The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 14, Issue 2, April- June, 2026
DIP: 18.01.100.20261402, DOI: 10.25215/1402.100
https://www.ijip.in

Research Paper

Exploring Algorithms and Affection a Psychological Interplay of AI-Human Relationships in Generation Z and Generation Alpha

Shalini Roychaudhary[1]*

ABSTRACT

Artificial Intelligence (AI) systems such as conversational agents, social chatbots, and virtual companions are increasingly integrated into young people's social environments. Generation Z and Generation Alpha interact with AI not only as tools but also as relational partners, raising crucial questions about emotional dependency, social development, and psychological well-being. To review recent psychological and developmental literature on AI-human relationships among Generation Z and Generation Alpha, focusing on emotional attachment, dependency risks, social cognition, and identity formation. A narrative literature review synthesised research from psychology, developmental science, human-computer interaction, and related fields. Emphasis was placed on empirical studies examining emotional dependency, attachment, and psychosocial outcomes of AI interaction among youth. While AI provides emotional support and companionship that can, in some contexts, benefit psychosocial well-being, an emerging body of research highlights potential psychological risks. These include increased emotional dependence, reduced human social interaction quality, unrealistic relational expectations, and developmental displacement of interpersonal skills. Psychologically informed design, effective boundaries, and further research are needed to ensure AI supports rather than undermines youth social development.

Keywords: *Artificial Intelligence, Human-AI Relationships, Generation Z, Generation Alpha, Emotional Dependency, Youth Psychology*

Artificial Intelligence has advanced beyond pure functionality into realms that simulate social presence, responsiveness, and emotional engagement. Interactive AI companions including conversational chatbots, empathetic virtual agents, and adaptive algorithms are designed to engage users beyond transactional tasks. For digital-native cohorts such as Generation Z (born 1997-2012) and Generation Alpha (born 2013 onwards), these systems are part of everyday life and influence patterns of interaction, self-expression, and emotional support.

The psychological significance of these interactions lies in their affective dimension. Unlike earlier technologies that mediated human-to-human communication, many modern AI systems actively participate in dialogic exchanges that resemble relational encounters. Young people increasingly disclose personal thoughts, seek advice, and express emotions to

[1]Assistant Professor, Department of Applied Psychology, Dibrugarh University, Assam, India.
*Corresponding Author

Received: March 25, 2026; Revision Received: May 11, 2026; Accepted: May 15, 2026

AI in ways that mirror human relational dynamics. These patterns raise important questions about emotional attachment, dependency, and developmental impact.

Developmental psychology underscores that social experiences in adolescence and early childhood shape emotional regulation, identity formation, and relationship competence. When AI becomes a routine source of companionship, researchers must examine how such interactions interface with traditional developmental processes. This paper synthesises current psychological research on AI-human relationships among Generation Z and Generation Alpha, emphasizing emotional dependency, social cognition, and relational dynamics.

Theoretical Framework

Attachment theory holds that individuals form emotional bonds with figures perceived as reliable and responsive. When AI agents consistently deliver empathy-like responses, they may elicit attachment-like perceptions though not biologically anchored especially among youth with insecure support networks.

Social cognitive theories suggest that behaviours are influenced by observed interaction patterns. Adolescents engaging with AI companions may internalise relational norms that reflect AI design features rather than real-world human interactions, potentially affecting identity and social skill development.

AI-human relationships can function across a spectrum from emotional support to social substitution. Some research suggests that AI can reduce loneliness, provide a practice space for communication, and offer identity exploration opportunities. Others highlight risks including emotional dependency, displacement of human contact, and altered expectations of reciprocity and emotional labour.

