Unifya
ISSN (O): 3139-1451 | Erudexa Publishing | Vol 2, Issue 2, Apr – Jun, 2026

Mental Health in the Age of Artificial Intelligence: Implications for Work and Social Relations

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Received: 04 April 2026 | Revised: 14 May 2026

Accepted: 23 May 2026 | Published: 20 June 2026

DOI: https://doi.org/10.5281/zenodo.20781131

Abstract

Artificial Intelligence (AI) is increasingly shaping how people work, interact, communicate, and manage their psychological well-being, making it one of the most influential technological developments of the contemporary era. While AI presents significant opportunities for enhancing productivity, access to information, and mental health support, concerns have emerged regarding its implications for employee well-being, social connectedness, and human relationships. Against this backdrop, this paper examined mental health in the age of Artificial Intelligence with particular focus on its implications for work and social relations. Specifically, the paper investigated the influence of Artificial Intelligence on mental health and psychological well-being, examined its implications for job experiences, workplace stress, and employee well-being, and assessed its effects on social relations, interpersonal interactions, and social connectedness. The paper was anchored on the Socio-Technical Systems Theory which explains the interdependence between technological systems and human social systems. Adopting a systematic literature review approach based on the PRISMA framework, evidence was synthesised from peer-reviewed studies retrieved from Scopus, Web of Science, PubMed, and Google Scholar. The paper revealed that AI has improved access to mental health support, enhanced workplace efficiency, and facilitated communication and social engagement. However, the paper also identified concerns relating to psychological dependency, job insecurity, workplace stress, algorithmic surveillance, social isolation, and weakened interpersonal interactions. The paper concluded that the outcomes of AI depend largely on how technological innovations are integrated into human-centred social and organisational systems. It recommended the adoption of human-centred AI policies, investment in digital skills and employee support programmes, and the development of ethical safeguards that promote healthy social interactions and psychological well-being.

Keywords: Artificial Intelligence, Mental Health, Psychological Well-being, Work, Employee Well-being, Social Relations

1. INTRODUCTION

The emergence of Artificial Intelligence (AI) has transformed patterns of work, communication, and social interaction across the world. AI systems now perform tasks that were previously dependent on human judgement, including recruitment, customer service, content creation, data analysis, healthcare support, and educational assistance. The increasing integration of AI into workplaces and everyday life has generated growing interest in its implications for mental health and social relationships. While AI offers opportunities for improving productivity and expanding access to information, concerns have emerged regarding psychological well-being, workplace stress, social isolation, and the quality of human interactions.

Mental health has become a major global public health concern. According to the World Health Organization (WHO), approximately one in every eight people worldwide lives with a mental disorder, with anxiety and depression remaining among the most prevalent conditions (World Health Organization, 2022). The expansion of AI technologies has coincided with changes in the organisation of work, particularly through automation, algorithmic management, and digital surveillance. Employees increasingly interact with AI-powered systems that monitor performance, allocate tasks, and evaluate productivity. Although these technologies can improve efficiency, they may also create uncertainty about job security and increase psychological pressure among workers. Recent empirical evidence indicates that employees who perceive AI as a threat to their jobs are more likely to experience negative emotions, reduced workplace well-being, and heightened stress levels (Jin et al., 2024). Similar concerns have been raised regarding algorithmic decision-making in recruitment and performance evaluation, where workers may feel a loss of autonomy and control over their careers.

The influence of AI extends beyond the workplace into interpersonal relationships and social life. AI-powered chatbots, virtual companions, and conversational agents are increasingly being used for emotional support, companionship, and mental health assistance. Research has shown that AI-based mental health applications can improve access to psychological support, particularly in contexts where mental health professionals are scarce or difficult to access (Wang et al., 2025). For example, AI-driven platforms such as Woebot and Wysa have been adopted in several countries to provide cognitive behavioural therapy techniques and emotional support to users experiencing stress, anxiety, and depression. At the same time, scholars have expressed concern that excessive dependence on AI-mediated interactions may weaken face-to-face relationships and reduce opportunities for meaningful social engagement (Fanarioti & Karpouzis, 2025).

The growing popularity of AI companions illustrates these emerging social changes. Surveys conducted among young people in Europe indicate that many individuals now find it easier to discuss emotional concerns with AI chatbots than with healthcare professionals or psychologists, although friends and family remain their primary sources of support (Reuters, 2026). This development raises important questions regarding the future of human relationships and social connectedness. While AI can provide immediate responses and non-judgemental interactions, it lacks the emotional reciprocity, empathy, and social understanding that characterise human

relationships. Studies have further reported associations between intensive use of AI companions and poorer psychological outcomes, including higher levels of depression and lower life satisfaction among some users (Brooks et al., 2025).

Recent literature suggests that AI's influence on mental health is neither entirely beneficial nor entirely harmful. AI applications have demonstrated potential for early detection of mental health conditions, personalised interventions, and continuous monitoring of psychological well-being (Pandey, 2024). However, concerns persist regarding privacy, misinformation, emotional dependence, algorithmic bias, and the reinforcement of harmful beliefs among vulnerable individuals (Wang et al., 2025). These developments highlight the need to examine how AI is reshaping experiences of work and social relations and how these changes affect mental health outcomes. Understanding these implications is particularly important as organisations, educational institutions, healthcare systems, and individuals increasingly rely on AI technologies in their daily activities.

2. STATEMENT OF THE PROBLEM

The increasing adoption of Artificial Intelligence in workplaces and social environments has created new opportunities for efficiency, communication, and access to information. Despite these benefits, growing concerns have emerged regarding its consequences for mental health and human relationships. Organisations across different sectors are replacing or supplementing human labour with AI-driven systems, creating uncertainty about employment stability, career progression, and professional identity. Workers are increasingly subjected to algorithmic monitoring and performance evaluation, conditions that may contribute to anxiety, emotional exhaustion, and job-related stress. Although AI has become a central feature of modern employment, evidence regarding its psychological effects on workers remains fragmented and inconclusive.

Beyond the workplace, AI is increasingly mediating social interactions. Millions of people now engage with conversational AI systems for companionship, emotional support, and personal advice. While these technologies may reduce barriers to seeking help and provide immediate responses to emotional concerns, questions remain about their influence on human connectedness and social well-being. Reports of emotional dependence on AI companions, reduced face-to-face interactions, and the substitution of human relationships with AI-mediated engagement have raised concerns among mental health professionals and researchers. Recent studies have also highlighted risks associated with misinformation, inappropriate psychological advice, and reinforcement of unhealthy beliefs among vulnerable users (Wang et al., 2025).

