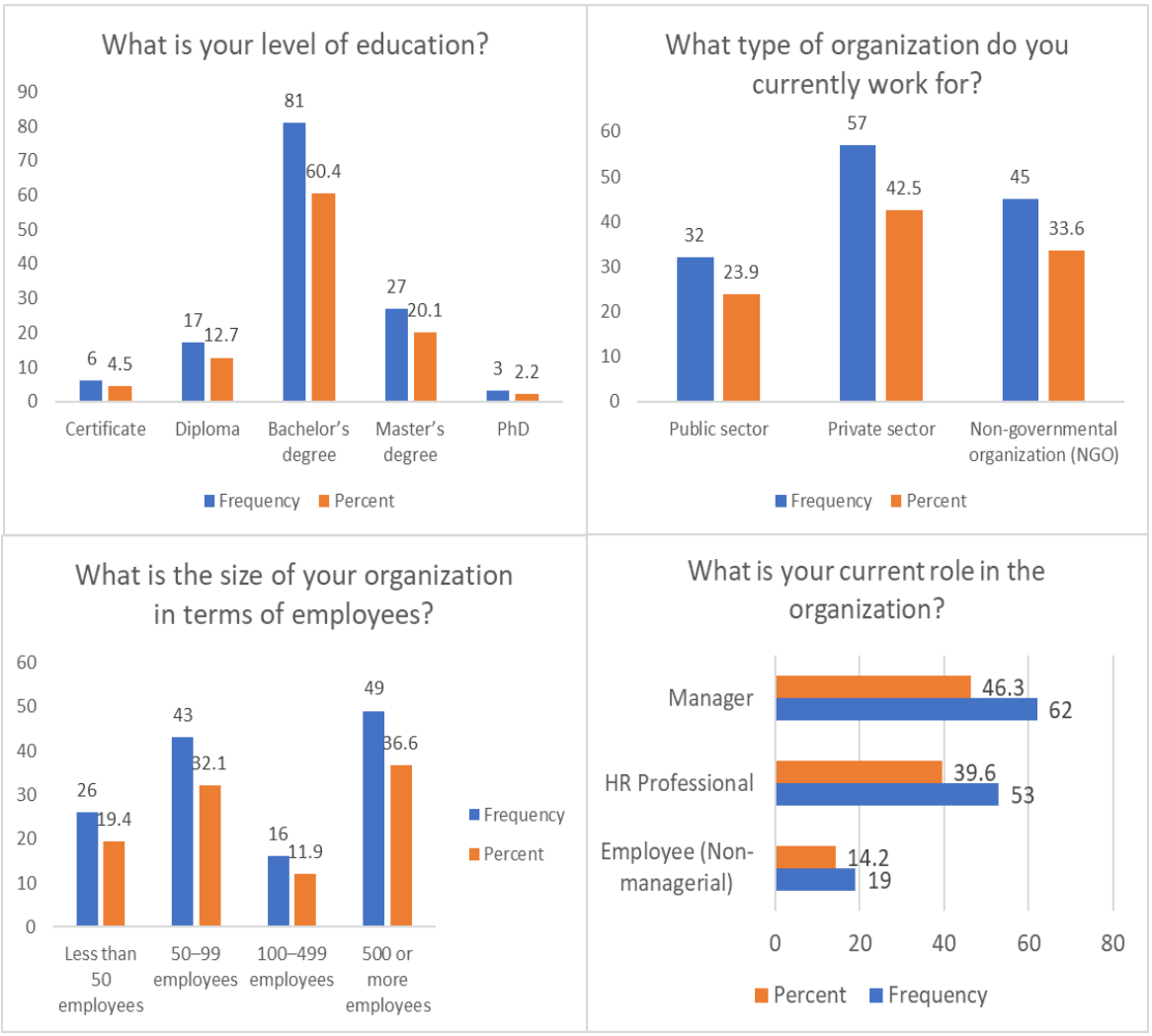


**Figure 3. Respondents' education, organization, size of organization and current role**

The study's findings on participants' professional experience indicate that the majority, 52.2%, have 4–7 years in their current roles, reflecting substantial mid-level experience. Participants with 1–3 years of experience constitute 21.6%, while those with 8–10 years account for 20.1%. Only 6.0% have over 10 years of tenure. This distribution highlights a focus on individuals with established expertise, though fewer

respondents occupy the lower or higher ends of the experience spectrum.

