JOURNAL OF DIGITAL WELLBEING AND HUMAN BEHAVIOR

VOL.1-NO.1-2026

P ISSN: xxxx-xxx

E ISSN: xxxx-xxx

IMPACT OF ARTIFICIAL INTELLIGENCE ON HUMAN PSYCHOLOGY AND DIGITAL WELLBEING

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ABSTRACT

Artificial intelligence (AI) is increasingly influencing human psychology and digital wellbeing through its integration into communication, education, healthcare, entertainment, and everyday activities. AI-powered chatbots, recommendation systems, virtual assistants, and personalized applications provide convenient access to information and support, while also introducing concerns regarding emotional dependence, cognitive functioning, privacy, and social interaction. This article examines the relationship between artificial intelligence, human psychological experiences, and digital wellbeing through a qualitative review of relevant scholarly literature. It explores the potential influence of AI on emotional wellbeing, attention, decision-making, behavioural patterns, and human relationships. Existing research suggests that AI-based conversational agents may help reduce certain symptoms of psychological distress, although their effects on overall wellbeing vary across studies and applications (Li et al., 2023). Recent research also emphasizes the importance of human-centred design, responsible personalization, and privacy protection in digital wellbeing technologies (Scibetta et al., 2025). The article further considers the role of digital literacy, transparency, and appropriate human oversight in reducing the potential risks of AI use. It argues that artificial intelligence should complement human capabilities rather than replace independent judgement and meaningful social relationships. The article concludes that responsible AI development, informed technology use, and continued research into psychological outcomes are essential for promoting sustainable digital wellbeing.

KEYWORDS

Artificial Intelligence, Human Psychology, Digital Wellbeing, Mental Health, Emotional Wellbeing, Human Behaviour, Human–AI Interaction, Digital Literacy.

INTRODUCTION

Artificial intelligence has become an important part of contemporary society, transforming how individuals communicate, obtain information, make decisions, and participate in digital environments. AI-powered applications are increasingly used in education, healthcare, online communication, entertainment, and workplace activities. These technologies offer opportunities to improve efficiency, accessibility, and personalization, but their expanding role also raises important questions about human psychology and digital wellbeing. The increasing use of intelligent systems makes it necessary to understand how technological interaction influences emotional experiences, cognitive processes, behavioural patterns, and interpersonal relationships. Li et al. (2023) examined AI-based conversational agents for mental health and wellbeing, demonstrating the importance of evaluating both the potential benefits and limitations of AI-supported psychological interventions. Their research provides a useful foundation for investigating how artificial intelligence may contribute to human wellbeing under different conditions.Human psychology involves mental processes, emotions, perceptions, motivation, memory, and behaviour. Digital technologies can influence these processes by determining how

individuals receive information, communicate with others, and respond to everyday experiences. Artificial intelligence introduces additional complexity because intelligent systems can generate conversational responses, personalize recommendations, predict preferences, and assist with decision-making. Nass and Moon (2000) explained that people may respond socially to computers even when they understand that the systems are not human. This perspective is particularly relevant to contemporary conversational AI, which can imitate aspects of human communication. Consequently, interactions with AI may shape users' perceptions of trust, companionship, credibility, and emotional support. Understanding these responses is important for evaluating the psychological consequences of increasingly interactive digital technologies.

One significant area of research concerns the relationship between artificial intelligence and emotional wellbeing. AI-powered conversational agents can provide immediate interaction, accessible information, and opportunities for users to discuss personal concerns. Li et al. (2023) conducted a systematic review and meta-analysis of AI-based conversational agents and found evidence of reductions in symptoms of depression and distress across the included studies. However, their analysis did not establish a statistically significant improvement in overall psychological wellbeing. These findings suggest that particular AI interventions may offer useful support for selected psychological outcomes, but their effectiveness should not be generalized to every application or user. AI systems also have limitations in interpreting complex personal circumstances and responding appropriately to every emotional situation. Their role should therefore be evaluated carefully, particularly when users require professional mental healthcare or meaningful interpersonal support.Artificial intelligence may also influence cognitive functioning, including attention, memory, critical thinking, and decision-making. AI tools can summarize information, generate explanations, organize tasks, and support problem-solving. These functions may reduce routine cognitive effort and allow individuals to concentrate on more complex activities. However, excessive reliance on automated outputs may discourage independent evaluation when users accept information without checking its accuracy. Parasuraman and Riley (1997) examined the use, misuse, disuse, and abuse of automation, demonstrating the importance of understanding how people depend on automated systems. This framework remains relevant to modern AI because the quality of human decision-making depends partly on users' ability to recognize system limitations and maintain appropriate levels of trust. Responsible AI use should therefore encourage independent judgement, information verification, and continued human involvement in important decisions.