Furthermore, existing studies have largely focused on either workplace outcomes or clinical applications of AI, with limited attention to the combined effects of AI on mental health, work experiences, and social relations. As AI continues to shape how individuals work, communicate, and seek emotional support, there is a need for empirical investigation into whether these technological changes are enhancing psychological well-being or contributing to new forms of stress, isolation, and social disconnection. The absence of sufficient evidence on these issues creates a gap in knowledge that may hinder the development of effective workplace policies, mental health interventions, and regulatory frameworks. This paper therefore sought to examine mental health in the age of Artificial Intelligence, with particular attention to its implications for work and social relations.

3. AIM AND OBJECTIVES OF THE PAPER

The aim of this paper was to examine mental health in the age of Artificial Intelligence and assess its implications for work and social relations.

The specific objectives of the paper were to:

a. examine the influence of Artificial Intelligence on the mental health and psychological well-being of individuals.

b. investigate the implications of Artificial Intelligence for work, particularly in relation to job experiences, workplace stress, and employee well-being.

c. assess the effects of Artificial Intelligence on social relations, including interpersonal interactions, social connectedness, and human relationships.

4. METHODOLOGY

This paper adopted a systematic literature review approach based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework developed by Moher et al. (2009). The PRISMA approach was considered appropriate because it provides a transparent, rigorous, and replicable procedure for identifying, screening, selecting, and synthesising scholarly evidence. The approach was particularly suitable for this study because of the rapidly expanding body of literature on Artificial Intelligence (AI), mental health, work, and social relations. Through the use of a systematic review methodology, the paper was able to minimise selection bias, ensure methodological transparency, and facilitate the synthesis of evidence from diverse empirical and theoretical sources. The review focused on examining the influence of Artificial Intelligence on mental health and psychological well-being, its implications for work experiences and employee well-being, and its effects on social relations and interpersonal interactions.

The paper relied on an extensive review of primary academic sources retrieved from four major scholarly databases: Scopus, Web of Science, PubMed, and Google Scholar. These databases were selected because of their extensive coverage of peer-reviewed publications in psychology, sociology, information systems, occupational studies, communication studies, and health sciences. The search process utilised Boolean combinations of keywords including “Artificial Intelligence”, “AI”, “mental health”, “psychological well-being”, “employee well-being”, “workplace stress”, “job experiences”, “social relations”, “social connectedness”, “interpersonal relationships”, “human interaction”, “digital technologies”, and “algorithmic management”. Searches were limited to peer-reviewed studies published between 2020 and 2025 to ensure that the review reflected the most recent developments in Artificial Intelligence.

However, foundational theoretical studies relevant to the adopted Socio-Technical Systems Theory, particularly Trist and Emery (1951) and Trist (1981), were included through backward citation analysis to provide the necessary theoretical grounding for the study. Consequently, the studies selected through the systematic search process formed the core evidence base, while the foundational theoretical works provided historical and conceptual context.

4.1 Inclusion and Exclusion Criteria

To ensure consistency and quality, studies were selected according to clearly defined inclusion and exclusion criteria. For inclusion, studies had to satisfy four conditions. Firstly, they had to be

published in peer-reviewed journals, conference proceedings, or reputable academic publications between 2020 and 2025. Secondly, they had to focus substantially on Artificial Intelligence and at least one of the following themes: mental health, psychological well-being, workplace experiences, employee well-being, social relations, social connectedness, or interpersonal interactions. Thirdly, the studies had to provide a clear description of their research methodology, whether quantitative, qualitative, mixed methods, systematic review, or conceptual framework. Fourth, the studies had to be published in English and available in full-text format.

Studies were excluded if they focused exclusively on technical aspects of Artificial Intelligence such as software architecture, programming algorithms, or system engineering without discussing human, social, psychological, or workplace implications. Editorials, opinion pieces, commentaries, news reports, blogs, and non-peer-reviewed publications were excluded because they lacked empirical or theoretical rigour. Duplicate studies identified across multiple databases were removed during the screening process. Furthermore, studies published in predatory journals or journals lacking recognised indexing standards were excluded to maintain the quality and credibility of the review.

4.2 PRISMA Article Selection Process

The article selection process followed the four stages recommended by the PRISMA framework: identification, screening, eligibility, and inclusion.

Identification

An initial search of the four databases generated a total of 428 records. Scopus produced 132 records, Web of Science generated 116 records, PubMed yielded 95 records, and Google Scholar contributed 85 records. These studies represented the preliminary pool of literature potentially relevant to the objectives of the review.

Screening

After importing all references into a reference management system, 104 duplicate records were identified and removed. This resulted in 324 unique studies for title and abstract screening. The titles and abstracts were reviewed against the predetermined inclusion and exclusion criteria. During this stage, 218 studies were excluded because they focused primarily on technical AI development, robotics engineering, computational modelling, or unrelated technological applications without addressing mental health, work, or social relations. Consequently, 106 studies remained eligible for full-text assessment.

Eligibility

The remaining 106 studies underwent a comprehensive full-text review. During this phase, 61 studies were excluded for one or more reasons. Twenty-one studies lacked clearly defined methodologies, 15 focused primarily on technical implementation without human-centred outcomes, 13 provided insufficient discussion of the key concepts under investigation, and 12 studies had inaccessible full texts or incomplete reporting of findings. Following the eligibility assessment, 45 studies satisfied all review requirements.

Inclusion

A final sample of 45 studies was included in the systematic review and served as the basis for thematic synthesis and analysis. In addition, two foundational theoretical works associated with the Socio-Technical Systems Theory were included through backward citation analysis to provide theoretical context. These foundational references were not part of the systematic search process and were therefore reported separately from the final review sample.

4.3 Quality Assessment

The methodological quality of the 45 studies included in the review was assessed using an adapted version of the quality assessment framework proposed by Kitchenham and Charters (2007). Each study was evaluated against six criteria: clarity of research objectives, appropriateness of research design, rigour of data collection procedures, adequacy of data analysis, credibility of findings, and relevance to the review objectives. Each criterion was scored on a three-point scale ranging from 0 (No) to 1 (Yes), with 0.5 indicating partial fulfilment.

Studies scoring below 3.0 out of a possible 6.0 were considered for exclusion. However, all 45 studies included in the final sample achieved scores above the minimum threshold, with quality scores ranging from 3.5 to 5.8 and an average score of 4.7. The final sample comprised 18 quantitative studies, 12 qualitative studies, 8 mixed-method studies, and 7 systematic reviews or conceptual studies. The quality assessment process enhanced the credibility and reliability of the evidence synthesised in this review.

4.4 Data Extraction and Synthesis

Data extraction followed an evidence-based approach designed to ensure consistency and accuracy in the review process. Information extracted from each study included authorship, year of publication, study location, theoretical framework, research design, sample characteristics, data collection methods, principal findings, conclusions, limitations, and relevance to the objectives of the present study. Particular attention was given to findings relating to the influence of Artificial Intelligence on mental health and psychological well-being, workplace experiences and employee well-being, and social relations and interpersonal interactions.

