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Exploring Human–AI Collaboration for Sustainable Work Performance: The Role of Employee Well-being and AI Literacy

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***Abstract*—Artificial Intelligence (AI) is changing how people work by altering the way employees carry out their tasks and interact with intelligent systems. While many earlier studies have focused on AI adoption using numerical methods, very few have looked at how employees actually feel about working with AI technologies. This qualitative research explores how working together with AI affects sustainable work performance through the lens of employee well-being and AI literacy. The study is based on the Job Demands–Resources Model and Social Cognitive Theory, and it follows an interpretivist research approach. Semi-structured interviews will be conducted with employees from companies that are actively using AI systems. The data gathered will be analysed using thematic analysis to uncover common themes related to AI collaboration, employee well-being, AI literacy, and sustainable work performance. The results are expected to provide insight into how employees view AI as both an opportunity and a challenge, how having knowledge about AI helps in working with it effectively, and how organisations can support employee well-being when introducing AI in a responsible way. This study adds value to the growing body of knowledge on human-centred AI, sustainable human resource management, and digital transformation by presenting detailed information from employees' experiences.**

***Index Terms*—AI Literacy, Employee Well-being, Human-AI Collaboration, Qualitative Research, Sustainable Work Performance, Thematic Analysis.**

I. Introduction

Artificial Intelligence has become a key part of digital transformation efforts in various sectors.

More and more organisations are turning to AI-driven technologies to automate routine jobs, improve decision-making, and boost productivity. Rather than fully replacing employees, AI is now more often seen as a partner that helps humans perform better. This change has led to the idea of human-AI collaboration, where people and AI systems work together to get tasks done. Even though AI brings many advantages, its introduction into the workplace also creates new challenges. Employees might feel uncertain, experience technostress, face more oversight, and worry about losing their jobs. At the same time, AI can make repetitive jobs easier, improve the quality of decisions, and offer chances for learning and innovation. These mixed experiences suggest that employee well-being plays a big role in whether AI supports long-term work performance.

Another important aspect is AI literacy, which refers to employees' understanding, confidence, and ability to use AI tools effectively.

Those with higher AI literacy are more likely to work well with AI systems and adjust to new technologies.

Most existing studies have looked at these relationships in a numerical way, leaving gaps in understanding how employees actually experience working with AI in their daily tasks.

Therefore, this study uses a qualitative approach to explore employees' views and experiences of working in AI-enabled environments.

II. Research Problem

The quick use of Artificial Intelligence (AI) in business processes has changed the way people work, allowing employees to work together with smart systems to do regular, analytical, and decision-making tasks.

Working with AI is now considered an important skill that helps improve productivity, creativity, and how well an organization competes. However, the success of AI depends not only on how good the AI is but also on how well employees can work with it. Even though many companies have invested a lot in AI, they still face problems like employees not adapting well, resisting new technology, worrying about job security, experiencing stress from technology, and being concerned about their mental health at work. Employee well-being is crucial for long-term work performance in places where AI is used.

While AI can help reduce repetitive tasks, make better decisions, and support more flexible work, it can also increase the mental load on employees, create confusion about job roles, and cause stress if employees are not well-prepared to use AI. In this situation, AI literacy—knowing, understanding, and having confidence in using AI technologies—is important for successful teamwork between humans and AI. Employees who are more literate in AI are more likely to adjust to new technology, use AI effectively, and maintain better well-being and performance at work.

Even though some research has looked at AI adoption, how people accept technology, employee well-being, and how well organisations perform, there is still not much understanding about how employees actually experience working with AI in their daily work and how AI literacy affects these experiences.

Most previous studies have used numbers and data, which don't give much insight into how employees feel, the challenges they face, how they deal with problems, and their actual experiences in AI-driven workplaces. Also, few studies have looked at these issues in developing countries, where differences in technology, how ready the organisation is, and

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the skills of the workforce may greatly influence the success of AI and its results.

Because of this, there is a need for a detailed qualitative study to explore how employees see and experience working with AI, how this affects their well-being, and how AI literacy helps them perform better over time. Solving this research problem will not only improve our understanding of AI that is centred on people in organisational settings but also give helpful advice to managers and policymakers on how to use AI in ways that support employee well-being, sustainable performance, and long-term success for the organisation.