Digital wellbeing concerns the ways technology use affects psychological, social, and everyday functioning. It includes maintaining a healthy relationship with digital devices, managing online engagement, and using technology in ways that support personal goals and emotional balance. Artificial intelligence may contribute positively to digital wellbeing by helping users identify behavioural patterns, personalize digital experiences, and access appropriate support. Nevertheless, poorly designed applications may encourage excessive engagement or create difficulties through intrusive recommendations, constant notifications, and limited transparency. Scibetta et al. (2025) reviewed AI-powered digital wellbeing applications and proposed a design framework addressing personalization, intervention strategies, and user-data privacy. Their work

highlights the importance of developing AI systems that support healthy digital habits rather than merely increasing user engagement. Digital wellbeing should therefore be considered an important objective in AI design and evaluation.Privacy, transparency, and trust are also central to the relationship between AI and human psychological wellbeing. Intelligent systems may process personal preferences, conversational records, behavioural information, and other sensitive data to provide personalized services. Although such processing can improve convenience, uncertainty about how personal information is collected and used may create discomfort and reduce trust. The Organisation for Economic Co-operation and Development (2019) established principles for trustworthy artificial intelligence, emphasizing human-centred values, transparency, robustness, and accountability. These principles are relevant to psychological wellbeing because users need to understand the capabilities and limitations of the systems with which they interact. AI developers must therefore consider privacy protection, informed user control, and the potential consequences of inaccurate or biased outputs. Responsible technological development requires attention to human needs alongside technical performance.

The psychological effects of artificial intelligence may also vary according to age, educational background, digital literacy, and individual patterns of technology use. Students may use AI for academic assistance and information retrieval, while professionals may rely on intelligent systems for productivity and decision support. Other users may interact with conversational AI for entertainment, companionship, or general guidance. These different purposes may produce different experiences and outcomes. For example, an AI application that supports an individual in completing a routine task may improve convenience, whereas frequent dependence on a conversational system for emotionally sensitive decisions may raise different concerns. Shin (2025), through a systematic review of research on human-centred AI and digital wellbeing, emphasized the importance of understanding how system features influence users' internal experiences and subsequent behaviours. This perspective supports the need to evaluate AI within its specific social and psychological context.The rapid development of generative AI has further increased the importance of understanding human–AI interaction. Generative systems can produce text, explanations, recommendations, and conversational responses that may appear convincing even when they contain errors. Bender et al. (2021) discussed risks associated with large language models, including misleading outputs and wider social consequences. These concerns demonstrate the importance of critical AI literacy, which enables users to evaluate generated information and understand the limitations of intelligent systems. Individuals should not assume that fluent responses necessarily indicate accuracy, emotional understanding, or professional expertise. Educational institutions, workplaces, and technology developers can help users develop realistic expectations and responsible practices. Such measures are important for ensuring that the convenience of AI does not undermine critical thinking or informed decision-making.

The relationship between artificial intelligence and digital wellbeing is therefore multidimensional, involving psychological, behavioural, social, and ethical considerations. Existing research indicates that AI may provide valuable assistance and support, but its outcomes

depend on system design, user characteristics, application context, and patterns of engagement. This article examines these issues through a qualitative review of relevant scholarly literature, focusing on emotional wellbeing, cognitive functioning, behaviour, social relationships, privacy, and responsible technology use. It aims to develop a balanced understanding of the opportunities and challenges associated with AI while emphasizing the importance of human-centred development. By bringing together research on psychological outcomes and digital wellbeing, the article highlights the need to ensure that artificial intelligence supports human capabilities, autonomy, and meaningful relationships.