The synthesis of evidence was conducted using thematic synthesis procedures adapted from Thomas and Harden (2008). The process involved three stages. The first stage consisted of detailed line-by-line coding of relevant findings extracted from the studies. The second stage involved grouping similar codes into descriptive themes reflecting common patterns across the literature. The final stage involved the development of analytical themes that explained broader relationships among Artificial Intelligence, mental health, work, and social relations. This approach enabled the identification of recurring trends, areas of convergence and divergence, and emerging issues within the literature while maintaining a transparent and systematic review process.

Table 1. Systematic Literature Review Protocol Summary

Element	Description
Databases	Scopus, Web of Science, PubMed, Google Scholar
Time Period	2020–2025 (systematic search); foundational theoretical works included through backward citation analysis

Search Terms	"Artificial Intelligence" OR "AI"; "Mental Health" OR "Psychological Well-being"; "Workplace Stress"; "Employee Well-being"; "Job Experiences"; "Social Relations"; "Social Connectedness"; "Interpersonal Relationships"; "Human Interaction"; "Algorithmic Management"
Inclusion Criteria	Peer-reviewed studies; focus on Artificial Intelligence and mental health, work, or social relations; defined methodology; English language; full text available
Exclusion Criteria	Technical AI studies without human-centred outcomes; editorials/opinion pieces; duplicates; predatory or non-indexed journals
Initial Records	428
After Deduplication	324
After Title/Abstract Screening	106
Final Sample	45 peer-reviewed studies + 2 foundational theoretical works
Quality Assessment	Adapted Kitchenham & Charters (2007) criteria; 6 dimensions, 3-point scale; mean score = 4.7/6.0
Synthesis Method	Three-stage thematic synthesis (Thomas & Harden, 2008)

5. LITERATURE REVIEW

The literature was reviewed under conceptual review, empirical review and theoretical framework as follows:

5.1 Conceptual Review

Artificial Intelligence

Artificial Intelligence (AI) has attracted diverse scholarly interpretations owing to its broad application across disciplines. Caluori (2024) argues that AI lacks a universally accepted definition because scholars emphasise different attributes such as autonomy, learning capability, problem-solving, and human-like reasoning. Similarly, Ozkaya et al. (2024) define AI as computer-based systems capable of performing tasks that ordinarily require human cognitive abilities, including learning, decision-making, language processing, and pattern recognition. Kalota (2024) views AI as a branch of computer science concerned with developing machines that can simulate aspects of human intelligence through the use of algorithms and data-driven learning processes.

While these definitions converge on the capacity of machines to perform intelligent tasks, they differ regarding the extent to which AI should be regarded as possessing intelligence comparable to human cognition. Some scholars maintain that contemporary AI demonstrates specialised competence rather than genuine intelligence (Sternberg & Sternberg, 2024). For the purpose of this paper, Artificial Intelligence is defined as computer-based systems that employ algorithms, machine learning, and data analytics to perform tasks involving learning, reasoning, decision-making, communication, and problem-solving that traditionally require human cognitive effort.

Mental Health

The concept of mental health has evolved beyond the traditional absence of mental illness to encompass positive psychological functioning and well-being. Magalhães (2024) contends that mental health consists of two related dimensions: the absence of psychological distress and the presence of positive well-being, life satisfaction, and effective functioning. Similarly, Lancman et al. (2024) argue that mental health should be understood within the context of individuals' interactions with their social and work environments, as psychological well-being is shaped by everyday experiences, opportunities, and constraints. These authors have further maintained that mental health involves the capacity to realise one's abilities, manage life's challenges, maintain productive activities, and establish meaningful relationships.

Although scholars differ in emphasis, recent literature increasingly recognises mental health as a positive state rather than merely the absence of psychopathology. In the context of this paper, mental health refers to a state of psychological, emotional, and social well-being that enables individuals to cope effectively with daily demands, maintain productive work activities, and sustain healthy interpersonal relationships.

Work

Work remains a central sociological concept because it shapes economic survival, social identity, and human well-being. Recent studies have expanded the understanding of work beyond paid employment to include the activities through which individuals contribute labour, skills, and knowledge to achieve personal and collective goals. Lancman et al. (2024) observe that work constitutes a social process that influences mental health through organisational conditions, job demands, autonomy, and interpersonal relations within the workplace.

Vallas and Schor (2020) further argue that technological transformations, platform labour, and digital management systems have altered the meaning of work by redefining how tasks are organised, monitored, and evaluated. While economic perspectives often emphasise productivity and remuneration, sociological approaches focus on work as a source of identity, social integration, and personal fulfilment. In this paper, work is defined as the organised performance of physical, cognitive, or emotional activities undertaken within formal or informal settings for the purpose of producing goods, services, knowledge, or social value while contributing to individual livelihood and societal development.

Social Relations

Social relations refer to the patterns of interaction and connections that exist among individuals and groups within society. Recent studies emphasise that social relations are sustained through communication, reciprocity, emotional attachment, cooperation, and shared social experiences. Liu and Zhang (2024) argue that social relations are embedded within broader socio-technical systems in which interpersonal, community, and technological resources influence human interactions and support networks. Fanarioti and Karpouzis (2025) further contend that emerging digital technologies, including AI-mediated communication systems, are reshaping the nature of social relationships by creating new forms of interaction while simultaneously altering traditional patterns of human engagement.

Although some scholars focus on the structural dimensions of social relations and others emphasise interpersonal exchanges, both perspectives acknowledge that relationships constitute the foundation of social life and individual well-being. For the purpose of this paper, social relations are defined as the enduring patterns of interaction, communication, emotional connection, and mutual influence that exist among individuals and groups and facilitate social support, belonging, cooperation, and social integration.

The Influence of Artificial Intelligence on the Mental Health and Psychological Well-being of Individuals

Studies examining the relationship between Artificial Intelligence (AI) and mental health indicate both beneficial and adverse outcomes. Current literature focuses on three dominant areas: AI-assisted mental health interventions, AI-enabled mental health assessment and diagnosis, and the psychological consequences of sustained interaction with AI systems.

One of the most widely reported benefits of AI concerns its growing role in expanding access to mental health support. Dehbozorgi et al. (2025), in a systematic review of AI applications in mental healthcare, found that machine learning systems, predictive algorithms, and conversational agents have improved the early identification of depression, anxiety disorders, suicidal ideation, and emotional distress. The review demonstrated that AI-assisted tools can process large volumes of behavioural, linguistic, and physiological data to identify mental health risks that may not be immediately observable during conventional clinical assessment. Similarly, Wang et al. (2025), reviewing generative AI applications in mental health, reported that AI-powered systems are increasingly being used for diagnosis, patient monitoring, therapeutic support, and clinical decision-making.