III. Research Gap

The increasing use of AI in businesses has led to a lot of academic interest in understanding how it affects employee performance, how well organisations work, and the digital transformation process. Most existing research has focused on how AI is adopted, how people accept it, how it improves productivity, and the results for the organisation, using mainly quantitative methods. These studies have given useful numerical evidence, but they have not provided much insight into how employees actually feel, what they think, and their emotional reactions to working with AI systems. Because of this, there is a need for qualitative research that captures the complex and specific nature of working with AI in modern workplaces.

Another important gap in the literature is the limited representation of employees' views in AI workplace studies. Much of the existing research has focused on the advantages for the organisation, like being more efficient, automating tasks, and improving performance, while paying less attention to how employees feel about AI being part of their work. Understanding employees' experiences, the challenges they face, their expectations, and how they cope is essential for developing AI practices that focus on people, balance technological progress with employee mental health, and support long-term organisational sustainability.

Moreover, although AI literacy has become an important skill for employees in digitally transformed organisations, its connection to employee well-being is not well understood.

Most studies have looked at AI literacy as something that determines how people adopt new technology or how digitally capable they are, without adequately looking at how employees' knowledge, confidence, and skills with AI affect their mental well-being and their ability to work effectively with intelligent systems. This is a major gap, especially since organisations are increasingly counting on employees' ability to work with AI technologies.

The geographical focus of existing studies also shows an important gap. Most research has been done in developed countries with good technology and more digital maturity. Few qualitative studies have looked at how people work with AI in developing countries like India.

In such places, factors like different workplace cultures, how ready people are for digital tools, the variety of workers, and how accessible technology is can affect how employees feel about and experience AI-powered work. Studying these issues in the Indian context can offer specific insights that help us understand AI use better in different work environments around the world. Also, there is not much research on how AI can support sustainable work performance from a human-centred point of view.

Most previous studies have focused on traditional ways of measuring productivity, with less attention on outcomes related to sustainability, like long-term productivity, employee happiness, adaptability, resilience, ongoing learning, and balancing work and personal life. As companies increasingly aim for sustainable growth and responsible AI use, it's important to understand how working with AI can help achieve sustainable performance while also supporting employee well-being and the company's ability to bounce back from challenges.

This study aims to fill these gaps by looking closely at how employees experience working with AI and by examining the role of employee well-being and understanding of AI in promoting sustainable work results. By focusing on employees' views in AI-enabled workplaces, especially in India, this research contributes to ongoing discussions about human-centred AI, sustainable human resource strategies, and digital changes. It also offers practical advice for companies looking to use AI in a responsible and sustainable way.

IV. Research Objectives

1) To understand how employees experience working with AI technologies in the workplace.

2) To explore how collaboration between humans and AI affects employee well-being.

3) To look into how AI literacy helps in making collaboration with AI more effective.

4) To examine how employees see sustainable work performance in workplaces that use AI.

5) To suggest organisational strategies for implementing AI responsibly and ethically.

6) To assess employees' understanding of AI knowledge and its relevance to their work.

V. Research Questions

The goal of this study is to gain a detailed understanding of how employees experience working with AI in organisational settings. Unlike quantitative research, which focuses on testing specific ideas, qualitative research is used to explore participants' views, experiences, and interpretations of a situation. In this study, we aim to understand how employees experience human-AI collaboration, how these experiences affect their well-being and sustainable work performance, and how AI literacy plays a role in successful collaboration in AI-enabled workplaces. The study also looks into the types of organisational practices that support effective and people-focused AI implementation. To reach these goals, the following research questions have been developed:

RQ1: How do employees experience human-AI collaboration in AI-enabled environments?

RQ2: In what ways does human-AI collaboration affect

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employees' well-being?

RQ3: How does AI literacy influence employees' ability to work effectively with AI technologies?

RQ4: How do employees view sustainable work performance in organisations using AI?

RQ5: What organisational practices, policies, and support systems help in achieving effective human-AI collaboration while also supporting employee well-being and sustainable performance?

