



Conceptualizing Digital Intimacy and AI Sexuality: A Systematic Review of Emerging Techno-Sexual Transformations

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Abstract

Background: Adolescents and young adults go through a period of development during which they are exploring identity, relationships, and sexuality. The process can be marked by an increase in risk-taking behavior. As digital and AI platforms have expanded rapidly, they have also changed the way people experience romance, intimacy, and sex. Tech-mediated intimate and sexual practice is the term used to describe these new forms of romantic, and sexual behaviors that are mediated by technology. The purpose of this systematic review was to synthesize the current literature on digital intimacy and AI-mediated sexual behavior, including conceptual definitions, subtypes, associated factors, and psychosocial outcomes.

Method and Analysis: The authors undergone a comprehensive literature search using the MEDLINE, PsycINFO, and PubMed databases, as well as manual searches to locate relevant studies published before March 2026. These studies included systematic reviews, quantitative, qualitative, and mixed method research on intimate, romantic, or sexual behavior that was related electronically or through AI mediation. Data extraction from the identified literature used an existing template to record the definitions and types of tech-mediated intimate and sexual practice as well as associated factors and outcomes. The methodological quality of all studies reviewed was assessed using the Joanna Briggs Institute (JBI) checklist.

Result: Twelve studies from around the world with different designs- cross-sectional, review, theory and narrative that met inclusion criteria resulting in three main areas of tech-mediated intimate and sexual practice. a) Internet mediated sex and partner seeking through the internet; b) Intimacy through digital romance (e.g. dating sites, instant messaging, social media); c) Using AI to provide companionship. Digital sexual health and virtual reality sexuality. How individuals engaged through these areas was determined by their individual, technological and sociocultural factors. The pros were emotional support, intimacy, sexual experimentation, and health education, while the cons were loss of privacy, emotional dependence, inappropriate material without consent, cyber-bullying, and health hazards.

Conclusion: Digital intimacy and AI sexuality present opportunities as well as risks to youth and provide relevance to develop and use relevant interventions to promote digital literacy, consent understanding, and safe participation, along with longitudinal and cross-cultural research to develop ethical, developmental, and sociocultural guidelines for safe techno-sexual exploration.

INTRODUCTION

Rapid expansion of technology has redefined how people initiate and maintain sociability, intimacy, and sexuality in present day digital world. The emergence of various online platforms, including social media, messaging

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applications, dating sites and virtual communities, has created a novel medium for relationships and intimacy, such as emotional connection, romantic involvement, and sexual activity over the last two decades. In recent times, advancements in the field of artificial intelligence (AI), such as chatbots, virtual partners, and relationship apps, have given rise to new types of “AI-mediated” intimacy and “techno-sexuality,” blurring traditional boundaries between human and technologically mediated forms of interaction. Digital Intimacy can be defined as an intimate, romantic, or sexual interaction that occurs through digital technologies rather than in a face-to-face, physical manner.^[1] Techno-sexuality can be defined as the increasing use of technology and different forms of digital tools to express one's sexuality, for example, obtaining sexual information, exploring sexual fantasies, communicating sexual desires, and engaging in sexual pleasure.^[2] According to the technology acceptance model, the perceived usefulness and ease-of-use of using new technologies influence one's willingness to use them. Perceptions that emerge from this model could influence users' levels of engagement with digital intimacy platforms and AI companions and their expectations related to relational and sexual satisfaction.^[3] The uncanny valley effect associated with the high degree of realism exhibited by human-like AI agents could create feelings of discomfort or eeriness when interacting with human-like AI partners, which in turn influences emotional responses to these intimacy dynamics.^[4]