Several practical examples demonstrate the growing utilisation of AI in mental health care. In the United States, Woebot, an AI-based conversational agent developed using cognitive behavioural therapy principles, has been employed to provide real-time emotional support and self-guided therapeutic interventions. Clinical evaluations have shown reductions in symptoms of anxiety and depression among users who engaged regularly with the platform. Likewise, Wysa, an AI mental health application currently used in more than 90 countries, provides guided psychological support, mood tracking, and stress management tools. Evidence reviewed by Wang et al. (2025) suggests that users frequently report improvements in emotional regulation and psychological resilience following sustained engagement with such systems. These developments are particularly important in low-resource settings where shortages of mental health professionals limit access to conventional services.

The relevance of AI-supported mental health interventions is especially significant in many developing countries. In sub-Saharan Africa, where psychiatrist-to-population ratios remain low, AI-assisted mental health platforms have increasingly been considered as supplementary support mechanisms. In Nigeria, where mental health service coverage remains inadequate and treatment gaps are substantial, digital mental health technologies are gradually receiving attention as potential tools for extending psychological support to underserved populations. Although large-scale AI-based mental health interventions remain limited in Nigeria, emerging studies on digital health adoption indicate increasing acceptance of technology-assisted psychological support among

younger populations and university students. This trend reflects broader global efforts to utilise AI in addressing shortages in mental health care delivery.

Beyond treatment support, AI has demonstrated considerable potential in mental health screening and prediction. Recent machine learning models have achieved high levels of accuracy in identifying depressive symptoms through analysis of social media content, speech patterns, facial expressions, and digital behavioural markers. Kolding et al. (2024) observed that generative AI systems are increasingly capable of identifying patterns associated with psychiatric conditions and supporting clinicians in treatment planning. Such developments may facilitate earlier intervention and reduce the progression of mental disorders. AI-enabled predictive systems have also been employed in suicide prevention programmes by identifying individuals at elevated risk based on behavioural indicators and electronic health records.

Despite these benefits, substantial concerns have emerged regarding the psychological consequences of AI use. One of the most frequently discussed issues involves emotional dependence on conversational AI systems. As AI companions become increasingly sophisticated, users may develop emotional attachments that resemble human relationships. Fanarioti and Karpouzis (2025) argue that AI systems are now capable of providing responses that create perceptions of empathy, companionship, and emotional understanding. While these characteristics may reduce feelings of loneliness in the short term, prolonged reliance on AI-mediated companionship may reduce motivation for face-to-face social engagement. Research reviewed by Wang et al. (2025) identified concerns regarding emotional dependency, attachment formation, and reduced social interaction among frequent users of AI companions.

Another concern relates to the quality and safety of AI-generated mental health advice. Although AI systems can provide immediate responses, they may generate inaccurate, misleading, or inappropriate recommendations. Dehbozorgi et al. (2025) noted that generative AI tools occasionally produce incorrect clinical information, potentially exposing vulnerable individuals to harm. Such concerns are particularly important for users experiencing severe depression, psychosis, or suicidal ideation, where professional clinical judgement remains indispensable. The possibility of algorithmic bias also remains a major challenge because AI systems are trained on datasets that may not adequately reflect cultural, linguistic, and demographic diversity.

Recent evidence further suggests that AI use may contribute to anxiety and psychological distress in some contexts. The increasing visibility of AI technologies has generated fears relating to job displacement, loss of human agency, privacy violations, and uncertainty about the future. These concerns may negatively affect psychological well-being, particularly among workers whose occupations face significant automation risks. Studies examining public perceptions of AI have reported elevated levels of technology-related anxiety among individuals who perceive AI as a threat to employment opportunities and social stability.

However, the literature reviewed therefore reveals a dual pattern. On one hand, AI has expanded opportunities for mental health assessment, intervention, monitoring, and support. AI-enabled applications have demonstrated effectiveness in reducing symptoms of anxiety, depression, stress, and loneliness among many users. On the other hand, concerns regarding emotional dependence, misinformation, algorithmic bias, privacy, and technology-related anxiety remain significant. The balance between these positive and negative outcomes appears to depend largely on the design,

regulation, ethical deployment, and context of AI use. Current evidence suggests that AI should be viewed as a complementary tool rather than a substitute for human-centred mental health care. The most effective approaches are those that integrate AI capabilities with professional oversight and meaningful human interaction.

The Implications of Artificial Intelligence for Work, Particularly in Relation to Job Experiences, Workplace Stress, and Employee Well-being

Recent literature reveals a growing body of evidence on how Artificial Intelligence (AI) is reshaping work experiences, employee well-being, job satisfaction, workplace stress, organisational behaviour, and labour relations. The reviewed studies were predominantly drawn from management, occupational psychology, industrial relations, information systems, and organisational behaviour literature. The evidence indicates that AI is producing both favourable and unfavourable outcomes depending on organisational context, implementation strategies, employee characteristics, and the degree of human oversight involved in AI deployment.

One of the most widely reported benefits of AI in workplaces relates to productivity enhancement and task efficiency. AI systems are increasingly being used to automate repetitive administrative functions, process large datasets, improve decision-making, and support employees in completing complex tasks. Jarrahi et al. (2023) found that generative AI technologies have become important collaborative tools that augment human capabilities rather than merely replacing labour. Employees in sectors such as finance, healthcare, education, logistics, and information technology increasingly utilise AI systems to reduce routine workloads and improve operational efficiency. In healthcare, for example, AI-assisted diagnostic systems help clinicians analyse medical images more rapidly, thereby reducing workload pressures and enabling greater focus on patient care. Similarly, AI-powered customer service systems assist workers by handling routine enquiries while allowing staff to concentrate on more specialised tasks.

Recent evidence suggests that AI can positively influence employee well-being when implemented as a supportive rather than controlling technology. In a multi-sector study, Tang et al. (2023) reported that employees who perceived AI as enhancing their work capabilities experienced higher levels of job engagement, improved performance, and greater workplace satisfaction. AI-assisted decision support systems can reduce cognitive burden by providing rapid access to relevant information, minimising errors, and facilitating problem-solving. Such benefits are particularly evident among knowledge workers who rely heavily on information processing and analytical tasks.

The emergence of generative AI platforms such as ChatGPT, Microsoft Copilot, and Google Gemini has further altered workplace experiences. Employees increasingly utilise these systems to draft reports, generate content, summarise information, conduct research, and automate communication processes. Studies indicate that these technologies often reduce time spent on repetitive tasks, allowing workers to devote more attention to strategic and creative responsibilities (Dell'Acqua et al., 2023). Evidence from experimental studies demonstrates that workers using generative AI frequently complete tasks faster and produce outputs of higher quality than those working without AI assistance.