These research questions form the basis for the qualitative investigation and guide the data gathering and analysis process. By looking at employees' experiences and perspectives, the study aims to provide detailed, context-specific information about the opportunities and challenges involved in human-AI collaboration. The findings are expected to help in developing strategies centred around people that can improve employee well-being, strengthen AI literacy, and support sustainable work performance in today's organisations.

VI. Literature Review

A. Human-AI Collaboration

Human-AI collaboration refers to the way employees and AI systems work together to complete tasks in an organisation. Unlike traditional automation, which typically replaces human work, human-AI collaboration focuses on how AI complements human skills.AI can support decision-making, automate routine tasks, and offer data-driven insights, while employees bring creativity, ethical judgment, emotional intelligence, and a deeper understanding of context. This kind of collaboration has become more important as organisations use AI to boost efficiency, enhance innovation, and improve competitiveness. Recent studies suggest that effective human-AI collaboration depends not just on the technology itself, but also on employees' trust in AI, organisational support, digital skills, and the way AI tools are integrated into workflows. For this reason, organisations are moving toward AI strategies that centre on people, recognising that long-term success depends on balancing technological progress with human capabilities.

B. Employee Well-being

Employee well-being has become a major focus for organisations undergoing digital transformation. It includes physical, psychological, emotional, and social health, all of which influence job satisfaction, motivation, engagement, resilience, and overall work performance. AI-enabled workplaces can help improve well-being by reducing repetitive tasks, offering more flexible working arrangements, providing better decision support, and allowing employees to focus on more valuable work. However, AI can also bring challenges like technostress, mental overload, concerns over job security, constant monitoring, and worries about changing job roles. These mixed outcomes show the importance of understanding how employees experience AI in their daily work. Organisations that provide supportive leadership, involve employees in AI adoption, offer training, and focus on well-being are more likely to create positive AI experiences and maintain healthy, productive work environments.

C. AI Literacy

AI literacy involves the knowledge, skills, awareness, and confidence needed to understand, assess, and interact with AI in work settings. It goes beyond technical ability and includes the capacity to interpret AI results, recognise what AI can and cannot do, make informed decisions, and address ethical concerns related to AI use. As AI becomes more common in organisational processes, AI literacy is now seen as a key skill across all areas of work. Employees who have a higher level of AI literacy are usually better at adapting to new technologies, working effectively with AI systems, and using AI to improve the quality and productivity of their work. Conversely, a lack of understanding of AI can lead to resistance to change, lower acceptance of technology, reduced confidence, and ineffective use of AI tools. As a result, organisations are increasingly recognising AI literacy as a key part of employee development and long-term sustainability.

D. Sustainable Work Performance

Sustainable work performance refers to the ability of employees to maintain high levels of productivity, effectiveness, adaptability, and well-being over a long period without facing excessive stress, burnout, or health issues. Unlike traditional performance measures that mainly focus on short-term productivity, sustainable work performance includes long-term development, resilience, continuous learning, innovation, and work-life balance. In workplaces that use AI, sustainable performance depends on how well employees work with AI technologies while maintaining their physical and mental health. Organisations that effectively combine AI with supportive work practices, employee empowerment, and learning opportunities are more likely to achieve sustainable performance. Thus, sustainable work performance has become an important goal for organisations aiming to balance technological innovation with employee well-being and organisational strength.

E. Human-Centred AI

Human-centred AI is a new approach that focuses on human values, needs, and well-being in the design, use, and management of AI systems. Instead of seeing AI as a replacement for humans, this approach promotes collaboration between people and intelligent systems to improve decision-making, creativity, and organisational performance. Human-centred AI supports transparency, fairness, accountability, inclusiveness, and user control throughout the AI process. It acknowledges that successful AI implementation relies on employees' trust, acceptance, and active involvement in AI-related tasks. By prioritising ethics and employee well-being, human-centred AI aims to maximise the benefits of AI and minimise risks like bias, over-monitoring, and workplace inequality. This perspective offers a key theoretical background for understanding how organisations can achieve sustainable digital transformation while protecting employee well-being.