Regarding experience with Artificial Intelligence (AI) in Human Resource Information Systems (HRIS), 35.1% of participants reported extensive experience, forming the largest group. Those with some experience represented 33.6%, while 31.3% indicated limited experience. The results demonstrate a well-balanced representation of expertise, with a slight predominance of advanced users, ensuring insights across varying familiarity levels with AI in HRIS. The frequency of HRIS usage in daily work showed that 35.1% of participants use the systems frequently, 29.1% occasionally, and 22.4% moderately. A smaller proportion, 11.2%, always used HRIS, while only 2.2% reported rare usage. Overall, the majority engage with HRIS at least moderately, reflecting its integral role in routine work activities. Finally, the primary focus of AI applications within HRIS was employee training and development (32.1%), followed by performance management (30.6%), payroll and benefits management (26.1%), and recruitment and selection (11.2%). These findings indicate that AI in HRIS is strategically leveraged to enhance employee skills, monitor performance, and support operational HR functions, highlighting its central role in workforce development and management (see figure 4).

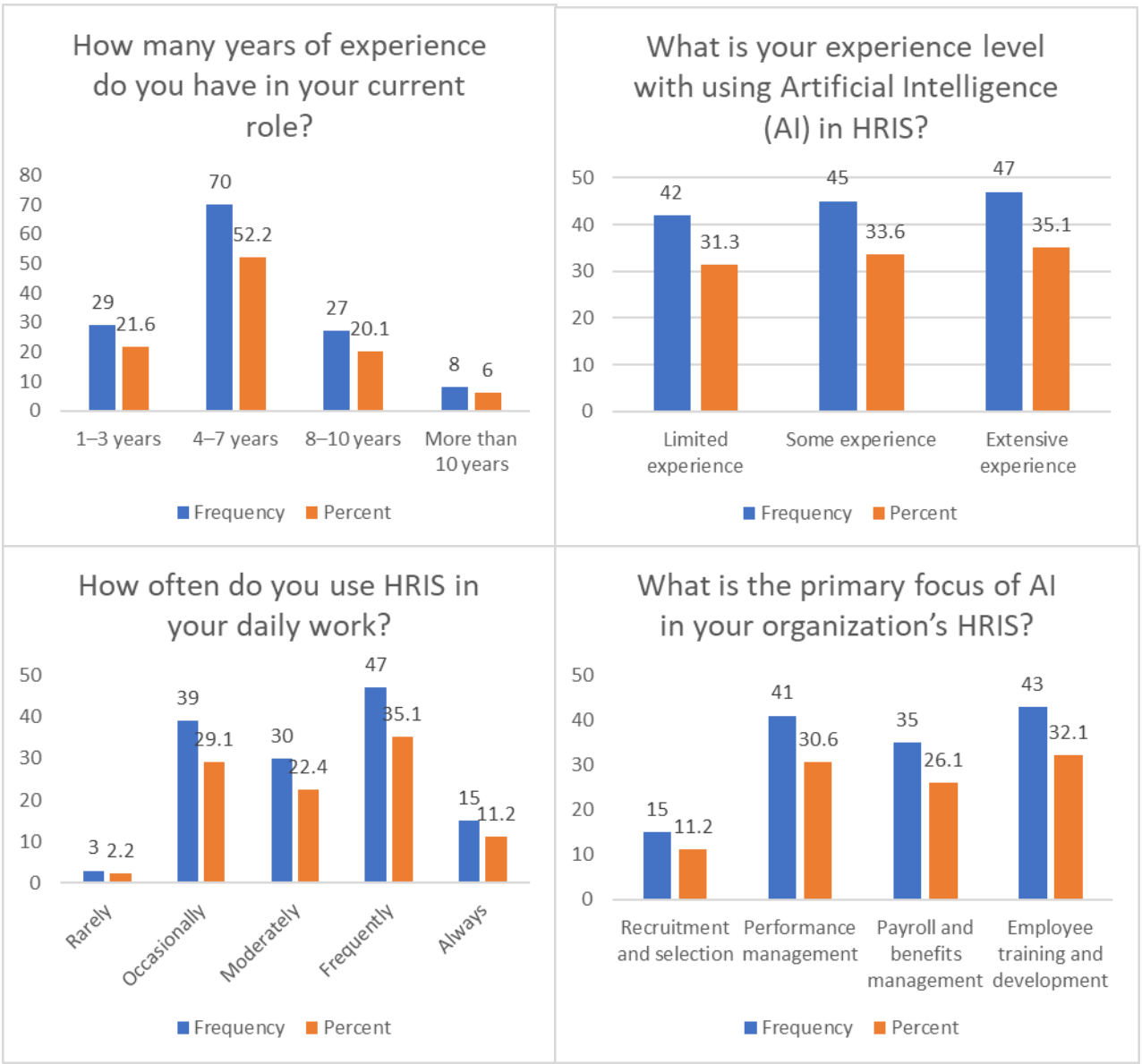


**Figure 4. Respondents' work experience, artificial intelligence usage, utility of HRIS and primary focus of AI The current modern Human Resources Information systems for ongoing performance in organizations**

The study revealed varying levels of sophistication in organizations' Human Resource Information Systems (HRIS) in managing performance-related data. The majority of participants (42.5%) reported moderate

integration with employee performance metrics, while 29.9% indicated advanced integration incorporating predictive analytics and AI features. Basic automation for performance tracking was reported by 22.4%, and only 5.2% of organizations relied primarily on manual processes. These findings suggest that most organizations are leveraging moderate to advanced HRIS capabilities, although some still depend on basic or manual systems, indicating room for technological enhancement.

Regarding HRIS support for employee performance evaluation, 33.6% of participants indicated that their systems fully support evaluation, and 31.3% reported support to a great extent. Moderate support was cited by 18.7% of respondents, while 14.2% indicated limited support, and 2.2% reported no support at all. These results demonstrate that HRIS is largely effective in facilitating performance evaluation, although some organizations still experience gaps in system functionality.

