International Journal Of
Digital Society
And
Social Transformation
VOL 01 | No. 1 | 2026
P-ISSN: XXXX_XXXX | E-ISSN: XXXX_XXXX

# THE IMPACT OF ARTIFICIAL INTELLIGENCE ON SOCIAL RELATIONSHIPS AND HUMAN INTERACTION

**Sana Afzal**
BS, Department of Computer Science, The Cosmic Degree College (For Women) ,University of Okara

## ABSTRACT

*Artificial Intelligence (AI) is increasingly influencing the ways individuals communicate, develop relationships, exchange information, and interact within contemporary society. AI-powered chatbots, virtual assistants, social media recommendation systems, and conversational applications have become important components of everyday digital communication. These technologies offer opportunities to improve accessibility, provide emotional support, facilitate communication, and connect individuals across geographical boundaries. However, their growing integration into daily life also raises concerns regarding emotional dependency, reduced face-to-face interaction, privacy, social isolation, and the authenticity of human relationships. This study examines the impact of artificial intelligence on social relationships and human interaction, with particular attention to communication patterns, emotional connections, interpersonal trust, and social behavior. The research adopts a qualitative, literature-based approach, examining relevant scholarly publications, theoretical perspectives, and research on AI-mediated communication. The analysis explores both the potential benefits and the challenges associated with integrating AI into personal and social relationships. The anticipated synthesis suggests that AI can support communication and provide useful conversational experiences, but its effects depend on the purpose of use, frequency of interaction, individual circumstances, and the availability of meaningful human contact. The study emphasizes that artificial intelligence should complement rather than replace human relationships. It concludes that responsible AI development, digital literacy, ethical safeguards, and awareness of emotional dependency are essential for maintaining healthy social relationships in an increasingly technology-driven society.*

***KEYWORDS:*** *Artificial Intelligence, Social Relationships, Human Interaction, Digital Communication, AI Chatbots, Emotional Support, Social Behavior, Interpersonal Trust, Digital Society, Human–AI Interaction, Social Connectivity, Technology and Society, Emotional Dependency, Digital Well-Being, Ethical Artificial Intelligence.*

## INTRODUCTION

Artificial intelligence has become an increasingly influential force in contemporary society, transforming communication, education, employment, entertainment, healthcare, and interpersonal relationships. The development of intelligent conversational systems, automated communication platforms, virtual assistants, and personalized digital services has created new opportunities for individuals to communicate with both humans and machines. Traditionally, social relationships have been established and maintained through face-to-face conversations, shared experiences, emotional understanding, and mutual participation in social activities. Although digital communication had already changed these practices through social networking platforms and instant messaging applications, artificial intelligence has introduced a further transformation by enabling technological systems to generate human-like responses, recognize conversational patterns, personalize communication, and participate in extended interactions. These developments have encouraged researchers to examine whether AI strengthens existing social connections, changes the quality of interpersonal communication, or creates new forms of social dependency.One of the most significant characteristics of contemporary AI systems is their ability to provide immediate and personalized responses. Hariyanto, H., Kristianingsih, F. X. D., & Maharani, R. (2025). found that Individuals can use AI-powered applications to seek information, discuss personal

International Journal Of
Digital Society
And
Social Transformation
VOL 01 | No. 1 | 2026
P-ISSN: XXXX_XXXX | E-ISSN: XXXX_XXXX

concerns, practice communication skills, explore emotions, and receive conversational assistance at almost any time. Such applications may be particularly useful for individuals who experience geographical separation from family members, difficulty accessing social support, or discomfort when discussing sensitive subjects with other people. AI can also facilitate communication for people who encounter language barriers or require assistive technologies. Nevertheless, the availability of artificial conversational partners raises questions about whether convenient machine-based interactions can provide the emotional depth, reciprocal responsibility, and shared understanding associated with human relationships. A system may generate empathetic language without possessing human consciousness or experiencing emotions in the way a person does, making it important to distinguish perceived emotional understanding from actual human emotional experience.