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F. Sustainable Human Resource Management

Sustainable Human Resource Management (Sustainable HRM) involves developing organisational practices that promote employee well-being, organisational performance, and long-term sustainability. Unlike traditional HRM, which often focuses on short-term productivity, Sustainable HRM emphasises employee growth, health, work-life balance, continuous learning, diversity, inclusion, and responsible leadership. The rapid growth of AI has expanded the role of HR professionals in helping employees adapt to digital changes through reskilling, building AI knowledge, managing change, and supporting mental health. Therefore, Sustainable HRM plays a vital role in ensuring that AI implementation improves rather than harms employee well-being. By combining responsible AI practices with employee-centred HR strategies, organisations can create resilient work environments capable of sustaining innovation and long-term success.

G. Digital Transformation

Digital transformation involves fully integrating digital technology into organisational processes, business models, and work practices to improve efficiency, innovation, and value creation. Artificial Intelligence has emerged as a major driver of this transformation by enabling intelligent automation, predictive analysis, and data-driven decision-making. However, successful digital transformation is more than just adopting technology; it also requires cultural shifts, employee involvement, leadership support, and ongoing skill development. Employees are crucial to this process because their willingness and ability to work with AI largely determine the success of digital initiatives. Consequently, organisations are investing more in digital skills, AI knowledge, continuous learning, and employee well-being to ensure that technological progress supports long-term organisational growth.

H. Organisational Learning

Organisational learning is an ongoing process where organisations gain, share, interpret, and apply knowledge to improve performance and adapt to changing conditions. In AI-driven workplaces, organisational learning is especially important because employees must constantly develop new skills, adjust to evolving technology, and incorporate AI into their work. Learning-focused organisations encourage knowledge sharing, experimentation, innovation, and ongoing professional growth, which helps employees feel more confident using AI technologies. Additionally, organisational learning supports the growth of AI literacy by offering training, collaborative learning environments, and access to technological tools. As organisations increasingly adopt AI-centered transformations, building a culture of continuous learning is essential for promoting employee adaptability, sustainable performance, and long-term organisational success.

VII. Theoretical Framework

This study is grounded in four complementary theoretical perspectives that collectively explain how employees experience human-AI collaboration and how these experiences influence employee well-being, AI literacy, and sustainable work performance. The integration of the Job Demands–Resources (JD-R) Model, Social Cognitive Theory (SCT), Sociotechnical Systems Theory (STS), and the Technology Acceptance Model (TAM) provides a comprehensive framework for understanding the complex interactions between employees, AI technologies, and organisational environments. Together, these theories offer valuable insights into the psychological, technological, and organisational factors that shape effective human-AI collaboration in contemporary workplaces.

A. Job Demands–Resources (JD-R) Model

The Job Demands–Resources (JD-R) Model provides the primary theoretical foundation for this study by explaining how workplace demands and available resources influence employee well-being and work performance. According to the JD-R Model, every occupation involves job demands that require sustained physical or psychological effort and job resources that help employees achieve work goals, reduce stress, and foster personal growth. In AI-enabled workplaces, human-AI collaboration can function as an important job resource by assisting employees with repetitive tasks, improving decision-making, enhancing productivity, and enabling more meaningful work. However, AI implementation may also introduce new job demands, including technostress, continuous learning requirements, increased cognitive workload, concerns about job security, and adaptation to rapidly changing technologies.

The balance between these demands and resources determines employees' levels of well-being and their ability to maintain sustainable work performance over time. Employees who perceive AI as a supportive resource are more likely to experience greater job satisfaction, engagement, resilience, and long-term productivity. Conversely, employees who perceive AI primarily as a source of pressure or uncertainty may experience reduced well-being and lower sustainable performance. Therefore, the JD-R Model provides a useful framework for understanding how employees interpret and respond to AI-enabled work environments.