The internet offers many ways for people to experience intimate relationships when, otherwise, they would face limitations because of stigma from society, geographic barriers, disabilities, or because they are part of a minority and an under-represented community. According to problem behavior theory, which considers that risk-taking behaviors stem from the interactions of personality, perceived environment, and behavior systems, the act of engaging in online sexual behavior, for example, sexting and cybersex, can be considered an accepted behavior for some adolescents, while also presenting other risks associated to the behavior, such as the non-consensual sharing of intimate images, cyber bullying and exploitation.^[5,6] There are also studies that show that situational conditioning, like sexual arousal, perception of control, has a sig-

nificant impact on willingness to engage with AI or robotic partners, demonstrating the relationship between mental status and techno-sexual behaviors.^[7,8] Adolescents and young adults are the largest demographic cohort utilizing digital technologies; therefore, studying digital intimacy and AI sexuality in youth is particularly important during this period of development, as they are evolving their identities, exploring and experimenting with relationships and sexuality. Digital technologies facilitate these behaviors through the anonymity and reduced social inhibition associated with these activities; however, the same technologies may increase the likelihood of being groomed online, coerced, or experiencing emotional harm.^[9,10]

The growing number of Indians using the internet and smartphones, especially younger people, has led to increased usage of social networking, dating apps, and messaging programs. As there are many limitations on how teenagers can discuss issues of sexuality in offline interactions because of social norms and stigma, these online environments can provide a space to experiment with romance and sexuality. Research conducted on Indian populations indicates that online harassment, revenge porn, the inadequacy of people's understanding of consent, and the development of emotional bonds with AI companions are prevalent problems facing young Indians.^[11,12] While there has been an increase in academic research into online intimacy and AI-mediated sexuality, there are inconsistencies in definitions and a lack of agreement on the psychosocial impact of engaging in digital intimacy across a variety of populations. The necessity for a systematic review exists, with the aim of synthesizing the data from existing studies, providing clarity to theoretical frameworks, and examining the behavioral, psychological, cultural, and ethical ramifications of AI-mediated intimacy, from multiple perspectives, in different environments, including India.^[13]

METHODS

Protocol and Registration

This systematic review was conducted in accordance with preferred reporting items for systematic

reviews and meta-analysis (PRISMA) guidelines.^[14] The study protocol was prospectively registered in the PROSPERO (CRD420261353956).

Information Sources

A comprehensive literature search was conducted using PubMed, MEDLINE and PsycINFO to capture relevant literature. The search includes studies published till March 2026. Studies were identified through backward citation tracking. Grey literature and preprints were not searched systematically. Full search strings are provided in the next section.

Search Strategy

The articles were extracted using keywords related to digital intimacy, AI sexuality, techno-sexuality, sexual behavior, online relationships, and relevant psychological or social outcomes. Boolean operators combined population, exposure, and outcome terms to retrieve relevant studies. The articles were retrieved through a search strategy on PubMed (“Sexual Behavior”[Mesh] OR “Sexuality”[Mesh] OR “Internet”[Mesh] OR “Social Media”[Mesh] OR “Online Social Networking”[Mesh] OR “digital intimacy” OR “online intimacy” OR “virtual intimacy” OR “cyber intimacy” OR “online relationship*” OR “virtual relationship*” OR “digital relationship*” OR “cyber relationship*” OR sexting OR cybersex OR “virtual sex” OR “online dating” OR “online romance” OR “virtual romance” OR “digital romance” OR “cyber romance” OR “parasocial relationship*” OR “parasocial interaction*” OR “online sexual behavior” OR “internet sexuality” OR cybersexuality OR “technology-mediated intimacy” OR “technology-mediated sexuality” OR “techno-sexuality” OR “sexual technologies” OR “online partner*” OR “online sex partner*” OR sexbot* OR “bot sex” OR “bot romance”) AND (“Artificial Intelligence”[Mesh] OR “Machine Learning”[Mesh] OR “artificial intelligence” OR AI OR “generative AI” OR chatbot* OR “AI companion*” OR “virtual partner*” OR “digital partner*” OR “AI sexuality” OR “human-AI relationship*” OR “intimate AI” OR “sex robot*” OR “social robot*” OR sexbot* OR “synthetic intimacy” OR “algorithmic intimacy” OR “virtual reality” OR “augmented reality” OR “immersive technolog*” OR “human-computer interaction” OR “affective computing”) AND (concept* OR definition* OR

framework* OR theor* OR model* OR typolog* OR pattern* OR categor* OR classif* OR “mental health” OR wellbeing OR relationship* OR “psychological outcome*” OR “social outcome*”)

Eligibility Criteria

Studies were included if they: a) were systematic reviews, quantitative, qualitative, or mixed-methods research; b) examined technology-mediated intimate, romantic, or sexual interactions *via* digital platforms like social media, messaging, dating apps, sexting, cybersex or AI-based systems such as chatbots, virtual partners, sex robots and c) reported behavioral, relational, or psychological outcomes. Exclusion criteria comprised: participants <13 years; offline sexual behaviors only. Passive consumption of sexual content; purely technical studies without behavioral outcomes; abstracts without full text; and non-English publications.