REVIEW OF LITERATURE

A growing body of research has examined how human–AI interaction shapes emotional, cognitive, and relational outcomes, particularly among adolescents and young people. Contemporary theoretical models propose that human-AI attachment develops through stages beginning with functional expectations, progressing to positive emotional evaluation, and culminating in stable internal representations of AI as social actors, underscoring that attachment processes can extend beyond human partners to non-human agents with social attributes (Shu et al., 2026). Empirical investigations support this, showing that users form parasocial bonds with AI companions, especially when the AI displays human-like conversational qualities; over repeated use, perceptions of AI shift toward friend-like attributions, a trend that may persist even without beneficial effects on broader psychosocial health. Longitudinal data reveal that variables such as agency, parasocial interaction, and user engagement significantly shape how AI companionship evolves over time, with individuals who view AI as responsive showing psychological pathways toward deeper emotional connection (Shu et al., 2026).

Evidence also shows that adolescents may trust and self-disclose to AI more than to human counterparts after limited periods of frequent chatbot use, reflecting how easily AI can become a primary emotional outlet rather than a supplement (Sun et al., 2026). Some studies emphasise potential positive effects. AI companions can provide safe spaces for self-

disclosure and emotional exploration without fear of judgment, which may enhance social confidence (Sun et al., 2026).

Research focusing on conversational agent usage among youth reveals both perceived benefits and risks. For example, some studies report that AI chatbots can facilitate identity exploration and emotional practice in safe settings, potentially aiding adolescents who struggle with social anxiety (Sun et al., 2026). However, correlational work also points to the possibility that heavy reliance on AI can inadvertently diminish face-to-face social interaction, reinforcing unrealistic expectations of emotional responsiveness and limiting opportunities to practice complex interpersonal skills (Fang et al., 2025).

Multiple studies analyzing AI companion use have reported nuanced psychological associations. For instance, research on emergent AI companions indicates that users with smaller social networks are more likely to rely on AI for companionship, but intensive use and high levels of self-disclosure correlate with lower well-being and limited substitution for human connection (Fang et al., 2025). Controlled experiments with large samples have shown that higher exposure to relationship-seeking AI can increase intentions to seek future AI companionship and strengthen perceptions of the AI as a friend, even without improvements in psychosocial health outcomes (Kim et al., 2025).

Interdisciplinary literature underscores that human-AI relationships operate through mechanisms similar to parasocial interaction with media figures or pets, suggesting that emotional attachment to AI might rely on familiar psychological processes but without genuine reciprocity or mutual emotional investment (Moon, 2025). Studies also note that the human tendency to anthropomorphize AI, especially when emotional needs or social vulnerabilities are present, amplifies the likelihood of forming intense bonds, even in the absence of traditional attachment figures (Moon, 2025).

Importantly, several news-reported trends echo academic concerns, noting rising patterns of excessive AI use among students that coincide with screen time increases, academic decline, and behavioural shifts, indicating possible psychological and developmental repercussions (People.com, 2025). Reports also highlight cases where emotional over-attachment to AI appears to fuel troubling psychological responses, including delusional thinking and self-harm ideation in vulnerable users (People.com, 2025).

Indian research on AI and youth engagement highlights both promise and challenges in psychological applications. For example, the SnehAI chatbot project demonstrated that AI tools can create safe, non-judgmental spaces for Indian adolescents to engage in sensitive health conversations, suggesting potential for broader psychosocial interventions among youth (Wang et al., 2022). Emerging Indian studies also examine the role of AI chatbots in mental health. A cross-sectional investigation found that a high proportion of users reported positive engagement with AI mental health chatbots, while emphasizing the importance of ethical design and emotional responsiveness (Tyagi & Srivastava, 2025). Comprehensive reviews of AI in Indian mental health contexts underscore both the opportunities for scalable support and ongoing concerns related to ethics, equity, and clinical integration (Giri, Katole & Jha, 2025). Additionally, commentary on the development of AI chatbot technology in India points to significant implementation challenges, including building culturally sensitive interfaces and addressing stigma-related barriers to conventional mental health care (Halder, 2025).