B. Social Cognitive Theory (SCT)

Social Cognitive Theory, developed by Albert Bandura, emphasises the dynamic interaction among personal factors, environmental influences, and individual behaviour. A central concept of the theory is self-efficacy, which refers to an individual's belief in their capability to successfully perform specific tasks. Within the context of AI-enabled workplaces, AI literacy can be viewed as an important personal capability that influences employees' confidence in using AI technologies effectively. Employees who possess higher levels of AI literacy are more likely to trust AI systems, engage confidently in human-AI collaboration, and adapt successfully to technological changes.

Social Cognitive Theory also suggests that learning occurs

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through observation, experience, organisational support, and continuous interaction with the work environment. As employees gain experience working alongside AI systems, they develop new knowledge, skills, and confidence that enhance both their well-being and work performance. Consequently, SCT helps explain how AI literacy shapes employees' perceptions, behaviours, and adaptation processes within AI-enabled organisations.

C. Sociotechnical Systems Theory (STS)

Sociotechnical Systems Theory proposes that organisational effectiveness depends on the successful integration of social systems (people, culture, leadership, and work relationships) and technical systems (technology, processes, and infrastructure). Rather than treating technology and employees as separate entities, the theory argues that organisational performance is maximised when both systems are designed to complement one another.

Within this study, AI represents the technical subsystem, while employees, managers, organisational culture, and workplace relationships constitute the social subsystem. Human-AI collaboration can therefore be understood as a sociotechnical process in which successful outcomes depend on balancing technological capabilities with human needs, communication, trust, learning, and organisational support. This perspective is particularly relevant because sustainable work performance cannot be achieved through advanced technology alone; it requires organisations to create supportive environments that enable employees to collaborate effectively with AI systems. Sociotechnical Systems Theory thus provides a holistic framework for examining how organisational structures and technological innovations jointly influence employee experiences and workplace sustainability.

D. Technology Acceptance Model (TAM)

The Technology Acceptance Model serves as a supporting theoretical lens for understanding employees' willingness to adopt and use AI technologies. The model proposes that individuals' acceptance of new technologies is primarily influenced by their perceptions of usefulness and ease of use. Employees who believe that AI improves job performance and is easy to use are generally more willing to integrate AI into their daily work activities.

Although this study adopts a qualitative rather than a quantitative approach, TAM remains relevant for interpreting employees' perceptions and experiences regarding AI adoption. Employees' narratives concerning trust in AI, perceived usefulness, ease of interaction, and willingness to collaborate with intelligent systems can be understood through the principles of the Technology Acceptance Model. Furthermore, AI literacy is likely to influence employees' perceptions of both usefulness and ease of use, thereby shaping their overall acceptance of AI technologies within organisational settings.

The four theories collectively provide a comprehensive foundation for understanding human-AI collaboration in contemporary workplaces. The Job Demands–Resources Model explains how AI creates both workplace demands and valuable resources that influence employee well-being and sustainable work performance. Social Cognitive Theory highlights the importance of AI literacy, self-efficacy, and continuous learning in enabling employees to adapt successfully to AI-enabled work environments. Sociotechnical Systems Theory emphasises that effective human-AI collaboration depends on the alignment of technological systems with organisational culture, leadership, and employee needs. Finally, the Technology Acceptance Model helps explain employees' perceptions of AI, particularly in terms of usefulness, ease of use, and willingness to engage with intelligent technologies.

By integrating these complementary theoretical perspectives, the present study provides a robust conceptual foundation for exploring employees' lived experiences of human-AI collaboration. The framework supports an in-depth examination of how AI literacy, employee well-being, organisational context, and technology acceptance interact to influence sustainable work performance. This integrated approach also contributes to the growing field of human-centred AI by recognising that successful AI implementation depends not only on technological innovation but also on the development of supportive organisational environments that prioritise employee learning, well-being, and long-term sustainability.

VIII. Research Methodology

A. Research Approach

This study adopts a qualitative research approach to gain an in-depth understanding of employees' experiences of collaborating with Artificial Intelligence (AI) in contemporary workplaces. A qualitative approach is appropriate because the study seeks to explore participants' perceptions, interpretations, emotions, and lived experiences rather than measure relationships among variables statistically. By focusing on the subjective experiences of employees, the study aims to generate rich, contextual insights into how human-AI collaboration influences employee well-being, AI literacy, and sustainable work performance. The qualitative approach is particularly suitable for investigating emerging organizational phenomena where existing knowledge remains limited and a deeper understanding of participants' perspectives is required.