Study Selection

Records were screened in two stages using Rayyan Software.^[15] Duplicates were removed before screening the articles. In the first stage, titles and abstracts were independently reviewed by two authors against predefined eligibility criteria. In the second stage, full texts of potentially relevant articles were independently assessed, and discrepancies were resolved through discussion or adjudication by a third reviewer. Backward citation tracking identified additional relevant studies.

Data Extraction

Data were extracted using a predefined template capturing authorship, year, country, study design, sample characteristics, definitions/conceptualizations of technology-mediated intimate or sexual practices, their subtypes/patterns/forms, associated factors, key findings, and quality assessment scores. Data extraction was conducted independently by two reviewers and discrepancies were resolved through discussion with a third author.

Risk of Bias in Individual Studies

Methodological quality and risk of bias of selected studies were assessed using the appropriate Joanna Briggs Institute (JBI) critical appraisal checklist

according to study design. Quality ratings informed the interpretations of findings but were not used as grounds for exclusion unless a study was judged to be of extremely poor methodological quality. The risk of bias was evaluated by three review authors, SS, RK, and NC, with disagreements resolved through discussion.

Data Synthesis

The findings were combined narratively and thematically, as substantial heterogeneity in study designs, populations, and outcomes prevented meta-analysis. Thematic analysis involved identification of patterns, categorization of techno-mediated intimate and sexual practice forms, and examination of associated personal, technological, and sociocultural determinants.

RESULTS

Overview of Study Designs and Characteristics of Studies Included

A total of 3,126 articles were yielded in the systematic search of databases. After removing six duplicates, 3,120 articles were screened based on title and abstract. Of these, 43 full-text articles were reviewed for full-text screening and 33 were excluded. Ten articles fulfilled the inclusion criteria, with two additional studies identified through manual searches, resulting in twelve studies included in the review (Figure 1). These twelve studies spanned different regions including Canada, China, Germany, India, Japan, Nigeria, Norway, and South Korea, Sweden, the UK and the US. Methodologies included cross-sectional studies (n = 5), narrative reviews (n = 4), systematic reviews (n = 1), and editorial papers (n = 2). Sample sizes ranged from 13 to 4,754, with populations including generation Z, men having sex with men (MSM) (Table 1), underserved groups, and general internet users.

Thematic Domains of Techno-Mediated Intimate and Sexual Practices

Five dominant types of technology-mediated intimacy, romantic relationship, and sexual expres-

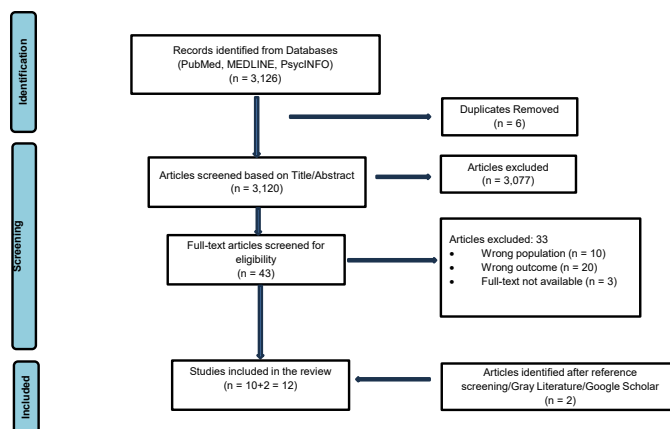


Figure 1: Search strategy: PRISMA flow diagram

sion were identified through the research, these include 1) Internet-mediated sexual behavior and partner-seeking, 2) Aigital intimacy and romantic relationships, 3) AI-mediated intimacy and virtual companionship, 4) Digital sexual health care and information-seeking and 5) Immersive and virtual-reality-based sexuality. Every one of the five categories together paint the range and complexity of technology-mediated intimacy, romantic interactions, and sexual expression.

