

Digital Desire: The Rise of AI Relationships and Techno-Intimacy – Impact on Fertility Intentions, Future Reproduction, Family Building, and Mental Health

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BACKGROUND AND AIMS

The last 2 decades saw an increase in dating platforms as individuals turned to digital platforms for relationships and to fulfil family-building intentions.¹⁻³ Recently, advances in AI have extended beyond productivity and automation into the deeply personal domain of human relationships.

Artificial intimacy is a form of human-AI interaction in which individuals form social connections, emotional bonds, or intimate relationships with various forms of AI, including chatbots, virtual assistants, and other artificial entities.

Increasingly, individuals are turning to AI-powered chatbots and virtual companions for emotional support, companionship, and romantic or intimate connection as the lines between psychological support and relationships blur.⁴ This trend is on the rise, particularly among younger generations already navigating economic uncertainty and changing social norms. While these technologies may offer comfort and

accessibility, growing reliance may have significant implications for reproductive decision-making.^{5,6} This research aimed to synthesise current evidence on the emerging trend of AI relationships.

MATERIALS AND METHODS

A systematic literature review was conducted following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. Databases searched included Embase, MEDLINE, Web of Science, and Google Scholar for studies investigating human and AI relationships. Due to the novelty of the topic as a rapidly emerging use of technology, with limited but gradually increasing peer-reviewed published work, grey literature and preprint articles were included. Only studies published in English were included. Content was analysed and categorised thematically.

RESULTS

After screening and full-text assessment, 32 studies were included. Most participants were in their peak reproductive age (20s and 30s). Methods included surveys and interviews ranging from 8–1,131 for specific user samples, and qualitative content analysis of user-generated content of international app users from mixed online platforms like Replika (Luka, Inc., San Francisco, California, USA) and Character.AI (Character Technologies Inc., Menlo Park, California, USA) including up to 30,000 conversations.

Motivation and positive impact include greater emotional comfort, increased feelings of support, stress relief, and support for socially anxious users. AI tools are reported to be very popular because of the sycophancy and validation provided to users. Negative consequences included

overdependence and emotional addiction, isolation and social withdrawal, stigma and shame, data privacy and manipulation fears, and emotional distress when AI identity changes or fails. Mental health effects associated with intensive AI companionship were mixed, suggesting both potential emotional support and increased loneliness depending on user vulnerability and usage patterns.

Studies also report altered intimacy patterns, reduced motivation for human romantic relationships, and changes in sexual behaviour. In terms of impact on future reproduction, these factors may plausibly influence reproductive timing, likelihood of conception, delayed partner formation, reduced partnered sexual activity, and reduced engagement with reproductive healthcare. Evidence suggests heavy porn users were more open to AI romantic partners. Many want to have children with their AI partner, with reports of an AI partner being 'pregnant'.

STUDY LIMITATIONS

Only studies published in English were eligible for inclusion, limiting the generalisability of study findings. As this is a novel research area involving emerging technologies, longitudinal studies are needed to confirm implications on future reproduction, especially at the population level.

CONCLUSION

As the trend to substitute AI for human partners continues to rise, these behavioural shifts can have direct implications for fertility rates and family formation. Stakeholders, including psychologists, reproductive health educators, healthcare professionals, policy makers, and others, should consider artificial relationships within the wider contexts of fertility trends and reproductive wellbeing.

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