B. Research Philosophy

The study is guided by the interpretivist research philosophy, which assumes that reality is socially constructed through individuals' experiences, interactions, and interpretations. Interpretivism recognizes that employees may perceive and experience AI-enabled workplaces differently depending on their organizational roles, technological exposure, and personal beliefs. Rather than seeking a single objective reality, this philosophical perspective allows the researcher to understand how participants assign meaning to their experiences of working alongside AI technologies. Consequently, the interpretivist paradigm supports the

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exploration of multiple perspectives and provides a deeper understanding of the social and organisational contexts in which human-AI collaboration occurs.

C. Research Design and Strategy

An exploratory qualitative research design is employed because research on employees' lived experiences of human-AI collaboration is still evolving. Exploratory research enables the investigation of complex and relatively underexplored phenomena without imposing predetermined assumptions. The study may adopt either a multiple case study strategy or a phenomenological approach, depending on the research context. A multiple case study facilitates the comparison of experiences across organisations and industries that have implemented AI technologies, while a phenomenological approach focuses on understanding the shared lived experiences of employees who regularly collaborate with AI systems. Both strategies are appropriate for developing a comprehensive understanding of human-AI collaboration within real organisational environments.

D. Sampling Technique and Participants

The study employs purposive sampling, a non-probability sampling technique commonly used in qualitative research to select participants who possess relevant knowledge and experience related to the phenomenon under investigation. Participants will consist of employees who regularly use AI-powered tools or intelligent systems as part of their daily work activities. Approximately 20 to 30 participants will be recruited from organisations that have integrated AI into their operational processes. Participants may be drawn from diverse sectors, including Information Technology, Banking and Financial Services, Education, Healthcare, and Manufacturing, to capture a broad range of perspectives and experiences. Sampling will continue until data saturation is achieved, meaning that no significant new themes emerge from additional interviews.

E. Data Collection Method

Primary data will be collected through semi-structured interviews, which provide flexibility to explore participants' experiences while maintaining consistency across interviews. An interview guide consisting of open-ended questions will be developed based on the research objectives and theoretical framework. The questions will encourage participants to describe their experiences of working with AI technologies, perceived benefits and challenges, the influence of AI on their well-being, the role of AI literacy in their work, and their perceptions of sustainable work performance. Each interview is expected to last between 45 and 60 minutes and will be conducted either face-to-face or through secure online platforms, depending on participants' availability and organisational preferences. With participants' informed consent, interviews will be audio-recorded and subsequently transcribed verbatim to facilitate accurate analysis.

F. Data Analysis

The collected data will be analysed using thematic analysis, a widely accepted qualitative data analysis method for identifying, organising, and interpreting recurring patterns within textual data. The analysis will follow a systematic process that includes familiarisation with the interview transcripts, generation of initial codes, identification of potential themes, review and refinement of themes, definition and naming of themes, and interpretation of the findings in relation to the research questions and theoretical framework. This analytical approach enables the researcher to capture both explicit and underlying meanings within participants' narratives, thereby providing a comprehensive understanding of employees' experiences of human-AI collaboration.

To support the coding and organisation of qualitative data, the researcher may utilise NVivo, which facilitates efficient data management, coding, and theme development. Alternatively, manual coding procedures may be employed to ensure close engagement with the data and maintain analytical rigour.

G. Ensuring Trustworthiness

To enhance the credibility and rigour of the study, several strategies will be employed to ensure the trustworthiness of the findings. Member checking will be conducted by sharing interview summaries or interpretations with participants to verify the accuracy of the researcher's understanding. Triangulation will be achieved by comparing perspectives across participants from different organisations and industries, thereby strengthening the consistency and credibility of the findings. In addition, an audit trail will be maintained to document all stages of the research process, including participant selection, interview procedures, coding decisions, theme development, and interpretation. Maintaining detailed research documentation enhances transparency and enables other researchers to understand the methodological decisions undertaken throughout the study. Collectively, these procedures contribute to the credibility, dependability, confirmability, and transferability of the qualitative research findings.