The frequency of updating performance-related data varied across organizations, with 38.8% updating weekly, 24.6% monthly, and 17.2% both quarterly and in real-time. Rare updates were reported by only 2.2% of participants. This indicates a general emphasis on frequent updates, with some organizations employing advanced real-time capabilities to enhance performance management.

Effectiveness in identifying and addressing performance gaps showed that 40.3% of respondents rated their HRIS as very effective, 31.3% as moderately effective, and 8.2% as extremely effective. Slightly effective systems were reported by 15.7%, and 4.5% of organizations indicated their systems were not effective. These results highlight that while HRIS plays a significant role in managing performance gaps, some organizations still face challenges in maximizing system potential (Table 2).

The alignment of HRIS with organizational performance management strategies was generally positive, with 50.0% of participants reporting good alignment and 10.4% full alignment. Moderate, poor, or nonexistent alignment was reported by 24.6%, 9.0%, and 6.0%, respectively, indicating that while integration is strong in many organizations, opportunities remain to enhance alignment with strategic goals.

Participants also identified key challenges in utilizing HRIS for ongoing performance management. Major issues included insufficient employee training, limited system integration, inadequate reporting and analytics, technical problems, resistance to adoption, data privacy concerns, outdated features, lack of customization, difficulty in real-time performance tracking, and high implementation or maintenance costs. Suggested solutions included regular training, system upgrades, AI and analytics integration, robust IT support, employee involvement in system selection, enhanced data security measures, and exploring cost-effective or scalable HRIS platforms (Table 2).

Hence, the results suggest that while HRIS plays a vital role in performance management and is generally well-integrated and effective, organizations face challenges related to training, technology, and resource limitations, highlighting areas for improvement and further investment (Table 2).