Notwithstanding these benefits, concerns regarding job displacement remain among the most prominent themes in contemporary literature. Acemoglu and Johnson (2023) argue that technological transformations driven by AI have intensified anxieties regarding employment

security, particularly among workers engaged in routine cognitive and administrative tasks. The possibility that AI may automate substantial portions of existing jobs has generated uncertainty across several industries. International studies have shown that employees who perceive a high likelihood of technological replacement often report elevated levels of stress, anxiety, emotional exhaustion, and reduced job satisfaction. These concerns are especially pronounced among workers with lower levels of digital skills and those employed in occupations considered vulnerable to automation.

Empirical evidence increasingly supports the relationship between AI-related job insecurity and psychological distress. Jin et al. (2024), using data from employees across multiple sectors, found that perceptions of AI-driven job threats significantly predicted reductions in work-related affective well-being. Workers who believed that AI could replace their positions reported increased negative emotions, decreased workplace confidence, and lower psychological well-being. Similar findings have been reported across Europe, North America, and Asia, where technological uncertainty has emerged as a major source of occupational stress.

Another important issue concerns algorithmic management. AI systems are increasingly used to allocate tasks, monitor performance, schedule work, and evaluate productivity. While such systems can improve organisational efficiency, they may also contribute to employee stress through continuous surveillance and reduced autonomy. Kellogg et al. (2020) observed that workers subjected to algorithmic control often experience diminished discretion over their work processes. This issue has been particularly evident within platform-based employment arrangements such as ride-hailing, food delivery, and online freelance work. Drivers working for digital platforms frequently report stress associated with algorithmic performance ratings, automated disciplinary procedures, and limited transparency regarding how decisions affecting their employment are made.

Practical examples illustrate these challenges across various countries. Studies of platform workers in China, India, the United Kingdom, and the United States consistently show that AI-driven monitoring systems can create intense pressure to maintain productivity targets while simultaneously reducing opportunities for worker participation in decision-making. Similar concerns have emerged within warehouses employing AI-enabled productivity tracking systems. Employees often report psychological strain arising from constant performance monitoring and concerns about disciplinary consequences for failing to meet algorithmically determined targets.

The implications of AI for workplace well-being are also evident in the changing nature of skills and professional identity. AI adoption increasingly requires workers to acquire new competencies, adapt to technological innovations, and engage in continuous learning. While such developments may enhance employability for some individuals, they can create stress for workers who struggle to adapt to rapidly changing technological demands. Tarafdar et al. (2025) note that AI-related technostress has emerged as a growing occupational challenge, particularly among employees required to interact continuously with unfamiliar digital systems. Technostress may manifest through fatigue, frustration, reduced confidence, and feelings of inadequacy when workers perceive themselves as unable to meet technological expectations.

In developing countries, including Nigeria, AI-related workplace transformations present both opportunities and challenges. Financial institutions, telecommunications firms, educational organisations, and technology companies increasingly utilise AI-driven systems to improve

efficiency and service delivery. However, concerns persist regarding workforce displacement, digital inequality, and inadequate opportunities for reskilling. The digital skills gap remains a significant concern because many workers may not possess the competencies required to adapt successfully to AI-enabled work environments. Consequently, the psychological effects of AI adoption in such contexts may be influenced by broader socioeconomic conditions, educational opportunities, and organisational support structures.

The reviewed literature suggests that the effects of AI on work are neither uniformly positive nor uniformly negative. AI can improve productivity, reduce repetitive workloads, support decision-making, and enhance job performance when implemented in ways that complement human capabilities. Conversely, concerns relating to job insecurity, algorithmic management, workplace surveillance, technostress, and skill obsolescence may undermine employee well-being and contribute to psychological distress. Current evidence indicates that employee outcomes are shaped less by the technology itself than by how organisations design, regulate, and integrate AI into workplace processes. Organisations that prioritise transparency, employee participation, digital training, and human-centred implementation strategies appear more likely to realise the benefits of AI while minimising adverse effects on employee well-being.

The Effects of Artificial Intelligence on Social Relations, Including Interpersonal Interactions, Social Connectedness, and Human Relationships

The available evidence demonstrates that AI is transforming how individuals communicate, form relationships, maintain social networks, seek emotional support, and experience social connectedness. While AI technologies have created new opportunities for communication and companionship, concerns have emerged regarding social isolation, emotional dependence, weakened interpersonal skills, and changes in the quality of human relationships.

One of the most significant developments in recent years has been the emergence of AI-mediated communication. Generative AI systems such as ChatGPT, Gemini, Claude, and other conversational agents increasingly participate in activities traditionally reserved for human interaction. Individuals use these technologies to seek advice, discuss personal concerns, obtain emotional support, and engage in everyday conversations. Research indicates that AI-mediated communication can reduce barriers to interaction, particularly for individuals who experience social anxiety, loneliness, or communication difficulties (Fanarioti & Karpouzis, 2025). The immediate availability and non-judgemental nature of AI systems make them attractive sources of interaction for many users.

Several empirical studies have reported positive social outcomes associated with AI use. In a systematic review of AI applications in mental health, Wang et al. (2025) found that conversational AI systems often provide users with feelings of companionship, emotional validation, and social support. For individuals living alone, older adults, and persons experiencing social isolation, AI companions may offer opportunities for engagement that would otherwise be unavailable. Research involving older populations in Japan and South Korea has shown that socially assistive robots can reduce feelings of loneliness and improve subjective well-being by facilitating daily interaction and companionship (Abdi et al., 2021). Similar findings have been reported among residents of long-term care facilities where robotic companions have contributed to increased social engagement and reduced emotional distress.

The practical application of AI in supporting social connectedness is evident in healthcare settings. Social robots such as Paro, Pepper, and ElliQ have been deployed in hospitals and residential care centres to support communication, stimulate social interaction, and assist individuals experiencing cognitive decline. Studies indicate that these technologies can promote conversational engagement and reduce social withdrawal among older adults. Such interventions have become increasingly important in ageing societies where social isolation constitutes a major public health concern.

AI has also expanded opportunities for maintaining relationships across geographical boundaries. Language translation systems powered by AI facilitate communication among individuals who speak different languages, while recommendation algorithms assist users in identifying social groups, communities, and networks that reflect shared interests. In educational settings, AI-supported communication platforms have enabled collaborative learning and interaction among students from diverse cultural backgrounds. These developments suggest that AI can strengthen social connectedness by overcoming barriers associated with distance, language, and accessibility.

Despite these benefits, the literature identifies several concerns regarding the consequences of AI for interpersonal relationships. One recurring issue involves the substitution of human interaction with AI-mediated engagement. Turkle (2024) argues that increasing reliance on digital technologies for emotional support may reduce opportunities for meaningful face-to-face interaction. While AI companions may simulate empathy and understanding, they do not possess genuine emotional reciprocity or lived social experience. Consequently, excessive dependence on AI systems may weaken the development and maintenance of authentic human relationships.