RESEARCH OBJECTIVES

1. To examine the impact of artificial intelligence on human psychology, including emotional wellbeing, cognitive functioning, and behavioural patterns.
2. To explore the relationship between AI-based technologies and digital wellbeing, including technology use, social interaction, and psychological experiences.
3. To identify the potential benefits and psychological risks of artificial intelligence and examine approaches to responsible and balanced AI use.

RESEARCH QUESTIONS

1. How does artificial intelligence influence human psychology, including emotional wellbeing, cognitive functioning, and behaviour?
2. What relationship exists between AI-based technologies and individuals' digital wellbeing and social interactions?
3. What potential benefits and psychological risks are associated with artificial intelligence, and how can responsible AI use support human wellbeing?

LITERATURE REVIEW

The literature on artificial intelligence and human psychology draws on research in human–computer interaction, cognitive science, mental health, and digital technology. Early studies established that people may respond to computers according to social expectations normally associated with human interaction. Nass and Moon (2000) demonstrated that individuals can apply social rules to computers despite recognizing that they are machines. This perspective provides a foundation for understanding responses to contemporary AI systems, particularly conversational agents that use natural language and personalized communication. Users may perceive such systems as helpful, reliable, or emotionally supportive, but these perceptions do not necessarily indicate that AI possesses human understanding. The psychological consequences of human–AI interaction therefore require attention to users' expectations, the design of the technology, and the circumstances in which interaction takes place.Research on automation provides further insight into the relationship between intelligent technologies and human decision-making. Parasuraman and Riley (1997) examined different patterns of automation use and explained how inappropriate dependence or failure to use automated systems can influence performance. Their work remains relevant to AI applications that assist with

information retrieval, writing, planning, and decision support. Such applications can improve efficiency, but their usefulness depends on whether users understand their limitations and evaluate their outputs appropriately. Excessive reliance may create difficulties when users fail to verify information or surrender important decisions to automated recommendations. The literature therefore suggests that effective human–AI interaction requires an appropriate balance between automation and independent judgement. This balance is particularly important in education, healthcare, and other contexts where inaccurate information may have significant consequences.Research on AI-based conversational agents has provided evidence concerning their possible contribution to psychological health. Li et al. (2023) conducted a systematic review and meta-analysis of studies evaluating conversational AI for mental health and wellbeing. Their findings indicated that these interventions significantly reduced symptoms of depression and distress in the included studies, although the overall improvement in psychological wellbeing was not statistically significant. The findings demonstrate that AI-based conversational interventions may offer benefits for particular outcomes without necessarily improving every dimension of wellbeing. Their effectiveness may depend on intervention design, the population being studied, the duration of use, and the purpose of the application. These results support continued investigation into the appropriate role of AI in psychological support, while emphasizing that automated tools should not automatically be treated as substitutes for professional treatment or human relationships.

The relationship between artificial intelligence and digital wellbeing has received increased attention as intelligent systems become integrated into everyday applications. Digital wellbeing involves the extent to which technology supports or disrupts emotional balance, personal goals, healthy routines, and meaningful social participation. Scibetta et al. (2025) reviewed AI-powered digital wellbeing applications and developed a design framework addressing personalization, user data, privacy, and intervention strategies. Their work indicates that AI may support healthier technology habits when applications are developed around users' needs and wellbeing objectives. However, the same personalization capabilities may raise concerns when systems collect excessive information or encourage users to rely continuously on automated interventions. The review highlights the importance of integrating psychological principles, responsible data practices, and appropriate evaluation into the development of digital wellbeing tools. This approach positions wellbeing as a central design consideration rather than an assumed benefit of technological innovation.Shin (2025) examined human-centred AI for digital wellbeing through a systematic review of multidisciplinary literature. The proposed framework connects AI system features with users' internal experiences, such as perceptions and emotions, and with their resulting attitudes and behaviours. This approach provides a useful explanation of why the same technology may affect different individuals in different ways. An AI system may improve convenience for one user while producing distraction, discomfort, or excessive reliance for another. Its psychological influence may depend on the user's expectations, the level of personalization, the transparency of the system, and the context in which it is used. The literature consequently supports the need to evaluate AI through human experiences and behavioural outcomes rather than relying exclusively on technical performance measures. It also emphasizes the importance of developing systems that respect autonomy and support users' individual