**Table 2. Human Resources Information systems for ongoing performance in organizations**

| **What level of sophistication does your organization's current HRIS exhibit in managing performance-related data?** | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Manual processes with minimal system support | 7 | 5.2 | 5.2 | 5.2 |
| | Basic automation for performance tracking | 30 | 22.4 | 22.4 | 27.6 |
| | Moderate integration with employee performance metrics | 57 | 42.5 | 42.5 | 70.1 |
| | Advanced integration with predictive analytics and AI | 40 | 29.9 | 29.9 | 100.0 |

| | | | | | |
|---|---|---|---|---|---|
| | features | | | | |
| | Total | 134 | 100.0 | 100.0 | |

| To what extent does the current HRIS support the evaluation of employees' performance? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Not at all | 3 | 2.2 | 2.2 | 2.2 |
| | To a limited extent | 19 | 14.2 | 14.2 | 16.4 |
| | To a moderate extent | 25 | 18.7 | 18.7 | 35.1 |
| | To a great extent | 42 | 31.3 | 31.3 | 66.4 |
| | Fully supports performance evaluation | 45 | 33.6 | 33.6 | 100.0 |
| | Total | 134 | 100.0 | 100.0 | |

| What is the frequency of updating performance-related data in your HRIS? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Rarely | 3 | 2.2 | 2.2 | 2.2 |
| | Quarterly | 23 | 17.2 | 17.2 | 19.4 |
| | Monthly | 33 | 24.6 | 24.6 | 44.0 |
| | Weekly | 52 | 38.8 | 38.8 | 82.8 |
| | Real-time | 23 | 17.2 | 17.2 | 100.0 |
| | Total | 134 | 100.0 | 100.0 | |

| How effective is your current HRIS in identifying and addressing performance gaps? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Not effective | 6 | 4.5 | 4.5 | 4.5 |
| | Slightly effective | 21 | 15.7 | 15.7 | 20.1 |
| | Moderately effective | 42 | 31.3 | 31.3 | 51.5 |
| | Very effective | 54 | 40.3 | 40.3 | 91.8 |
| | Extremely effective | 11 | 8.2 | 8.2 | 100.0 |
| | Total | 134 | 100.0 | 100.0 | |

| How well does your HRIS align with your organization’s overall performance management strategy? | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Not aligned | 8 | 6.0 | 6.0 | 6.0 |
| | Poorly aligned | 12 | 9.0 | 9.0 | 14.9 |
| | Moderately aligned | 33 | 24.6 | 24.6 | 39.6 |
| | Well aligned | 67 | 50.0 | 50.0 | 89.6 |
| | Fully aligned | 14 | 10.4 | 10.4 | 100.0 |
| | Total | 134 | 100.0 | 100.0 | |

The findings of this study indicate that artificial intelligence (AI) within Human Resource Information Systems (HRIS) has generally had a positive impact on performance management processes across organizations, although the level of impact varies. A small proportion of respondents, 4.5%, reported that AI had no impact, while 12.7% experienced minimal effects. A moderate impact was observed by 26.9% of participants, whereas a majority of 41.8% identified significant improvements due to AI integration. Additionally, 14.2% of respondents reported a transformative effect, highlighting AI’s potential to revolutionize performance management practices (see table 3). These results suggest that AI tools are increasingly important for optimizing HR processes, though some organizations face barriers to fully utilizing their capabilities.

Regarding the reliance on AI-driven insights for performance management decision-making, 44.8% of participants reported frequent use of such insights, while 28.4% indicated occasional use. In contrast, 19.4% rarely used AI insights, and 7.5% never employed them (see table 3). This demonstrates that while AI integration is growing, some organizations have yet to fully embed AI into decision-making processes, suggesting variability in adoption and alignment with organizational practices.

The impact of AI on the accuracy of performance evaluations was also examined. A majority, 51.5%, reported significant improvement, and 6.0% observed a complete transformation in evaluation accuracy. Moderate improvement was cited by 17.2%, slight improvement by 20.1%, and no improvement by 5.2% (see table 3). These results highlight the ability of AI to enhance objective, data-driven assessments, though some organizations have yet to maximize this benefit (see table 3).

In terms of efficiency, 44.0% of respondents reported significant improvements in performance management processes due to AI, 29.9% observed moderate improvements, 16.4% slight improvements, and 7.5% noted no impact. A small group, 2.2%, experienced exceptional transformation, reflecting cases of highly effective AI utilization (see table 3). These findings underscore AI's role in streamlining performance management by automating routine tasks and facilitating timely, informed decision-making.