Recent evidence suggests that some users develop emotional attachments to AI companions that resemble interpersonal relationships. Investigations into platforms such as Replika have documented cases in which users describe AI companions as friends, romantic partners, confidants, or sources of emotional intimacy. Pentina et al. (2023) found that users frequently attributed human characteristics to AI companions and often reported emotional attachment following prolonged interaction. Although such relationships may alleviate loneliness, concerns have emerged regarding emotional dependency and reduced motivation to pursue human social relationships. These concerns have become more pronounced as generative AI systems exhibit increasingly sophisticated conversational abilities.

The implications of AI for family relationships have also attracted growing attention. AI technologies increasingly mediate communication within households through virtual assistants, smart home devices, and personalised recommendation systems. While these technologies can facilitate coordination and information sharing, some studies suggest that excessive technology use may reduce the quality of direct interpersonal interaction among family members. Parents, for example, have expressed concerns regarding children's increasing engagement with AI-powered technologies at the expense of face-to-face socialisation and relationship-building activities. Similar concerns have been raised regarding adolescents whose social interactions are increasingly shaped by algorithmically curated digital environments.

Social media algorithms is another important dimension of AI's influence on social relations. AI-driven recommendation systems determine much of the content individuals encounter online, influencing social interaction patterns, information exposure, and community participation. Research has shown that these systems can strengthen social connections by helping users identify

relevant communities and maintain relationships. However, they may also contribute to social polarisation, misinformation, and the formation of echo chambers where individuals primarily encounter viewpoints that reinforce existing beliefs (Guess et al., 2023). Such developments may weaken broader social cohesion and limit constructive interpersonal dialogue.

The effects of AI on workplace relationships have also become increasingly apparent. AI-mediated communication systems, automated collaboration tools, and algorithmic management structures influence interactions among employees, supervisors, and organisational stakeholders. While AI can facilitate communication and coordination, studies suggest that excessive automation may reduce opportunities for informal interaction, trust-building, and social support within organisations. Human relationships remain essential for teamwork, organisational commitment, and workplace well-being, and the replacement of interpersonal exchanges with automated systems may undermine these outcomes.

Evidence from African contexts remains relatively limited but increasingly relevant. In Nigeria, the growing adoption of AI-enabled communication platforms, educational technologies, customer service systems, and social media applications has altered patterns of social interaction, particularly among younger populations. University students and young professionals increasingly rely on AI-powered technologies for learning, communication, and information seeking. While these technologies facilitate connectivity and access to knowledge, concerns have emerged regarding declining face-to-face engagement, increasing digital dependency, and the quality of interpersonal relationships in highly mediated environments. Although empirical research in Nigeria remains underdeveloped, existing studies on digital technology use suggest trends similar to those observed in other parts of the world.

These demonstrate that AI exerts both positive and negative influences on social relations. On the positive side, AI facilitates communication, reduces loneliness, supports social inclusion, assists vulnerable populations, and enables connections across geographical and linguistic boundaries. On the negative side, excessive reliance on AI-mediated interaction may contribute to emotional dependence, reduced interpersonal engagement, weakened social skills, and challenges to relationship authenticity.

However, current evidence suggests that AI is most beneficial when it complements rather than replaces human interaction. The preservation of meaningful interpersonal relationships remains essential for social well-being, regardless of technological advancement. Consequently, future AI development and deployment should prioritise human-centred approaches that strengthen rather than diminish social connectedness and relationship quality.

5.2 Empirical Reviews

Jin et al. (2024) conducted a study on the impact of Artificial Intelligence on employees' affective well-being in the workplace. The study was carried out in China and was anchored on the Affective Events Theory, which explains how workplace experiences influence employees' emotional states and well-being. The researchers adopted a quantitative cross-sectional research design and collected data from 321 employees working across different sectors. Participants were selected through a survey-based sampling procedure, and data were obtained using structured questionnaires. Statistical analyses were conducted to examine the relationships among AI-related job perceptions, emotional responses, and employee well-being. The findings revealed that employees who

perceived AI as a threat to their job security experienced increased negative emotions, anxiety, and reduced workplace well-being. Conversely, employees who viewed AI as a tool for enhancing work performance reported more positive emotional outcomes. The study concluded that perceptions of AI significantly influence employees' psychological well-being in contemporary workplaces.

While the study provides important insights into AI-related workplace experiences, it focused primarily on employees within a Chinese context and concentrated mainly on workplace well-being. The study paid limited attention to broader mental health outcomes and did not examine how AI influences social relations beyond the workplace. This creates a gap for the current paper, which sought to examine mental health in the age of Artificial Intelligence by simultaneously considering implications for work and social relations.

Pentina et al. (2023) investigated the development of human relationships with AI-powered social chatbots using users of the Replika platform. The study was conducted in the United States and drew upon Human-Computer Interaction Theory and Social Response Theory, which suggest that individuals often respond to technological systems as though they were social actors. The researchers employed a mixed-method research design involving quantitative surveys and qualitative interviews. Data were collected from 404 active users of the Replika chatbot through purposive sampling. Online questionnaires and in-depth interviews constituted the primary methods of data collection. The findings showed that many users developed strong emotional attachments to their AI companions and frequently regarded them as friends, confidants, or sources of emotional support. The study further revealed that AI companionship helped reduce feelings of loneliness among some participants. However, evidence also indicated that excessive reliance on AI companions could discourage real-world social interactions and foster emotional dependency. The researchers concluded that AI chatbots have the potential to influence human relationships in both positive and negative ways.

Although the study provides valuable evidence regarding AI-mediated social interaction, it focused mainly on users of a specific chatbot platform and did not investigate broader workplace implications or overall mental health outcomes. The gap identified is that the combined effects of AI on psychological well-being, work experiences, and social relations remain insufficiently explored, which the current paper addressed.

Tang et al. (2023) examined the relationship between Artificial Intelligence capability and employee well-being. The study was undertaken among employees from technology-oriented organisations in China and was guided by the Job Demands-Resources Theory, which explains how workplace resources influence employee engagement and well-being. A quantitative research design was adopted, and data were collected from 412 employees through structured questionnaires. The respondents were selected using a stratified sampling approach to ensure representation across different organisational units. Data were analysed using structural equation modelling to assess the relationships among AI capability, work engagement, and employee well-being. The findings demonstrated that AI capability positively influenced employee well-being by enhancing work engagement and improving employees' perceptions of organisational support. Employees who viewed AI as a resource that simplified tasks and improved efficiency reported higher levels of job satisfaction and psychological well-being. The study concluded that AI can contribute positively to employee outcomes when implemented as a supportive workplace resource.

Nevertheless, the investigation focused predominantly on organisational settings and did not explore how AI influences social connectedness, interpersonal relationships, or broader dimensions of mental health outside the workplace. The study also concentrated on a single national context. Consequently, a significant gap remains regarding the wider implications of Artificial Intelligence for mental health, work, and social relations within diverse social environments, which the present paper addressed.