Furthermore, AI-mediated communication may influence how individuals understand friendship, companionship, trust, and emotional intimacy. De Freitas, J., Oğuz-Uğuralp, Z., Uğuralp, A. K., & Puntoni, S. (2026). Explained thatWhen people repeatedly interact with conversational systems that respond in supportive and personalized ways, they may develop feelings of familiarity, attachment, or companionship. Such experiences can be meaningful to users, but they may also encourage unrealistic expectations about human communication or lead some individuals to prioritize digital interactions over face-to-face relationships. The possible consequences are not uniform because people differ in their social circumstances, communication preferences, technological skills, and reasons for using AI. For some individuals, AI may serve as a bridge to wider social participation; for others, excessive reliance on AI-mediated companionship could reduce opportunities to develop interpersonal skills or maintain existing relationships. Therefore, the relationship between artificial intelligence and social well-being requires careful examination rather than a simplistic conclusion that AI is either entirely beneficial or inherently harmful.The influence of AI also extends beyond direct conversations with chatbots. Recommendation algorithms shape the information people encounter online, influence their exposure to different viewpoints, and contribute to the formation of digital communities. Automated systems may help users discover people with shared interests, maintain long-distance connections, and participate in discussions that would otherwise be difficult to access. At the same time, algorithmic personalization may reinforce existing preferences, narrow exposure to alternative perspectives, and contribute to misunderstandings or social polarization under certain conditions.

From a broader social perspective, the growing integration of artificial intelligence requires renewed attention to the relationship between technological innovation and human values. Social relationships depend not only on the exchange of information but also on empathy, accountability, mutual respect, vulnerability, and shared social experiences. While AI can support some communication activities, it cannot automatically reproduce every dimension of human connection. Its effects therefore depend on how systems are designed, how individuals use them, and how institutions establish ethical standards for their deployment. Digital literacy, transparent system design, privacy protection, and awareness of the limitations of machine-generated communication are important for helping individuals make informed decisions about AI use.In this context, the present study investigates the impact of artificial intelligence on social relationships and human interaction by examining its potential to improve communication, support companionship, influence emotional experiences, and reshape interpersonal behavior. It also considers concerns involving emotional dependency,

International Journal Of
Digital Society
And
Social Transformation
VOL 01 | No. 1 | 2026
P-ISSN: XXXX_XXXX | E-ISSN: XXXX_XXXX

social isolation, trust, authenticity, and the possible displacement of direct human contact. By bringing these themes together, the study aims to contribute to a balanced understanding of AI within the wider transformation of digital society. Its central argument is that the social consequences of artificial intelligence depend not simply on the existence of advanced technology but on the purposes, practices, and ethical principles governing its use. A human-centered approach is therefore necessary to ensure that technological innovation strengthens meaningful social connections instead of undermining the relationships that remain fundamental to individual and collective well-being.

## RESEARCH OBJECTIVE

1. To examine how artificial intelligence influences social relationships and human interaction, particularly in relation to communication patterns, emotional connection, interpersonal trust, social support, and the potential risks of excessive dependence on AI-mediated communication.

## RESEARCH QUESTION

1. How does artificial intelligence influence the quality of social relationships and patterns of human interaction, including communication, emotional connection, trust, and social connectedness?

## LITERATURE REVIEW

Artificial intelligence is changing the nature of digital communication by introducing systems capable of producing context-sensitive responses, participating in extended conversations, and adapting their language to users' expressed needs. Unlike traditional communication technologies, which primarily transmit messages between people, conversational AI can directly participate in exchanges by generating responses that appear coherent, supportive, and personalized. This development has created a new area of inquiry concerning the social consequences of interactions between people and artificial conversational agents. Researchers are increasingly investigating whether such technologies complement existing relationships, provide alternative forms of companionship, or alter people's expectations of interpersonal communication. Fang, C. M., Liu, A. R., Danry, V., Lee, E., Chan, S. W., Pataranutaporn, P., ... & Agarwal, S. (2025). Explains thatThe development of large language models has made AI-mediated communication more accessible and natural. Users can engage with conversational systems to obtain information, organize their thoughts, discuss everyday problems, and explore personal experiences. Such systems may provide convenient support to individuals who have limited access to social resources or who find certain conversations difficult to initiate with other people. However, natural-sounding language should not automatically be interpreted as evidence of genuine understanding or reciprocal emotional experience. The distinction between conversational performance and human emotional experience is central to evaluating the social role of AI.

A 2026 study by Kleinert and colleagues examined interpersonal closeness in two randomized studies involving 492 participants. The researchers found that an AI system could generate stronger feelings of closeness than human partners in a particular emotionally engaging conversation task when participants believed they were interacting with a human.