Internet-Mediated Sexual Behavior and Partner-Seeking

The research conducted in Nigeria and Sweden found web-based sexual behaviors such as consuming pornography, erotic chats, searching for sexual information and partners using the internet. Mediated sexual behaviors that sought partners on the internet were connected to broader sexual networks and were at significant risk of being infected with HIV or STIs. Factors that majorly contributed to individuals' sexual behavior on the internet were privacy, anonymity, unrestricted access, owning a mobile phone and using the internet frequently. On the other hand, individual characteristics such as age, gender, sexual orientation and relationship status also had an impact on sexual behaviors on the internet. Therefore, there are two sides to internet-mediated sexual behaviors. Individuals can explore and learn on the internet; however, there are also sexual health risks associated with these behaviors. Therefore, the research high-

Table 1: Summary of included studies

S. No.	Author(s), year, place of study	Study title	Study characteristics	Conceptualization of tmisp	Subtypes/Patterns/forms of tmisp	Associated factors	Key findings	JBI quality score
1	Kristian Daneback et al., 2012, Sweden	<i>Technological Advancements and Internet Sexuality: Does Private Access to the Internet Influence Online Sexual Behavior?</i>	N = 1,614 internet users; mean age: women 27 years, men 29 years	TMISP referred to internet-based sexual activities facilitated by accessibility, affordability, and anonymity, particularly private internet access.	Pornography viewing; erotic stories; sexual chatting; sexual information seeking; online flirting; cybersex; seeking sexual/romantic partners; meeting partners offline.	Private internet access; gender; age; relationship status; sexual orientation.	Private access increased engagement in online sexual practices. Women with private access were more likely to engage in cybersex and offline sexual meetings; men were more likely to seek sexual information and erotic content.	1
2	Lee et al., 2025, South Korea	<i>Will You Accept a Virtual Human as a Friend? Exploring the Role of Virtual Humans in Mood Management and Mental Health Support</i>	N = 743 Instagram users; age 14–59 years	TMISP was conceptualized as friendship-like, parasocial interaction with virtual humans for emotional support and mood management.	Casual chatting with virtual humans; therapeutic chatting; parasocial friendship with virtual influencers.	Preference for online social interaction; perceived usefulness; perceived ease of use; loneliness; depression; anxiety; perceived eeriness.	Preference for online social interaction predicted acceptance of virtual humans. Perceived usefulness and ease of use increased willingness to accept virtual humans as friends.	0.75
3	Patrice Renaud et al., 2002, Canada	<i>Measuring Sexual Preferences in Virtual Reality: A Pilot Study</i>	N = 13; mean age 26.3 years	TMISP was defined as use of immersive virtual reality to explore and assess sexual preferences through interaction with virtual stimuli.	Viewing virtual erotic stimuli; interacting with virtual avatars; VR-based exploration of erotic body zones.	Gender; sexual orientation; locomotion; sense of presence; affective state.	Men and heterosexual participants paid more attention to erotic body zones. Women reported greater presence in VR. Locomotion increased attention to sexual stimuli.	0.6
4	Julie McLeod et al., 2025, United Kingdom	<i>Opening the Digital Doorway to Sexual Healthcare: Recommendations from a Behaviour Change Wheel Analysis of Barriers and Facilitators to Seeking Online Sexual Health Information and Support Among Underserved Populations</i>	N = 35 underserved participants; age not reported	TMISP referred to online sexual health information seeking and support through digital sexual healthcare platforms.	Searching sexual health information online; online support; use of websites; chatbots; peer forums; multimedia resources.	Digital literacy; trust; awareness of services; accessibility; relevance of information; response time.	Underserved groups faced barriers such as low awareness, distrust, and information overload. Inclusive, credible, and easy-to-use resources facilitated access.	0.7