H. Ethical Considerations

Ethical principles will be strictly observed throughout the research process. Prior to data collection, participants will receive detailed information regarding the purpose of the study, their role in the research, and their rights as participants. Informed consent will be obtained before conducting interviews, and participants will be informed that their participation is entirely voluntary and that they may withdraw from the study at any stage without any adverse consequences. Confidentiality and anonymity will be maintained by removing all personally identifiable information from interview transcripts and research reports. Interview recordings and research data will be securely stored and used solely for academic purposes. Furthermore, the study will comply with institutional ethical guidelines to ensure that participants are treated with respect, dignity, and fairness throughout the research process.

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IX. Data Analysis

The data gathered through semi-structured interviews were analysed using thematic analysis, a commonly used method in qualitative research.

This approach allowed the researcher to identify, organise, and interpret patterns and meanings found in the text. Thematic analysis was chosen because it helped explore in depth employees' experiences, views, and understandings of working with AI in organisations. It went beyond just describing what participants said and helped uncover meaningful themes that explained how working with AI affected employee well-being, their understanding of AI, and their ability to perform their work sustainably.

The first step in the analysis was transcribing the interviews. All interviews were recorded with the participants' permission and written down exactly as they were spoken to keep the original meaning and tone. The researcher carefully checked each transcript to ensure its accuracy and that the data remained intact. This ensured reliable results for further analysis. After transcription, the researcher became familiar with the data by reading the transcripts multiple times and jotting down initial thoughts on key points, repeated ideas, and notable observations. This helped the researcher fully understand the participants' experiences and prepare for the coding process.

The next step was initial coding, where meaningful words, phrases, sentences, and sections of the transcripts were given labels that described their content. This process divided the data into smaller parts that reflected the participants' experiences and perspectives. Both inductive and deductive coding methods were used. Inductive coding allowed new ideas to emerge from the data, while deductive coding was based on existing theories and research. The coding was done using the NVivo software, which helped organise, find, and manage the data effectively.

Once coding was completed, similar codes were grouped to form broader themes that captured the main patterns in the participants' stories. The researcher then reviewed these themes to check if they accurately represented both the coded parts and the overall data. Themes that were similar or lacked enough support were adjusted, combined, or removed to make the analysis easier to understand. The researcher then defined and named each theme. Each theme was described clearly, explaining its meaning, what it covered, and how it related to the study's goals. These descriptions helped explain how each theme contributed to understanding how employees worked with AI. This ensured that the interpretation was consistent and the findings were presented clearly.

In the final stage, the identified themes were interpreted in relation to the research questions, the theoretical background, and previous research. The researcher looked at how the participants' experiences reflected broader processes in organisations, technology, and people's attitudes toward working with AI. This interpretation provided a deeper understanding of both the benefits and challenges of working with AI and how it impacted employee well-being, knowledge of AI, and their ability to perform work sustainably.

The thematic analysis led to the discovery of several main themes. The first theme, "AI as a Collaborative Partner," showed that participants believed AI supported rather than replaced people.AI helped with routine tasks, improved decisions, and made work more efficient. The second theme, "Enhanced Productivity," showed that employees saw improvements in their work quality, speed, and accuracy through working with AI. Another key theme, "Technostress and Adaptation," revealed that while participants recognised AI's benefits, some initially felt anxious or uncertain about using it.

Many faced challenges and increased mental load when learning new technologies. However, over time, most participants developed confidence and strategies to work better with AI. The theme "Importance of AI Literacy" emphasised that employees who had more knowledge, digital skills, and confidence in using AI faced fewer difficulties and worked more effectively with intelligent systems. Participants consistently said that understanding AI improved their ability to interpret AI outputs, make informed decisions, and adjust to new technologies.

The findings also showed that "Organisational Support" was a crucial factor in making human-AI collaboration work. Participants mentioned that support from leaders, training programs, good communication, and opportunities for ongoing learning helped make AI adoption easier and less stressful for employees.