International Journal Of
Digital Society
And
Social Transformation
VOL 01 | No. 1 | 2026
P-ISSN: XXXX_XXXX | E-ISSN: XXXX_XXXX

The effect was reduced when the AI identity was disclosed, highlighting the potential importance of expectations, self-disclosure, and perceived social presence in human–AI interaction. These findings demonstrate that conversational design can influence subjective experiences of closeness, although the results of a structured experiment should not be generalized to long-term friendships or everyday human relationships without further evidence. Consequently, AI should be understood as a technology that can influence the processes through which people communicate and interpret social experiences. Its influence depends on the interaction setting, the expectations users bring to the conversation, and whether AI is used to support communication with others or to replace it.AI companionship has emerged as an important subject in research on digital society. Companion-oriented systems are designed to sustain conversations, respond to emotional disclosures, and create a sense of continuity across interactions. Some users describe these systems as companions because they provide immediate responses, appear attentive, and are available when human contacts are unavailable. This perceived accessibility may be particularly attractive to people who feel socially disconnected, experience geographical separation from loved ones, or prefer a low-pressure environment for discussing personal matters.Malfacini (2025) examined the potential effects of companion AI on human relationships, discussing both its possible benefits and associated risks. Companion systems may offer opportunities for reflection, perceived emotional support, and conversational engagement. At the same time, their design can encourage users to invest emotional attention in systems that are not human partners and may operate according to commercial, technical, or organizational priorities. This raises questions about user autonomy, the boundaries of companionship, and the responsibility of developers to prevent manipulative design practices.

A related systematic review of romantic AI companions published in 2025 examined 23 articles and identified both potential benefits and possible harms. Folk, D., & Dunn, E. (2026). revealed thatThe reviewed literature described perceived connection, opportunities for personal reflection, and companionship, while also identifying concerns about excessive reliance, privacy, manipulation, and the possible weakening of human relationships. The review's findings suggest that emotional experiences involving AI are complex and cannot be evaluated solely according to whether users report enjoying the interaction. The longer-term consequences, the context of use, and the effects on relationships outside the digital environment must also be considered. An important distinction is that a user may genuinely experience comfort or attachment during an AI interaction even though the system does not experience emotions in the human sense. The user's experience can be psychologically meaningful without establishing that the relationship is equivalent to a reciprocal human relationship. Therefore, research should distinguish perceived companionship, emotional attachment, social support, and actual improvements in social connectedness.

Loneliness is frequently discussed in research on AI companionship because conversational systems offer a readily available way to engage in social-like exchanges. People experiencing loneliness may use AI because it is accessible, does not visibly express impatience, and allows conversations to occur without the uncertainty associated with human responses. These features may provide temporary comfort, but they do not necessarily address the underlying causes of loneliness, such as limited social networks, relationship difficulties, exclusion, or a lack of meaningful community participation.A longitudinal study published by Folk and Dunn in 2026 investigated the relationship between social chatbot use and loneliness among more than 2,000 adults across four Western countries over 12 months. The

International Journal Of
Digital Society
And
Social Transformation
VOL 01 | No. 1 | 2026
P-ISSN: XXXX_XXXX | E-ISSN: XXXX_XXXX

authors reported that increased social chatbot use predicted increased loneliness when loneliness was measured through a single indicator of emotional isolation. They also found that lower social connectedness predicted subsequent increases in chatbot use, while chatbot use did not significantly predict reductions in social connectedness when a broader measure was applied. The authors cautioned against strong conclusions because the analyses were exploratory. These findings are important because they indicate that AI companionship may be both a response to existing social difficulties and, under some circumstances, a factor associated with continued emotional isolation. They do not establish that AI use inevitably causes loneliness. Instead, they suggest that the relationship between AI use and social well-being may depend on individual circumstances, the kind of interaction involved, and the availability of offline relationships.The distinction between temporary relief and sustained social improvement is especially important. A person may feel less alone during a conversation with an AI system without experiencing a lasting increase in social support or participation in community life. Researchers should therefore assess not only immediate feelings after AI interactions but also longer-term changes in friendship quality, family communication, participation in social activities, and perceived belonging.The frequency and duration of AI use may influence its relationship with social behavior. Occasional use for information, communication practice, or emotional reflection differs substantially from prolonged engagement that becomes a person's principal source of companionship. Research must distinguish the effects of the technology's design from the characteristics of the people who choose to use it extensively.