5	Runyu Shi & Dimitra Petrakaki, 2026, United Kingdom	<i>User-AI Intimacy in Digital Health</i>	N = 4,754 app reviews; age not reported	User-AI intimacy was defined as emotional closeness and relationship-like attachment developed through repeated interactions with AI health applications.	Self-disclosure to AI; emotional support from chatbots; repeated AI interaction; AI companionship.	Self-disclosure; emotional responses; anthropomorphism; AI responsiveness; technological affordances.	Repeated disclosure and empathetic AI responses fostered emotional wellbeing and relationship-like attachment to AI applications.	0.7
6	Nicola Liberati, 2022, China and Japan	<i>Digital Intimacy in China and Japan: A Phenomenological and Postphenomenological Perspective on Love Relationships at the Time of Digital Technologies in China and Japan</i>	Theoretical paper; no sample	TMISP was conceptualized as digitally mediated love and companionship that become integrated into users' emotions and identities.	AI companionship; virtual romantic relationships; digital companions; teledildonics; sex robots.	Cultural norms; loneliness; emotional needs; digital immersion; technological affordances.	Digital companions blurred the distinction between "real" and "virtual" relationships and reshaped understandings of intimacy and love.	1
7	Anna M. Lomanowska & Matthieu J. Guittou, 2016, Canada	<i>Online Intimacy and Well-Being in the Digital Age</i>	Narrative review; no sample	TMISP was defined as emotional, social, and sometimes physical closeness developed through internet- and mobile-mediated interactions.	Online self-disclosure; online dating; social networking; long-distance relationships; avatar-based intimacy; virtual worlds.	Anonymity; self-disclosure; perceived social support; online disinhibition; communication frequency.	Online intimacy improved wellbeing through social support and disclosure but also increased risks of unrealistic expectations and sexual disinhibition.	0.8
8	Chris Geeng et al., 2025, Norway	<i>Co-Constructing the Future of Digital Intimacy</i>	Workshop paper; no sample	TMISP was conceptualized as digitally mediated romance, sex, and intimacy using internet-based and AI technologies.	Online dating; sexting; online sex work; romantic chatbots; generative AI intimacy; deepfakes.	Privacy; security; technological change; AI; intimate partner violence; regulation.	The paper highlighted both opportunities and risks of digital intimacy and emphasized the need for ethical guidance and stronger protections.	0.8
9	Sigmund Hough, 2024, United States	<i>The Linking of Artificial Intelligence with Sexuality and Disability</i>	Editorial; no sample	TMISP referred to AI-supported sexual expression, intimacy, and communication among persons with disabilities.	AI companions; adaptive sexual technologies; virtual sex education; AI-assisted communication.	Disability-related barriers; loneliness; accessibility; privacy; autonomy; bias.	AI may improve opportunities for intimacy and sexual wellbeing among people with disabilities, but ethical and inclusive design is essential.	0.8
10	Nicola Döring et al., 2024, Germany	<i>The Impact of Artificial Intelligence on Human Sexuality: A Five-Year Literature Review 2020–2024</i>	Review of 88 publications/106 studies	TMISP was conceptualized as AI-mediated sexual and intimate experiences, ranging from sexual information seeking to romantic companionship and pornography.	Sexual information seeking via AI; AI counseling; companion chatbots; AI pornography; deepfake pornography.	Accessibility; anonymity; loneliness; anthropomorphism; emotional dependence; technological affordances.	AI tools provided sexual information and companionship but also introduced risks of dependence, manipulation, and non-consensual deepfake pornography.	0.6

11	Vishakha Mishra & Sheetal Yadav, 2025, India	<i>The Role of Commitment and Digital Intimacy in Shaping Relationship Satisfaction Among Generation Z Romantic Relationships</i>	N = 60; age 18–25 years	TMISP was conceptualized as technology-mediated emotional closeness and communication within Generation Z romantic relationships.	Digital communication with romantic partners; virtual emotional closeness; online relationship maintenance.	Commitment style; gender; communication frequency; use of digital platforms.	Commitment predicted relationship satisfaction, whereas digital intimacy showed no significant association with satisfaction.	0.75
12	Shauna Stahlman et al., 2018, Nigeria	<i>Online Sex-Seeking Among Men Who Have Sex with Men in Nigeria: Implications for Online Intervention</i>	N = 1,370 MSM; age ≥16 years	TMISP was defined as using the internet to seek or meet male sexual partners.	Online partner seeking; use of social media and apps; online-to-offline sexual meetings.	Younger age; education; mobile phone ownership; internet use; stigma; social networks.	Online sex-seeking was common and associated with greater HIV/STI risk, but it also represented an opportunity for targeted digital interventions.	1

lights the need for interventions that consider the individual autonomy and the individual's safety.^{16,17}