Qualitative feedback from participants emphasized multiple benefits of AI in HRIS. Respondents noted enhanced accuracy and transparency in evaluations, improved identification of performance gaps, targeted training programs, increased employee engagement, and better alignment of individual goals with organizational objectives. Suggested improvements included more intuitive user interfaces, advanced predictive analytics, real-time feedback mechanisms, gamification elements, multilingual support, and enhanced system integration. Participants also recommended additional training to maximize the utility of AI functionalities (see table 3).

Therefore, the study demonstrates that AI integration in HRIS contributes substantially to improved performance management by enhancing efficiency, accuracy, decision-making, and employee engagement. While adoption and effectiveness vary across organizations, the findings highlight opportunities for further optimization through user-friendly interfaces, predictive capabilities, and robust training programs, enabling organizations to fully leverage AI to drive strategic performance management outcomes (see table 3).

**Table 3. The effect of the use of artificial intelligence in modern human resources information systems on ongoing performance in organizations**

| **What level of impact has AI in your HRIS had on improving performance management processes in your organization?** | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | No impact | 6 | 4.5 | 4.5 | 4.5 |
| | Minimal impact | 17 | 12.7 | 12.7 | 17.2 |
| | Moderate impact | 36 | 26.9 | 26.9 | 44.0 |
| | Significant impact | 56 | 41.8 | 41.8 | 85.8 |
| | Transformative impact | 19 | 14.2 | 14.2 | 100.0 |
| | Total | 134 | 100.0 | 100.0 | |

| **What level of impact has AI in your HRIS had on improving performance management processes in your organization?** | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | No impact | 6 | 4.5 | 4.5 | 4.5 |
| | Minimal impact | 17 | 12.7 | 12.7 | 17.2 |
| | Moderate impact | 36 | 26.9 | 26.9 | 44.0 |
| | Significant impact | 56 | 41.8 | 41.8 | 85.8 |
| | Transformative impact | 19 | 14.2 | 14.2 | 100.0 |

| | | | | | |
|---|---|---|---|---|---|
| | Total | 134 | 100.0 | 100.0 | |

**How frequently are AI-driven insights from your HRIS used to make performance management decisions?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Never | 10 | 7.5 | 7.5 | 7.5 |
| | Rarely | 26 | 19.4 | 19.4 | 26.9 |
| | Occasionally | 38 | 28.4 | 28.4 | 55.2 |
| | Frequently | 60 | 44.8 | 44.8 | 100.0 |
| | Total | 134 | 100.0 | 100.0 | |

**How has AI in HRIS impacted the accuracy of performance evaluations in your organization?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | No improvement | 7 | 5.2 | 5.2 | 5.2 |
| | Slight improvement | 27 | 20.1 | 20.1 | 25.4 |
| | Moderate improvement | 23 | 17.2 | 17.2 | 42.5 |
| | Significant improvement | 69 | 51.5 | 51.5 | 94.0 |
| | Completely transformed the accuracy | 8 | 6.0 | 6.0 | 100.0 |
| | Total | 134 | 100.0 | 100.0 | |

**What impact has the use of AI in HRIS had on the overall efficiency of your performance management system?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | No impact | 10 | 7.5 | 7.5 | 7.5 |
| | Slight improvement | 22 | 16.4 | 16.4 | 23.9 |
| | Moderate improvement | 40 | 29.9 | 29.9 | 53.7 |
| | Significant improvement | 59 | 44.0 | 44.0 | 97.8 |
| | Exceptional transformation in efficiency | 3 | 2.2 | 2.2 | 100.0 |
| | Total | 134 | 100.0 | 100.0 | |

**Regression analysis: Impact analysis**

The ANOVA results indicated that the regression model was statistically significant, with a p-value of less than 0.001. An F statistic of 19.756 demonstrated that the predictors collectively exerted a meaningful effect on the efficiency of performance management systems, supporting their inclusion in the model. The total sum of squares was 129.052, with the regression sum of squares accounting for 56.212, further validating the significance of the predictors in explaining variations in the dependent variable.