Fang and colleagues (2025) reported a four-week randomized controlled study involving 981 participants that examined different chatbot interaction modes and psychosocial outcomes, including loneliness, social interaction with real people, emotional dependence, and problematic use. The researchers did not detect significant effects attributable to the experimental conditions. However, participants who voluntarily used the chatbot more frequently showed associations with less favorable psychosocial outcomes, while higher trust and social attraction toward the AI were associated with greater emotional dependence and problematic use. These results highlight the importance of distinguishing assigned experimental exposure from self-selected patterns of use. Ho, J. Q., Hu, M., Chen, T. X., & Hartanto, A. (2025). Elaborated onThe findings also caution against assuming that a more engaging conversational design necessarily improves users' social well-being. High engagement may reflect convenience and usefulness, but it may also occur alongside pre-existing vulnerabilities or unmet social needs. Without appropriate research designs, it is difficult to determine whether frequent AI use produces adverse outcomes, whether people experiencing difficulties are more likely to use AI, or whether both processes occur together.The potential displacement of human interaction is another concern. Time devoted to AI conversations may compete with time available for family discussions, friendships, and community activities. Nevertheless, displacement should not be assumed in every case. Some users may engage with AI while maintaining active social networks, and others may use it to prepare for difficult conversations or develop confidence before communicating with people. The key question is whether AI expands the user's capacity for social participation or becomes a substitute for meaningful relationships.

International Journal Of
Digital Society
And
Social Transformation
VOL 01 | No. 1 | 2026
P-ISSN: XXXX_XXXX | E-ISSN: XXXX_XXXX

## METHODOLOGY

This study adopts a qualitative, literature-based methodology to examine the impact of artificial intelligence on social relationships and human interaction. The approach is appropriate because the topic involves complex social experiences, including emotional attachment, perceived companionship, communication practices, interpersonal trust, loneliness, and ethical concerns. Rather than collecting new responses from participants, the study synthesizes existing scholarly research to identify major themes, compare findings, and develop a broader understanding of how AI-mediated communication may influence human social life.The study draws on peer-reviewed journal articles, systematic reviews, conceptual frameworks, and empirical investigations published in 2025 and 2026. Relevant literature is identified through scholarly search resources and publisher platforms, including research addressing AI companionship, conversational agents, social connectedness, emotional support, interpersonal closeness, and human–AI relationships. Particular attention is given to studies that explain their research designs and provide empirical evidence concerning social and psychological outcomes.The literature is evaluated according to its relevance to the research question, clarity of methodology, credibility of publication venue, and contribution to understanding social relationships. Both beneficial and potentially harmful outcomes are considered. Studies discussing communication support, emotional connection, and social bonding are examined alongside research addressing loneliness, dependency, privacy, trust, and the displacement of human contact. Where findings differ, the study considers possible explanations, including differences in sample characteristics, duration of AI use, outcome measures, and experimental conditions.

## RESEARCH DESIGN

The research uses a qualitative descriptive design supported by thematic literature analysis. This design enables a structured examination of how artificial intelligence may influence social relationships without requiring the researcher to conduct an experiment or survey. The unit of analysis is the scholarly publication, with individual studies examined for their descriptions of AI use, social experiences, communication outcomes, and ethical implications.The research design follows five connected stages. First, the research question and scope are defined to focus on AI-mediated communication and interpersonal relationships. Second, relevant publications from 2025–2026 are identified using combinations of terms such as artificial intelligence, AI companionship, human interaction, social relationships, loneliness, emotional attachment, and interpersonal trust. Third, eligible publications are screened for relevance and sufficient methodological or conceptual information. Fourth, information from the selected publications is extracted and organized into thematic categories. Finally, the themes are compared and synthesized to develop an integrated interpretation of the relationship between AI use and social well-being.The design incorporates evidence from different research approaches, including controlled experiments, longitudinal studies, systematic reviews, and conceptual analyses. This diversity allows the study to consider both immediate experiences and broader social implications. Experimental research can help identify effects under particular conditions, whereas longitudinal research can investigate changes over time. Reviews can summarize the scope of existing evidence, and conceptual papers can explain possible mechanisms through which AI influences relationships.To strengthen the credibility of the synthesis, the study distinguishes empirical

International Journal Of
Digital Society
And
Social Transformation
VOL 01 | No. 1 | 2026
P-ISSN: XXXX_XXXX | E-ISSN: XXXX_XXXX

findings from theoretical interpretations and proposed future outcomes. Conflicting evidence is retained rather than excluded merely because it does not support a single conclusion.