Digital Intimacy within Romantic Relationships

A study from China, Japan, Canada, and India showed that intimacy in romantic relationships through electronic means was studied using online self-disclosure, feeling close emotionally, being together digitally, and maintaining your relationship using text messaging, social networking, and video. Some of the factors that were studied that would have something to do with the degree of digital intimacy in romantic relationships were commitment of the relationship, loneliness, frequency of digital communication, cultural norms, and how accessible digital communication is for everyone. Results showed that there is digital intimacy and online platforms can certainly help an individual feel supported emotionally and more intimate, especially where in-person contact is difficult to establish. However, even with digital intimacy, in relation to how satisfied individuals are with their relationship, the level of commitment in the relationship remained a stronger predictor of relationship satisfaction than how much digital intimacy existed between two individuals in the relationship.^{18,19,20}

AI-Mediated Interactions and Companionship

Research in South Korea, Norway, Germany, the US, and the UK involved how we experience social interactions, including human relationships online; these are usually described as virtual friendships, therapeutic chatbots, AI companion and AI-mediated romantic/sexual relationships. Some of the forces that were studied that had something to do with the creation of intimacy via AI were loneliness, emotional needs, the ability to personify AI, the usefulness of AI, accessibility and disability. Individuals who did, in fact, experience emotional support and companionship through AI were usually individuals who were unable to participate socially in person (i.e., disabilities of being a social anxiety disorders), but there were issues or concerns that were expressed by many individuals, such as becoming dependent on AI, issues of consent, issues of privacy, and misuse of AI through deep-fakes.²¹⁻²⁵

Table 2: Quality Assessment of Included Studies

Study Design	Author	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Systematic Reviews and Research Synthesis	Nicola Döring et al., 2024	1	1	1	1	2	2	3	1	2	1	1
Qualitative Study	Julie McLeod et al., 2025	3	1	1	1	1	2	2	1	1	1	
	Runyu Shi & Dimitra Petrakaki, 2026	3	1	1	1	1	2	2	1	1	1	
Cross-Sectional Study	Kristian Daneback et al., 2012	1	1	1	1	1	1	1	1			
	Lee et al., 2025	1	1	1	1	2	2	1	1			
	Patrice Renaud et al., 2002	1	1	1	2	4	1	2	1			
	Vishakha Mishra & Sheetal Yadav, 2025	1	1	1	1	2	1	1	2			
	Shauna Stahlman et al., 2018	1	1	1	1	1	1	1	1			
Narrative / Literature Review	Anna M. Lomanowska & Matthieu J. Guitton, 2016*	1	1	1	1	1	1					
	Nicola Liberati, 2022	1	1	1	1	1	1					
	Chris Geeng et al., 2025	1	1	1	1	1	3					
	Sigmund Hough, 2024	1	1	1	1	1	3					

1. Yes, 2. No, 3. Unclear, 4. Not Applicable; JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES – Q1. Is the review question clearly and explicitly stated? Q2. Were the inclusion criteria appropriate for the review question? Q3. Was the search strategy appropriate? Q4. Were the sources and resources used to search for studies adequate? Q5. Were the criteria for appraising studies appropriate? Q6. Was critical appraisal conducted by two or more reviewers independently? Q7. Were there methods to minimize errors in data extraction? Q8. Were the methods used to combine studies appropriate? Q9. Was the likelihood of publication bias assessed? Q10. Were recommendations for policy and/or practice supported by the reported data? Q11. Were the specific directives for new research appropriate?

JBI CRITICAL APPRAISAL CHECKLIST FOR QUALITATIVE RESEARCH – Q1. Is there congruity between the stated philosophical perspective and the research methodology? Q2. Is there congruity between the research methodology and the research question or objectives? Q3. Is there congruity between the research methodology and the methods used to collect data? Q4. Is there congruity between the research methodology and the representation and analysis of data? Q5. Is there congruity between the research methodology and the interpretation of results? Q6. Is there a statement locating the researcher culturally or theoretically? Q7. Is the influence of the researcher on the research, and vice-versa, addressed? Q8. Are participants, and their voices, adequately represented? Q9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body? Q10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?