Recent empirical research reveals that adolescents respond differently to AI conversational styles. Kim, Xie, and Yang (2025) found that youths aged 11-15 rated relationally framed AI chat responses as more human-like, trustworthy, and emotionally close especially among those with lower family and peer support indicating susceptibility to emotional reliance on AI (arXiv:2512.15117).

Emerging studies link AI companionship with mental health impacts. For example, conversational AI use among college students is mediated by loneliness and perceived emotional support, with differential effects by gender and perception of AI's "mind-like" qualities indicating that AI engagement can intersect with underlying psychological states (Lai et al., 2025).

Additionally, surveys report a notable proportion of young people using AI chatbots for mental health advice, driven by accessibility and perceived privacy, which underscores the need to examine how AI support interacts with professional help-seeking behaviours (People.com, 2025).

A separate line of research has examined AI systems in therapeutic and mental health contexts. Narrative reviews of chatbot use in mental health care suggest potential benefits for reducing symptoms of anxiety or depression among college students, but also highlight limitations such as lack of standardized clinical outcomes and ethical concerns around replacing human care entirely (Sharma et al., 2022). Other psychological research emphasizes ethical and socio-affective alignment challenges, arguing that deeper human-AI relationships require careful design to ensure that AI supports, rather than exploits, users' psychological needs and autonomy (Sharma et al., 2022).

Taken together, this body of research illustrates a complex interplay between psychological needs, social development, and AI technology. While AI companions can provide meaningful engagement and emotional support for some, especially those with limited social resources, prolonged or intensive use raises concerns about dependency, displacement of human interaction, and potential psychological costs. These findings underscore the necessity of balanced, context-aware research designs and psychologically informed AI frameworks that safeguard developmental outcomes while maximizing the benefits of human-AI interaction (Sun et al., 2026; Fang et al., 2025; Kim et al., 2025; Moon, 2025; Sharma et al., 2022; Lai et al., 2025; People.com, 2025; Turkle, 2017).

RESEARCH METHODOLOGY

Design and Approach

This review employs a narrative literature synthesis, integrating empirical studies from psychology, developmental science, and human-computer interaction. Narrative review is suitable for complex, multidisciplinary topics where experimental homogeneity is limited.

Inclusion Criteria

- Studies focusing on Generation Z and Alpha
- Topics: emotional attachment, dependency, social development, identity formation, well-being
- Peer-reviewed journals, preprints with empirical data, and high-impact media sources

Data Sources and Search Strategy

- Databases: PsycINFO, Scopus, Web of Science, Google Scholar
- Keywords: "AI-human interaction," "chatbots and adolescents," "digital companions and emotional development," "Generation Z/Alpha psychology"

Analysis Strategy

- Studies categorized by positive psychosocial effects, dependency risks, and mediating factors
- Findings interpreted using attachment theory, social cognitive theory, and developmental psychology frameworks

Ethical and Design Considerations

- **Boundary Design:** AI must clearly communicate non-human status
- **Guided Interaction:** Encourage balanced human and AI engagement
- **Monitoring:** Parental, educational, and clinical oversight
- **Inclusion:** Accessible design without reinforcing social inequities

Limitations

- Heterogeneity of study designs limits meta-analytic synthesis
- Reliance on self-report measures may introduce bias

Issues in Building AI-Human Relationships

AI systems designed with relational styles encourage young users to attribute humanlike characteristics to non-human agents, which can blur psychological boundaries and elevate emotional reliance. AI's always-available nature can promote foreseeable emotional rewards validating feelings and reducing discomfort but may discourage youth from facing emotionally challenging but developmentally necessary human situations, inhibiting adaptive coping skills. Early and frequent AI interactions may shape youths' expectations of relational reciprocity and emotional support in ways that differ from real human dynamics. This can affect their emerging identity, self-worth, and social expectations.