The coefficients analysis provided insights into the individual contribution of each predictor. Organizational size, measured by the number of employees, had a significant positive effect on the efficiency of performance management systems ($B = 0.335$, $p < 0.001$). The standardized beta coefficient of 0.396 indicated that larger organizations tend to benefit more from the integration of AI in HRIS, making organizational size one of the strongest predictors in the model.

Years of experience emerged as the most impactful predictor, with a coefficient of 0.523 and a p-value of less than 0.001. The standardized beta of 0.428 highlighted the importance of employee experience in leveraging AI-driven HRIS, suggesting that employees with greater tenure are better equipped to utilize AI tools for enhanced performance management.

The frequency of using AI-driven insights for decision-making also showed a significant positive effect (B = 0.314, p = 0.001). A standardized beta of 0.308 demonstrated that frequent application of AI insights is closely associated with improved system efficiency, indicating that organizations actively incorporating AI into their performance management processes gain tangible benefits (see table 4).

The user interface of HRIS was another significant predictor (B = 0.213, p = 0.001), with a standardized beta of 0.286. This finding emphasized that a user-friendly and intuitive interface enhances the effectiveness of AI-integrated HRIS, underscoring the need for well-designed systems that facilitate ease of use.

Interestingly, the availability of technical support exhibited a negative coefficient (B = -0.160, p = 0.004), with a standardized beta of -0.220. This result suggested that perceived deficiencies in technical support hinder the effective utilization of AI tools, reducing overall system efficiency (see table 4).

Overall, the study highlighted key factors influencing the efficiency of AI-powered performance management systems. Larger organizations, greater employee experience, frequent use of AI insights, and well-designed user interfaces contributed positively to efficiency, while inadequate technical support posed a challenge. These findings emphasize the importance of comprehensive training, effective support mechanisms, and system design considerations to optimize the performance of AI-integrated HRIS (see table 4).

**Table 4. Regression analysis**

| **Variables Entered/Removed[a]** | | | |
|---|---|---|---|
| Model | Variables Entered | Variables Removed | Method |
| 1 | How would you rate the availability of technical support for your organization's HRIS?, How many years of experience do you have in your current role?, What is the size of your organization in terms of employees?, To what extent does the user interface of your HRIS affect its effectiveness in managing ongoing performance?, How frequently are AI-driven insights from your HRIS used to make performance management decisions?[b] | . | Enter |
| a. Dependent Variable: What impact has the use of AI in HRIS had on the overall efficiency of your performance management system? | | | |
| b. All requested variables entered. | | | |

| **Model Summary** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .660[a] | .436 | .414 | .75436 |
| a. Predictors: (Constant), How would you rate the availability of technical support for your organization's HRIS?, How many years of experience do you have in your current role?, What is the size of your organization in terms of employees?, To what extent does the user interface of your HRIS affect its effectiveness in managing ongoing performance?, How frequently are AI-driven insights from your HRIS used to make performance management decisions? | | | | |

| **ANOVA[a]** | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 56.212 | 5 | 11.242 | 19.756 | .000[b] |
| | Residual | 72.840 | 128 | .569 | | |
| | Total | 129.052 | 133 | | | |
| a. Dependent Variable: What impact has the use of AI in HRIS had on the overall efficiency of your | | | | | | |

performance management system?

b. Predictors: (Constant), How would you rate the availability of technical support for your organization's HRIS?, How many years of experience do you have in your current role?, What is the size of your organization in terms of employees?, To what extent does the user interface of your HRIS affect its effectiveness in managing ongoing performance?, How frequently are AI-driven insights from your HRIS used to make performance management decisions?

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.490 | .401 | | -1.222 | .224 |
| | What is the size of your organization in terms of employees? | .335 | .059 | .396 | 5.713 | .000 |
| | How many years of experience do you have in your current role? | .523 | .084 | .428 | 6.243 | .000 |
| | How frequently are AI-driven insights from your HRIS used to make performance management decisions? | .314 | .096 | .308 | 3.280 | .001 |
| | To what extent does the user interface of your HRIS affect its effectiveness in managing ongoing performance? | .213 | .065 | .286 | 3.279 | .001 |
| | How would you rate the availability of technical support for your organization's HRIS? | -.160 | .055 | -.220 | -2.893 | .004 |

a. Dependent Variable: What impact has the use of AI in HRIS had on the overall efficiency of your performance management system?