wellbeing goals.Recent research has also investigated the emotional consequences of increasingly interactive artificial intelligence. Santiago-Torner et al. (2026) examined emotional wellbeing in relation to AI-mediated experiences through a critical review of research published between 2020 and 2025. Their discussion addresses the psychosocial and ethical tensions associated with AI-mediated emotional support, interpersonal trust, and changing patterns of human interaction. This perspective is relevant because conversational systems can provide accessible interaction while also creating uncertainty about the nature and limits of machine-generated support. Users may find AI communication convenient, but they may also misunderstand the capabilities of a system or develop expectations that it cannot reliably meet. These concerns suggest that AI applications intended to support emotional wellbeing should communicate their limitations clearly and encourage appropriate human involvement when necessary.

The potential influence of AI on academic stress and psychological wellbeing is another emerging research area. Wang, Diao, and Yu (2026) conducted a meta-analysis examining AI interventions and academic anxiety. Their analysis found a moderate overall reduction in academic anxiety across the included studies, although the effects differed across intervention types and educational settings. The authors also reported that effects for university students were not statistically significant in their subgroup analysis. These findings suggest that AI may help address certain forms of academic anxiety, but its effectiveness cannot be assumed across all student populations or applications. The findings also demonstrate the importance of considering contextual factors when evaluating psychological outcomes. More broadly, AI-assisted learning may support students when it provides useful guidance and accessible explanations, but its influence on wellbeing requires careful assessment of learning demands, user expectations, and patterns of dependence.Ethical concerns constitute another major theme in the literature. Bender et al. (2021) discussed the limitations and social risks of large language models, including the production of misleading information and the consequences of training systems on large amounts of language data. These concerns have implications for psychological wellbeing because users may place excessive trust in fluent AI-generated responses. Misleading information can influence perceptions, decisions, and emotional reactions, particularly when users lack the knowledge needed to verify an answer. The OECD (2019) principles for trustworthy AI similarly emphasize transparency, accountability, robustness, and human-centred values. Together, these perspectives indicate that responsible AI requires both technical safeguards and clear communication about system capabilities. Privacy protection, informed use, and the opportunity for human oversight are important conditions for maintaining trust and reducing potential harm.

Overall, the reviewed literature identifies artificial intelligence as a technology with potentially beneficial and adverse implications for human psychology and digital wellbeing. Research on conversational agents suggests that some AI interventions may improve selected mental health outcomes, while studies of digital wellbeing emphasize personalization, privacy, and human-centred design. Work on automation and human–computer interaction further highlights the importance of appropriate trust, independent judgement, and realistic expectations. Nevertheless, differences in research methods, populations, applications, and outcome measures make broad

conclusions difficult. The present article brings these perspectives together to examine emotional wellbeing, cognitive functioning, behaviour, social interaction, and responsible AI use. It emphasizes that the value of artificial intelligence depends not only on its capabilities but also on whether its design and use support human autonomy, psychological health, and meaningful relationships.

METHODOLOGY

This article adopts a qualitative, literature-based methodology to examine the impact of artificial intelligence on human psychology and digital wellbeing. Relevant scholarly publications were identified through topic-focused searches of Google Scholar and academic literature concerning AI, mental health, digital wellbeing, human–computer interaction, automation, and responsible technology use. Priority was given to peer-reviewed journal articles, systematic reviews, meta-analyses, and relevant conceptual studies published between 2023 and 2026, while earlier foundational publications were included to explain established theoretical perspectives. Sources were considered for their relevance to the research objectives, clarity of their scholarly contribution, and usefulness in explaining psychological, behavioural, and ethical aspects of AI use. The selected literature was examined comparatively to identify recurring themes, differences in reported outcomes, and limitations in existing knowledge. Particular attention was given to emotional wellbeing, cognitive dependence, digital habits, social interaction, privacy, and human-centred design. This article does not involve the collection of new participant data or the administration of an original survey or experiment. Its conclusions are therefore based on the interpretation and synthesis of published research rather than direct measurements of participants' psychological experiences.