## DATA ANALYSIS

The study applies thematic analysis to the information extracted from the selected publications. The purpose is to identify recurring patterns and meaningful differences in the ways artificial intelligence influences social communication, emotional experiences, and interpersonal relationships. The analysis is organized into six principal themes: communication and accessibility, emotional connection and companionship, loneliness and social connectedness, trust and authenticity, emotional dependency, and ethical and cultural considerations.The first stage involves familiarization with the literature. Each publication is examined for its objectives, theoretical approach, research design, population, principal findings, and limitations. Information relevant to the research question is then coded according to the social outcomes discussed. For example, findings about personalized conversation and communication assistance are grouped under communication and accessibility, while findings about attachment, perceived empathy, and companionship are grouped under emotional connection.The second stage involves comparing the coded information across studies. Research examining social bonding is considered alongside studies investigating loneliness and emotional dependence. This comparison helps distinguish short-term positive experiences from evidence concerning broader social well-being. Particular attention is paid to differences between perceived support, measured social connectedness, and actual changes in relationships with family members, friends, or partners.The third stage identifies areas of agreement, disagreement, and uncertainty. Some studies suggest that conversational AI can create feelings of closeness or provide perceived emotional support, while others highlight associations between intensive use and less favorable psychosocial outcomes. These results are not necessarily contradictory because they may reflect different populations, usage patterns, time periods, and outcome measures.

## FINDINGS

The following findings summarize patterns reported in the literature reviewed above. They are a synthesis of existing research, not results from a new survey or experiment conducted for this paper.The literature indicates that conversational AI can make communication support more accessible. AI systems can provide immediate responses, help users organize thoughts, support language practice, and assist with difficult conversations. These functions may be valuable when individuals have limited access to communication resources or need help expressing their concerns. However, the availability of conversational support does not automatically establish that users' relationships with other people improve.Research suggests that personalized responses and emotionally engaging conversations can encourage users to experience AI systems as socially present or supportive. Kleinert and colleagues (2026), for example, found that AI-generated responses could increase perceived interpersonal closeness in a controlled conversational task under particular labeling conditions. This suggests that conversational style and user expectations can influence feelings of connection. The literature does not support a universal conclusion that AI companionship either eliminates loneliness or inevitably increases it. The 2026 longitudinal research by Folk and Dunn found evidence of a relationship between chatbot use and emotional isolation, while also suggesting that lower social connectedness may lead people to seek more chatbot companionship. These results

International Journal Of
Digital Society
And
Social Transformation
VOL 01 | No. 1 | 2026
P-ISSN: XXXX_XXXX | E-ISSN: XXXX_XXXX

indicate that users' existing social circumstances and the measures used to assess loneliness are important when interpreting outcomes. Evidence from a 2025 controlled study suggests that the amount of voluntary chatbot use and users' attraction to the system deserve further investigation. Although the experimental conditions did not produce significant differences in the measured outcomes, more frequent voluntary use was associated with less favorable psychosocial outcomes.

## CONCLUSION

Artificial intelligence is becoming an important part of contemporary social life, influencing how people communicate, experience companionship, and maintain relationships. This study examined its potential effects on social relationships and human interaction through a qualitative synthesis of recent literature. The review indicates that AI offers several opportunities, including accessible conversational support, personalized communication, assistance with difficult discussions, and the possibility of perceived emotional connection. These functions may help individuals reflect on their experiences, communicate more confidently, and obtain support when human contacts are not immediately available.However, the findings also highlight important concerns regarding loneliness, emotional dependency, privacy, trust, and the possible displacement of face-to-face communication. Although some users may experience comfort and companionship through AI, these experiences should not automatically be interpreted as evidence of improved social connectedness. Research published in 2025 and 2026 suggests that the relationship between AI use and social well-being is complex and may vary according to individual circumstances, interaction patterns, and the availability of existing social support.The study further emphasizes that the effects of AI depend on how these technologies are designed and used. When AI helps individuals prepare for conversations, overcome communication barriers, or reflect on interpersonal difficulties, it may complement human relationships.

## REFERENCES

*Hariyanto, H., Kristianingsih, F. X. D., & Maharani, R. (2025). Artificial intelligence in adaptive education: A systematic review. Discover Education, 4, 458.*

*De Freitas, J., Oğuz-Uğuralp, Z., Uğuralp, A. K., & Puntoni, S. (2026). AI companions reduce loneliness. Journal of Consumer Research, 52(6), 1126-1148.*

*Fang, C. M., Liu, A. R., Danry, V., Lee, E., Chan, S. W., Pataranutaporn, P., ... & Agarwal, S. (2025). How AI and human behaviors shape psychosocial effects of extended chatbot use: A longitudinal randomized controlled study. arXiv preprint arXiv:2503.17473.*

*Folk, D., & Dunn, E. (2026). How does turning to AI for companionship predict loneliness and vice versa?. Psychological Science, 37(4), 276-286.*

*Ho, J. Q., Hu, M., Chen, T. X., & Hartanto, A. (2025). Potential and pitfalls of romantic Artificial Intelligence (AI) companions: A systematic review. Computers in Human Behavior Reports, 19, 100715.*