**Factors that influence the effectiveness of modern Human Resources Information systems for ongoing performance in organizations**

The descriptive analysis of factors influencing the effectiveness of modern Human Resources Information Systems (HRIS) for ongoing performance management reveals key insights into organizational experiences. The study examined variables including technical support, user interface design, maintenance costs, organizational culture, and data reliability, highlighting their impact on HRIS functionality.

The availability of technical support for HRIS received a mean rating of 2.8881 on a 1–5 scale, with a standard deviation of 1.35813, indicating moderate perceptions of support and a wide range of experiences among respondents. While some users reported adequate assistance, others faced challenges accessing timely or effective technical support. This underscores the need for organizations to strengthen support systems to ensure consistent and reliable guidance for HRIS users (see table 5).

User interface design was rated with a mean of 2.9851 and a standard deviation of 1.32066, suggesting neutral to moderately positive perceptions. Some HRIS platforms were deemed user-friendly, whereas others lacked the intuitiveness required to maximize efficiency. Improving interface design is likely to enhance engagement, facilitate easier navigation, and optimize system functionality.

The cost of maintaining and upgrading HRIS was perceived as a potential barrier, receiving a mean rating of

2.5821 and a standard deviation of 1.20337. Respondents indicated that high financial requirements could hinder optimal HRIS performance, highlighting the importance of cost management strategies, affordable solutions, and transparent budgeting to mitigate these concerns (see table 5).

Organizational culture's support for adopting AI-enabled HRIS features scored a mean of 2.7463 with a standard deviation of 1.24264, reflecting moderate cultural alignment with AI adoption. Fostering a culture that encourages innovation through training, leadership endorsement, and clear communication of AI benefits can enhance readiness and effective utilization of HRIS tools.

The reliability of data generated by HRIS received the highest mean rating of 3.4403 and a standard deviation of 1.07962, indicating generally favorable perceptions. Reliable data underpins informed decision-making and effective use of AI features, though variability suggests ongoing data quality challenges in some organizations. Overall, the findings indicate that while data reliability is a strong asset, improvements in technical support, user interface design, cost management, and cultural readiness are essential. Addressing these areas will enable organizations to fully leverage AI-enabled HRIS, enhancing performance management and supporting strategic objectives (see table 5).

**Table 5. Descriptive Statistics: Factors that influence the effectiveness of modern Human Resources Information systems**

| **Descriptive Statistics** | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| How would you rate the availability of technical support for your organization's HRIS? | 134 | 1.00 | 5.00 | 2.8881 | 1.35813 |
| To what extent does the user interface of your HRIS affect its effectiveness in managing ongoing performance? | 134 | 1.00 | 5.00 | 2.9851 | 1.32066 |
| What impact does the cost of maintaining and upgrading HRIS have on its effectiveness? | 134 | 1.00 | 5.00 | 2.5821 | 1.20337 |
| How supportive is the organizational culture in adopting AI-enabled HRIS features for performance management? | 134 | 1.00 | 5.00 | 2.7463 | 1.24264 |
| How reliable is the data generated by the HRIS for ongoing performance management? | 134 | 1.00 | 5.00 | 3.4403 | 1.07962 |
| Valid N (listwise) | 134 | | | | |

## DISCUSSION

The study explored the current state of modern Human Resources Information Systems (HRIS) in organizations and their role in ongoing performance management. The findings revealed varying levels of technological sophistication among organizations. A moderate level of integration, where HRIS manages essential functions such as goal tracking and employee evaluations, was observed in 42.5% of organizations. This reflects a growing trend toward leveraging AI-enhanced systems to optimize HR tasks, consistent with Ali and Kallach (2024), who noted the adoption of AI tools to improve performance management. However, only 29.9% of organizations reported advanced integration with predictive analytics and AI, indicating a more mature technological adoption that aligns with previous studies highlighting AI's potential to enhance HR efficiency. Conversely, 22.4% of organizations relied on basic automation, while 5.2% continued to depend on manual processes, reflecting the challenges identified by Rana et al. (2024) and underscoring the persistent technological gap among smaller or less resourceful companies (Mugisha and Extension, 2024).