RESEARCH DESIGN

The study employs a qualitative narrative literature-review design to develop an interpretive understanding of the relationship between artificial intelligence, human psychology, and digital wellbeing. This design is appropriate because the topic includes multiple interconnected dimensions, including emotional experiences, cognitive processes, behavioural patterns, social relationships, and ethical concerns. The review is organized around the research objectives and questions, allowing the literature to be examined in relation to psychological outcomes, digital engagement, and responsible AI use. Studies addressing conversational AI, automation, human–computer interaction, and digital wellbeing applications are considered to identify similarities and differences in their findings. The design also recognizes the importance of context, including the purpose of AI use, users' digital literacy, and the characteristics of the technology. Rather than estimating a statistical relationship between variables, the study develops a thematic interpretation of existing evidence. As a narrative review, it does not claim to provide an exhaustive systematic search or a reproducible estimate of the overall effects of AI.

DATA ANALYSIS

The data analysis uses qualitative thematic synthesis to organize and interpret the selected scholarly literature. Relevant findings and arguments are grouped into themes concerning emotional wellbeing, cognitive functioning, behavioural patterns, digital habits, social interaction, privacy, and responsible technology use. Within each theme, the literature is compared to identify recurring findings, contrasting interpretations, and areas in which evidence remains limited. Potential benefits, including convenient information access, personalized assistance, and selected mental health outcomes, are examined alongside risks involving excessive reliance, misleading outputs, privacy concerns, and weakened human oversight. The analysis also considers how individual characteristics, system design, and usage context may influence the outcomes reported by different researchers. Conclusions are developed through comparison and interpretation rather than statistical aggregation because the reviewed studies differ in their methods, populations, and outcome measures. No original numerical dataset was collected, and no statistical tests were performed for this article. Accordingly, the analysis identifies themes in existing evidence without claiming new causal relationships or statistically significant findings.

FINDINGS

The review of scholarly literature indicates that artificial intelligence has a complex relationship with human psychology and digital wellbeing. The first major finding is that AI can improve access to information, personalized assistance, and selected forms of psychological support. AI-powered conversational agents and digital applications may help users obtain information, organize activities, and access interventions that would otherwise be difficult to reach. Li et al. (2023) reported reductions in depression and distress in studies of AI-based conversational agents, although improvements in overall psychological wellbeing were not statistically significant. This finding suggests that AI may offer benefits for specific psychological outcomes, but its effectiveness depends on the application, the intended purpose, and the characteristics of the users.The second finding concerns emotional wellbeing and human–AI interaction. Conversational systems can provide immediate responses and accessible communication, which some individuals may find reassuring or useful. However, automated responses do not necessarily demonstrate genuine emotional understanding, and AI systems may fail to respond appropriately to complex personal circumstances. Santiago-Torner et al. (2026) discussed the psychosocial and ethical challenges associated with AI-mediated emotional wellbeing. The literature therefore indicates that AI may complement certain forms of emotional support, but it should not automatically replace human relationships or qualified professional care. Further research is needed to understand the long-term emotional consequences of frequent interaction with conversational AI.

The third finding relates to cognitive functioning and independent decision-making. AI applications can simplify information retrieval, summarization, planning, and problem-solving. These capabilities may improve efficiency and help users complete routine tasks. However, inappropriate reliance on automated outputs may reduce the effort users devote to verification and independent reasoning. Parasuraman and Riley (1997) emphasized the importance of

appropriate automation use and the risks associated with misuse or over-reliance. This perspective suggests that AI users should critically evaluate generated information, recognize the limitations of automated systems, and retain responsibility for important decisions. The literature supports the use of AI as an aid to human thinking rather than a complete replacement for independent judgement.The fourth finding concerns digital habits and technology-related behaviour. AI-powered applications can personalize recommendations and provide adaptive interventions that may help users manage their digital activities. Scibetta et al. (2025) highlighted the potential of AI-powered digital wellbeing tools while identifying challenges involving privacy, personalization, and excessive reliance on automated interventions. These findings suggest that the design of AI applications is important in determining whether they support healthy digital habits. Systems that encourage reflection, provide meaningful user controls, and respect personal boundaries may contribute to better digital experiences. Conversely, applications that encourage continuous engagement without sufficient attention to wellbeing may make balanced technology use more difficult.The fifth finding highlights privacy, transparency, and trust as important conditions for psychological wellbeing. AI systems may process personal information to generate recommendations and personalize interactions. If users do not understand how their information is collected or used, they may experience uncertainty about privacy and control. The OECD (2019) principles for trustworthy AI emphasize transparency, accountability, robustness, and human-centred values. These principles support the conclusion that responsible AI development should protect personal information and provide clear explanations of system capabilities and limitations. Trust should be based on appropriate safeguards and realistic expectations rather than the assumption that AI-generated information is always reliable.The sixth finding concerns digital literacy and responsible AI use. Users require the ability to evaluate information, recognize potential errors, protect personal data, and decide when human assistance is necessary. Bender et al. (2021) highlighted the risks associated with misleading outputs from large language models, reinforcing the importance of critical evaluation. Educational institutions and workplaces can promote responsible AI use by teaching individuals how to verify information and maintain independent reasoning. The reviewed literature consequently suggests that digital wellbeing depends on the interaction between technological design, user awareness, individual circumstances, and social context. These findings represent a synthesis of published research rather than results from a new empirical investigation.