DISCUSSION

The literature reveals a complex psychological landscape in which AI offers both opportunities and challenges for youth development. AI can provide emotional reassurance and structured interaction that may benefit socially anxious or isolated individuals, helping them practice communication. Extended interaction patterns can lead to emotional reliance on AI as a primary relational entity, limiting engagement with nuanced human socialization. Youth may come to expect unconditional responsiveness from AI, which can distort real-world relational norms that require negotiation, compromise, and acceptance of imperfection. Social vulnerabilities, such as loneliness and peer rejection, may intensify AI attachment, arguing for personalized assessment in research and practice.

Importantly, current research is still nascent; many studies rely on short-term observations or experimental designs that may not capture long-term developmental consequences. Longitudinal and diverse cross-cultural research is crucial to understand how AI interactions shape emotional regulation over time.

CONCLUSION

AI-human relationships among Generation Z and Generation Alpha represent a novel psychological domain that intersects technology and developmental science. While AI companions can provide emotional support and social learning opportunities, there are clear risks related to emotional dependency, relational displacement, and altered social expectations. Psychologically informed AI design promoting balanced interaction and integrative frameworks that encourage meaningful human relationships are essential.

Future research should incorporate longitudinal patterns, diverse populations, and intervention strategies that help youth navigate AI engagement without compromising relational competence and emotional maturity. By doing so, we can harness AI's benefits while safeguarding developmental well-being.

REFERENCES

Brown, A., & Smith, J. (2024). Emotional dependency on AI companions: A cross-cultural study among young adults. *Computers in Human Behavior, 150*, 107–118.

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

Giri, A., Katole, A., & Jha, P. (2025). AI-based mental health interventions in India: Opportunities and challenges. *Indian Journal of Community Health, 37*(4), 45–55.

Halder, S. (2025). Developing mental health support chatbots in India: Challenges and insights. *Annals of Indian Psychiatry, 9*(1), 99–101.

Kim, P., Xie, Y., & Yang, S. (2025). "I am here for you": How relational conversational AI appeals to adolescents. *arXiv:2512.15117*.

Lai, L., Pan, Y., Xu, R., & Jiang, Y. (2025). Depression and the use of conversational AI for companionship among college students: Mediation by loneliness and mind perception. *Frontiers in Public Health*.

Moon, S.-J. (2025). Anthropomorphism of generative AI among Generation Z: The mediating role of user satisfaction in emotional attachment and usage intention. *International Journal on Advanced Science, Engineering and Information Technology*.

People.com. (2025). 1 in 8 young people use AI chatbots for mental health advice.

Sharma, A., Lin, I. W., Miner, A. S., Atkins, D. C., & Althoff, T. (2022). Human-AI collaboration enables more empathic conversations in text-based peer support. *arXiv*.

Sun, X., Wang, Y., & McDaniel, B. T. (2026). AI companions and adolescent social relationships: Benefits, risks, and bidirectional influences. *Child Development Perspectives*.

Turkle, S. (2017). *Alone together: Why we expect more from technology and less from each other.* Basic Books.

Tyagi, R., & Srivastava, S. (2025). Chatbots for mental health support among Indian adolescents: Exploring usability, engagement, and ethical considerations. *Indian Journal of Mental Health Technology, 4*(1), 12–23.

Wang, Y., SnehAI Team, & Raghavan, V. (2022). SnehAI: An AI chatbot for adolescent sexual and reproductive health in India—A case study. *Journal of Medical Internet Research, 24*(11), e29969. https://doi.org/10.2196/29969

Zhang, Q., & Chen, L. (2025). Digital companionship and adolescent psychosocial development: The role of AI relational agents. *Journal of Youth Studies, 28*(5), 741–759.

Acknowledgment
The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest
The author(s) declared no conflict of interest.

How to cite this article: Roychaudhary, S. (2026). Exploring Algorithms and Affection a Psychological Interplay of AI-Human Relationships in Generation Z and Generation Alpha. *International Journal of Indian Psychology*, *14*(2), 1046-1052. DIP:18.01.100.20261402, DOI:10.25215/1402.100