The study further examined the effect of AI integration within HRIS on performance management. Regression analysis demonstrated a strong positive relationship (R = 0.660) between AI use and system efficiency, with

organizational size, employee experience, and the frequency of AI-driven insights significantly influencing outcomes. These findings support Rana et al. (2024) and Mugisha and Extension (2024), who emphasized that AI improves HR decision-making and task automation. However, inadequate technical support negatively affected efficiency (B = -0.160, p = 0.004), echoing Li's (2024) observation that insufficient support can hinder effective AI utilization. The results suggest that while AI significantly enhances performance management, challenges related to technical support and user adaptation remain critical.

The study also identified key factors influencing HRIS effectiveness. Technical support (mean = 2.8881) and user interface design (mean = 2.9851) received moderate ratings, indicating variability in usability experiences, consistent with Rana et al. (2024). Maintenance costs were also highlighted as a barrier (mean = 2.5821), supporting Li's (2024) findings on financial constraints. Organizational culture emerged as a moderating factor (mean = 2.7463), reflecting the need for cultural alignment to adopt AI effectively, in line with Mugisha and Extension (2024). Data reliability received the highest positive rating (mean = 3.4403), emphasizing its role in informed decision-making, though variability suggests ongoing challenges in some organizations, echoing Ali and Kallach (2024).

Overall, the findings align with empirical literature regarding the transformative potential of AI in HRM while highlighting persistent challenges. While many organizations are adopting advanced HRIS, financial, infrastructural, and cultural barriers continue to limit adoption. To maximize the benefits of AI-enhanced HRIS, organizations must invest in user-friendly systems, robust technical support, and a culture that encourages innovation, thereby enhancing performance management and achieving strategic objectives.

## CONCLUSION

The study examined the sophistication, impact, and effectiveness of modern Human Resource Information Systems (HRIS) in enhancing ongoing performance management in organizations. Regarding technological adoption, the findings revealed a varied landscape. Most organizations (42.5%) reported moderate integration of HRIS, where systems manage essential functions such as goal tracking and employee evaluations. Nearly 30% of participants indicated advanced integration incorporating predictive analytics and artificial intelligence (AI), highlighting that a significant proportion of organizations are leveraging advanced tools to support proactive decision-making and enhance employee performance management. Conversely, 22.4% of organizations relied on basic automation, and 5.2% still depended on manual processes, indicating limited technological adoption and significant challenges in achieving efficiency, consistency, and strategic alignment in performance management. These results demonstrate an uneven pace of technological advancement across organizations, emphasizing the need for broader adoption of sophisticated HRIS to bridge performance management gaps.

The study also investigated the effect of AI integration on HRIS efficiency. Regression analysis showed a strong positive relationship (R = 0.660) between AI use and the effectiveness of performance management systems. Factors such as organizational size, employee experience, frequency of AI insights usage, and user interface design positively influenced efficiency, while inadequate technical support negatively impacted system performance. Larger organizations and experienced employees were better positioned to utilize AI-driven insights effectively, highlighting the importance of skilled personnel and scalable infrastructure. Frequent use of AI-generated insights and intuitive system interfaces further enhanced efficiency, underscoring the need for practical usability and employee engagement in technology adoption.

Key factors influencing HRIS effectiveness included technical support, user interface design, maintenance costs, organizational culture, and data reliability. While data reliability received the most positive ratings, moderate perceptions of technical support, interface usability, and financial constraints suggest areas for improvement. Organizational culture supporting AI adoption also requires attention to foster innovation and ensure effective integration of AI-enabled features.

Based on these findings, several recommendations emerge. Organizations should invest in advanced HRIS incorporating AI and predictive analytics, alongside tailored training programs to improve adoption. Frequent use of AI insights should be encouraged, and robust technical support systems must be established. User-

friendly system designs and continuous feedback mechanisms are critical for enhancing usability. Financial barriers can be mitigated through cost-effective solutions such as cloud-based platforms, while organizational culture should actively support technological innovation. Finally, data integrity must be prioritized through regular audits and validation processes. By implementing these measures, organizations can enhance HRIS sophistication and effectiveness, ultimately improving performance management outcomes and strategic decision-making.

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