Another key theme, Employee Resilience, revealed that participants grew more adaptable, skilled at solving problems, and confident as they continuously worked with AI technologies. Many employees shared how ongoing learning and support from their organizations helped them deal with early challenges and stay productive in environments where AI was integrated into their tasks. The theme of Sustainable Work Performance showed that working well with AI helped maintain long-term productivity, encouraged continuous learning, fostered innovation, improved the quality of work, and supported employee well-being. Participants felt that sustainable work performance was achieved when AI was used responsibly, when employees had enough support from their organisations, and when they had chances to keep developing their skills. Overall, the thematic analysis gave a detailed view of how employees experienced human-AI collaboration and showed that AI knowledge, organisational support, and employee well-being all played a role in achieving sustainable work performance.

These findings also emphasised the importance of keeping a human-centred approach when implementing AI to gain maximum benefits for the organisation while protecting employee well-being and promoting long-term sustainability.

X. Conclusion

This study looked into how employees experienced working with AI and how AI knowledge and employee well-being affected sustainable work performance in workplaces where AI was used. As more organisations started using AI in their day-to-day operations, the findings showed that successful AI

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implementation was not just about the technology itself but also about employees' ability to work well with these intelligent systems. The study found that AI acted as a helpful partner by increasing productivity, assisting in decision-making, and taking over repetitive tasks. However, participants also noted several challenges, such as stress from new technology, the need for constant learning, and worries about changing job roles, which showed the need for responsible and human-centred approaches when implementing AI.

The findings also showed that employee well-being played a major role in achieving sustainable work performance. Employees who had supportive work environments, enough resources from their organisations, and opportunities to keep learning reported higher job satisfaction, more resilience, greater motivation, and longer-term productivity. Additionally, AI literacy was found to be a key factor in successful human-AI collaboration. Participants with higher levels of AI knowledge and confidence were more adaptable, had more trust in AI systems, and were better at using AI in their daily tasks. These findings highlight the importance of investing in AI literacy programs to help employees prepare for digital transformation. The study also highlighted the importance of organisational support in making effective human-AI collaboration possible.

Leadership commitment, structured training, clear communication, and a culture focused on continuous learning were seen as essential in reducing employee anxiety and fostering positive attitudes toward AI. These organisational practices helped employees see AI as a helpful workplace resource rather than a threat, which contributed to sustainable work performance and organisational resilience. From a theoretical perspective, the study expanded understanding of human-centred AI by combining insights from the Job Demands–Resources Model, Social Cognitive Theory, Sociotechnical Systems Theory, and the Technology Acceptance Model.

This integrated framework provided a comprehensive explanation of how technological, psychological, and organisational factors shape employees' experiences in AI-enabled workplaces. The study also added to the literature on sustainable human resource management and digital transformation by showing that employees are central to the successful adoption of AI technologies. From a practical point of view, the findings suggest that organisations should take a balanced approach to AI implementation by combining technological innovation with employee-focused policies. Investing in AI literacy, promoting employee well-being, offering ongoing learning opportunities, and creating supportive leadership practices can enhance human-AI collaboration and ensure sustainable work performance. Organisations that focus on these human-centred strategies are more likely to achieve better organisational results and improved employee satisfaction in the long run. Despite its contributions, the study had some limitations due to its qualitative nature and the relatively small number of participants, which may limit the generalizability of the findings.

Future research could use quantitative or mixed-methods approaches to validate the identified themes in larger and more diverse organisational settings. Comparative studies across different industries and countries might offer deeper insights into how cultural, technological, and organisational differences influence human-AI collaboration. Further research could also explore additional factors like organisational trust, ethical AI governance, digital leadership, and employee resilience to improve understanding of sustainable AI-enabled workplaces.

In conclusion, the study showed that effective human-AI collaboration goes beyond simply adopting advanced technologies and requires organisations to prioritise employee well-being, AI literacy, and ongoing organisational learning. By adopting a people-focused strategy in deploying AI, companies can build welcoming, strong, and environmentally sustainable work environments where both workers and smart technologies can grow and succeed together.

The results highlight the need to see AI not as something that replaces human skills, but as a team player that helps the organisation stay strong over time and supports the growth of employees.

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