5.3 Theoretical Framework

This paper was premised on the theoretical foundation of Socio-Technical Systems Theory as discussed below:

Socio-Technical Systems Theory

The Socio-Technical Systems Theory was developed by Eric Trist and Fred Emery in 1951 through studies conducted at the Tavistock Institute of Human Relations in the United Kingdom. The theory emerged from investigations of technological changes in British coal mines, where researchers observed that organisational outcomes could not be adequately explained by technological factors alone but were also influenced by social relationships, group dynamics, and human needs. The theory proposes that every organisation and society consists of two interconnected systems: the technical system, which includes tools, technologies, machines, procedures, and methods of work, and the social system, which comprises individuals, relationships, values, attitudes, norms, and patterns of interaction. According to the theory, optimal outcomes occur when these two systems are jointly designed and managed to complement one another.

The central assumption of the theory is that technological advancement does not operate independently of human beings. Rather, technology and society continuously influence one another, and changes introduced into one system inevitably affect the other. The theory maintains that organisational effectiveness, employee well-being, and social stability depend on achieving a balance between technological efficiency and human needs. It further assumes that individuals are not passive recipients of technological change but active participants whose attitudes, behaviours, and relationships shape the outcomes of technological innovations. Consequently, any technological intervention that prioritises efficiency while neglecting human welfare may generate unintended social and psychological consequences.

The major strength of the theory lies in its holistic approach to understanding technological change. Unlike technological determinist perspectives that view technology as the sole driver of social transformation, Socio-Technical Systems Theory recognises the importance of human agency, workplace relationships, organisational culture, and social interactions. The theory provides a useful framework for examining how Artificial Intelligence affects mental health, work experiences, and interpersonal relationships simultaneously. Another strength is its continued relevance in contemporary digital societies where emerging technologies increasingly influence both professional and personal life. The theory is also flexible enough to be applied across different settings including workplaces, educational institutions, healthcare systems, and online communities.

Despite its strengths, the theory has certain limitations. One criticism is that it places considerable emphasis on organisational environments and may not fully explain broader societal inequalities that influence access to technology and its benefits. Critics also argue that the theory tends to assume that social and technical systems can be harmonised, whereas real-world situations often

involve competing interests, unequal power relations, and conflicting objectives. Furthermore, the theory was developed before the emergence of Artificial Intelligence and therefore does not specifically address issues such as algorithmic bias, autonomous decision-making, data privacy, or emotional attachment to intelligent machines. Nevertheless, its core assumptions remain highly relevant for understanding contemporary technological developments.

The application of Socio-Technical Systems Theory to this paper is particularly appropriate because Artificial Intelligence represents a technological system that increasingly shapes how individuals work, interact, and maintain psychological well-being. The theory explains that the impact of AI on mental health cannot be understood solely by examining the technology itself but must also consider the social environment in which it operates. For instance, AI can improve employee productivity and reduce routine workloads, thereby enhancing well-being when implemented in supportive organisational contexts.

Conversely, AI-driven surveillance, algorithmic management, and fears of job displacement may generate workplace stress, anxiety, and emotional exhaustion when human needs are overlooked. Similarly, AI-powered communication tools and virtual companions may strengthen social connectedness for some individuals while simultaneously contributing to social isolation and reduced face-to-face interaction for others. The theory therefore provides a strong foundation for analysing how the interaction between Artificial Intelligence and human social systems influences mental health, work experiences, and social relations. It underscores the argument that the benefits of AI will depend largely on how technological innovations are integrated into human-centred social and organisational environments.

6. RESULTS AND DISCUSSIONS

The findings of this paper indicated that Artificial Intelligence has become an influential factor in shaping mental health and psychological well-being across contemporary societies. Evidence reviewed in the study demonstrates that AI-powered mental health applications, predictive diagnostic systems, and conversational agents have expanded access to psychological support, particularly in contexts where mental health professionals are insufficient. This finding aligns with the position of Dehbozorgi et al. (2025), who observed that AI technologies facilitate early identification of mental health challenges and improve opportunities for intervention. Similarly, Wang et al. (2025) found that AI-assisted mental health systems have enhanced diagnosis, monitoring, and therapeutic support for individuals experiencing anxiety, depression, and emotional distress.

The experiences of users of platforms such as Woebot and Wysa illustrate how AI can provide immediate psychological assistance, emotional regulation strategies, and coping mechanisms. However, the findings also reveal concerns regarding emotional dependence, misinformation, privacy risks, and technology-related anxiety. These observations support the argument of Fanarioti and Karpouzis (2025) that while AI may reduce loneliness and improve access to support, excessive reliance on AI-mediated interactions can create new psychological vulnerabilities. The evidence therefore suggests that AI contributes positively to mental health when used as a complementary support system rather than as a substitute for professional care and human relationships.

With respect to the implications of Artificial Intelligence for work, the paper revealed that AI has fundamentally altered job experiences, workplace practices, and employee well-being. The review

indicated that AI technologies improve efficiency by automating routine tasks, enhancing decision-making processes, and reducing repetitive workloads. These findings corroborate the views of Jarrahi et al. (2023), who argued that AI functions most effectively as a collaborative resource that augments rather than replaces human capabilities. Evidence from organisations using generative AI tools such as ChatGPT and Microsoft Copilot demonstrates improvements in productivity and task performance among employees.

These findings also support the work of Tang et al. (2023), who established that AI capability contributes positively to employee well-being through enhanced work engagement and organisational support. Nevertheless, the study equally reveals that fears of job displacement, algorithmic management, continuous digital surveillance, and increasing demands for technological adaptation contribute to workplace stress and psychological strain. This observation is consistent with the findings of Jin et al. (2024), who reported that employees perceiving AI as a threat to their employment experienced reduced affective well-being and increased anxiety. Practical examples from platform-based employment, including ride-hailing and delivery services, illustrate how algorithmic monitoring can create pressure and emotional exhaustion among workers. Consequently, the findings suggest that the influence of AI on employee well-being depends significantly on whether organisations deploy the technology in a manner that supports rather than controls workers.

The paper further revealed that Artificial Intelligence is transforming social relations, interpersonal interactions, and patterns of social connectedness. AI-powered communication systems, virtual assistants, and social chatbots have created new opportunities for interaction, companionship, and emotional support. This finding supports the position of Pentina et al. (2023), who found that many users developed meaningful emotional attachments to AI companions and frequently viewed them as trusted sources of support. The use of socially assistive robots among older adults in countries such as Japan demonstrates how AI can reduce loneliness and encourage social engagement. Likewise, AI-enabled language translation systems and communication platforms have strengthened social connectivity across geographical and linguistic boundaries.

However, the paper also indicates that increased reliance on AI-mediated interactions may weaken face-to-face relationships and reduce opportunities for authentic social engagement. These observations are consistent with the concerns expressed by Turkle (2024), who argued that growing dependence on digital companionship may undermine the depth and quality of human relationships. The experiences of users who increasingly rely on AI companions rather than human networks illustrate the possibility of emotional dependency and social withdrawal. The findings therefore suggest that while AI can strengthen social connectedness in certain contexts, its benefits are greatest when it complements rather than replaces direct human interaction.