CONCLUSION

Artificial intelligence is increasingly shaping human psychology and digital wellbeing through its influence on communication, information access, education, decision-making, and everyday digital activities. The reviewed literature demonstrates that AI can offer valuable benefits, including convenient assistance, personalized services, and potential improvements in selected mental health outcomes. At the same time, its expanding use raises concerns about emotional dependence, cognitive reliance, privacy, trust, and the quality of human relationships. These findings indicate that the psychological consequences of artificial intelligence cannot be understood through technological performance alone. They must also be considered in relation to human needs, behavioural patterns, social circumstances, and individual differences.The article

concludes that the impact of AI on human psychology is neither universally positive nor universally negative. Its outcomes depend on the purpose of use, the design of the application, users' expectations, and their ability to evaluate AI-generated information. AI can support human capabilities when it provides useful assistance while preserving independent thinking, personal autonomy, and meaningful human interaction. However, inappropriate reliance on automated systems may create difficulties when users accept inaccurate information, overlook privacy concerns, or substitute digital interactions for necessary human support. Responsible AI use therefore requires a balance between technological convenience and human judgement.

Promoting digital wellbeing requires cooperation among individuals, researchers, educators, developers, and policymakers. Users should develop critical AI literacy, verify important information, protect personal data, and maintain healthy technology habits. Developers should prioritize transparency, privacy, accessibility, and user control while evaluating the psychological consequences of their systems. Educational institutions and workplaces should encourage informed AI use without weakening opportunities for independent reasoning and interpersonal communication. Future research should examine long-term human–AI interactions, differences across demographic and cultural groups, and the effectiveness of AI applications specifically designed to promote digital wellbeing. In conclusion, artificial intelligence can contribute meaningfully to psychological health when it is developed and used responsibly, with human wellbeing, autonomy, and social relationships remaining central priorities.

REFERENCES

Bender, E. M., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). On the dangers of stochastic parrots: Can language models be too big? Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency, 610–623.

Li, H., Zhang, R., Lee, Y.-C., Kraut, R. E., & Mohr, D. C. (2023). Systematic review and meta-analysis of AI-based conversational agents for promoting mental health and well-being. npj Digital Medicine, 6, Article 236.

Nass, C., & Moon, Y. (2000). Machines and mindlessness: Social responses to computers. Journal of Social Issues, 56(1), 81–103.

Organisation for Economic Co-operation and Development. (2019). Recommendation of the Council on Artificial Intelligence. OECD.

Parasuraman, R., & Riley, V. (1997). Humans and automation: Use, misuse, disuse, abuse. Human Factors, 39(2), 230–253.

Santiago-Torner, C., Corral-Marfil, J.-A., & Tarrats-Pons, E. (2026). Artificial intelligence and the reconfiguration of emotional well-being (2020–2025): A critical reflection. Societies, 16(1), Article 6.

Scibetta, L., Pellegrino, M., Monge Roffarello, A., & De Russis, L. (2025). Intelligent support for digital wellbeing: A design framework through a systematic literature review. International Journal of Human-Computer Studies, 205, Article 103653.

Shin, Y. (2025). Toward human-centered artificial intelligence for users' digital well-being: Systematic review, synthesis, and future directions. JMIR Human Factors, 12, Article e69533.

Wang, W., Diao, L., & Yu, J. (2026). Artificial intelligence and academic anxiety? A meta-analysis. BMC Psychology.