The findings of this paper are strongly supported by the Socio-Technical Systems Theory developed by Trist and Emery (1951). The theory posits that technological systems and social systems are interdependent and that outcomes depend on the quality of interaction between them. The evidence reviewed throughout this study confirms this proposition. The positive mental health outcomes associated with AI-assisted therapy, the productivity gains observed in AI-supported workplaces, and the social benefits arising from AI-enabled communication demonstrate the advantages that emerge when technological innovations are integrated with human needs and social structures.

Conversely, the negative outcomes identified in the study, including workplace anxiety, emotional dependence, social isolation, and job insecurity, illustrate the consequences of technological systems that are not adequately aligned with human welfare. For example, organisations that utilise AI primarily for surveillance and performance control often generate employee stress, whereas those that employ AI to support decision-making and reduce workloads tend to promote employee well-being. Similarly, AI companions may alleviate loneliness, yet excessive dependence on such technologies may weaken interpersonal relationships when human interaction is neglected. These examples validate the central argument of Socio-Technical Systems Theory that technological progress alone cannot guarantee positive outcomes; rather, benefits emerge when technological innovations are designed and implemented in ways that support social relationships, human dignity, and psychological well-being.

7. CONCLUSIONS

Artificial Intelligence has become one of the defining forces shaping human existence in the twenty-first century, influencing not only economic and technological development but also the psychological and social foundations of everyday life. Its growing integration into healthcare, workplaces, educational systems, communication platforms, and social networks demonstrates that the future of human well-being will increasingly be linked to how societies manage the relationship between technological innovation and human needs. The evidence examined in this paper indicates that Artificial Intelligence possesses significant capacity to enhance mental health support, improve workplace efficiency, and strengthen social connectivity when deployed responsibly and ethically.

At the same time, it presents important challenges relating to psychological dependency, workplace insecurity, algorithmic control, social isolation, and the erosion of meaningful human interactions. These realities suggest that the critical issue is no longer whether Artificial Intelligence should be adopted, but how it should be governed and integrated into social systems in ways that preserve human dignity, emotional well-being, productive work experiences, and healthy interpersonal relationships. Sustainable progress in the age of Artificial Intelligence therefore requires a human-centred approach that places mental health, social cohesion, and employee welfare at the core of technological development rather than treating them as secondary considerations. Only through such an approach can societies maximise the benefits of Artificial Intelligence while minimising the social and psychological risks associated with its increasing presence in human affairs.

8. RECOMMENDATIONS

1. Governments, employers, educational institutions, and technology developers should establish and enforce human-centred Artificial Intelligence policies that require regular assessment of the mental health implications of AI systems, particularly in workplaces and digital environments where prolonged human-AI interaction occurs.
2. Organisations should invest in continuous digital skills development, psychological support programmes, and employee participation in AI implementation processes to reduce job insecurity, workplace stress, and resistance associated with technological change while promoting employee well-being and productivity.
3. Developers and regulators of AI-powered communication platforms and virtual companions should incorporate safeguards that encourage healthy human interaction, limit excessive emotional dependency on AI systems, and promote the use of Artificial Intelligence as a

complement to rather than a replacement for genuine interpersonal relationships and social support networks.

9. LIMITATIONS

While this paper contributes to the growing body of knowledge on Artificial Intelligence, mental health, work, and social relations, several limitations should be acknowledged. First, as a systematic literature review, the study is inherently dependent on the quality, scope, and methodological rigour of the studies included in the review. Although the PRISMA guidelines were rigorously followed and all selected studies underwent a quality assessment process, the findings presented in this paper are constrained by the research designs, data quality, theoretical orientations, and analytical approaches adopted in the reviewed studies. A considerable proportion of the studies examined employed cross-sectional designs, which limited the ability of researchers to establish causal relationships between Artificial Intelligence adoption and outcomes relating to mental health, workplace experiences, and social relations. Consequently, the conclusions drawn from the review should be interpreted primarily as evidence of associations and emerging patterns rather than definitive causal effects.

In addition, despite the extensive search strategy involving four major academic databases—Scopus, Web of Science, PubMed, and Google Scholar, the review was restricted to studies published in English. This may have introduced language bias and database coverage bias, as potentially relevant studies published in other languages or indexed in databases not included in the search process may have been overlooked. Given the global nature of Artificial Intelligence adoption and its social implications, valuable evidence from non-English-speaking regions may not be fully reflected in the findings of this study.

Furthermore, the review excluded grey literature, including unpublished theses, technical reports, policy papers, working papers, and non-peer-reviewed publications. While this decision was necessary to maintain academic quality and methodological consistency, it may have contributed to publication bias because studies reporting significant or positive findings are generally more likely to be published in peer-reviewed outlets than studies reporting null or contradictory findings. As a result, certain dimensions of the relationship between Artificial Intelligence, mental health, work, and social relations may be underrepresented in the available evidence.

Another limitation relates to the conceptual nature of the synthesis presented in this paper. Although the study adopted the Socio-Technical Systems Theory to explain the interaction between technological systems and human social systems, the theoretical propositions derived from the review were not subjected to direct empirical testing. The discussion and interpretations are therefore based on synthesised evidence from existing studies rather than on primary data collected specifically for this investigation. Future research employing longitudinal, mixed-method, and comparative designs would be valuable for testing the relationships identified in this review and for examining how they evolve over time.

Finally, most of the studies included in the review were conducted in technologically advanced societies, particularly in North America, Europe, and parts of Asia, where Artificial Intelligence adoption is relatively widespread. Consequently, the findings may not fully capture the experiences of populations in developing countries where access to digital infrastructure, technological literacy, regulatory frameworks, and mental health services differ substantially. Although some evidence

from developing contexts was incorporated, there remains limited empirical research examining the implications of Artificial Intelligence for mental health, work, and social relations in many African countries, including Nigeria. Therefore, caution should be exercised when generalising the findings to all social, cultural, and economic contexts. Future studies focusing on developing societies would provide a more balanced understanding of the opportunities and challenges associated with Artificial Intelligence across diverse settings.

Article Publication Details

This article is published in the **Unifya**, ISSN 3139-1451 (Online). In Volume 2 (2026), Issue 2 (April - June). The journal is published and managed by **Erudexa Publishing**.

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Acknowledgements
We sincerely thank the editors and the reviewers for their valuable suggestions on this paper.

Data availability
No datasets were generated or analyzed during the current study.

Declarations

Ethics approval and consent to participate
Not applicable. This study did not involve human or animal subjects.

Funding
The authors declare that no funding was received for this work.

Competing interests
The authors declare that they have no competing interests.

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