JBI CRITICAL APPRAISAL CHECKLIST FOR ANALYTICAL CROSS SECTIONAL STUDIES – Q1. Were the criteria for inclusion in the sample clearly defined? Q2. Were the study subjects and the setting described in detail? Q3. Was the exposure measured in a valid and reliable way? Q4. Were objective, standard criteria used for measurement of the condition? Q5. Were confounding factors identified? Q6. Were strategies to deal with confounding factors stated? Q7. Were the outcomes measured in a valid and reliable way? Q8. Was appropriate statistical analysis used?

JBI CRITICAL APPRAISAL CHECKLIST FOR TEXTUAL EVIDENCE: NARRATIVE- Q1. Is the generator of the narrative a credible or appropriate source? Q2. Is the relationship between the text and its context explained? (where, when, who with, how) Q3. Does the narrative present the events using a logical sequence so the reader or listener can understand how it unfolds? Q4. Do you, as reader or listener of the narrative, arrive at similar conclusions to those drawn by the narrator? Q5. Do the conclusions flow from the narrative account? Q6. Do you consider this account to be a narrative?

Digitally Based Sexual Health Care and Information-Seeking

Digital-based sexual health care and information-seeking through digitally mediated methods have been highlighted by McLeod *et al.* (2025), focusing on how these methods were specifically used by underrepresented populations. Web-based sexual health resources, chatbot programs, peer support forums and multimedia resources were examples of TECH-MEDIATED INTIMATE AND SEXUAL PRACTICE. Contributing factors of user engagement include digital literacy, trust in the sources of information, accessibility, and easy use. Interventions promoted access to sexual health education, behavior change support, and empowered individuals, demonstrating that the potential of digital technologies extends not only toward facilitating relationships or supporting health promotion but also toward providing access to sexual health services.²⁶

Immersive and Virtual-Reality Based Sexuality

Immersive and virtual reality studies of sexuality by Renaud *et al.* (2002) studied erotic avatars and immersive evaluation and assessment of sexual preferences. Influences on user engagement included gender, sexual orientation, sense of presence, locomotion and affective state. Immersive and virtual reality created a safe, flexible, and ethical environment to identify and evaluate the nature of sexual behaviors, fantasies, and sexual preferences. As such, there was a high degree of individual variability as well as a clear demonstration of how immersive technologies have the potential to better facilitate social research, education and treatment of sexual behaviors.²⁷

Patterns, Associated Factors, and Outcomes

Among the included studies, tech-mediated intimate and sexual practice forms frequently identified across studies include online sexual information seeking; cybersex; sexting; online partner seeking; AI companions; digital romantic relationships; online sexual health support; and immersive VR-based

sexual experiences. Common factors influencing tech-mediated intimate and sexual practice engagement include privacy, anonymity, loneliness, accessibility, gender, age, social norms and stigma, emotional needs and technological affordability. Stakeholders include consumers and content creators, who cited emotional support, social connection, sexual self-exploration, access to sexual health information and mental health as benefits. AI-based communication provided companionship and emotional regulation. VR-based platforms offered a safe space for sexual experimentation and validation. Risks included emotional dependence; privacy and security issues; exposure to non-consensual and/or deepfake content; disinhibition; exploitation; stigma; and sexual health risks—including exposure to sexually transmitted infections from online partner seeking. There were various ethical issues associated with AI-based sexual interaction, for example- importance of consent, protection of data, and maintaining the boundaries with virtual relationships. The relationship between individual, technological, and sociocultural factors indicates that tech-mediated intimate and sexual practice is a flexible spectrum of behaviors that offers potential benefits as well as risks. Therefore, there is a need for continued research, ethical frameworks, and context-based interventions to maximize benefits and minimize risks.

Qualitative assessment of the studies

Moderate to high methodological quality was demonstrated in the 12 included studies (Table 2). Quality Assessment of Included Studies) with a range of JBI scores of 0.6 to 1.0. The cross-sectional and quantitative studies collected clear data on the participants and outcomes, while pilot studies provided an exploratory understanding of the behaviors associated with behaviors exhibited through technology, as well as behaviors associated with tech-mediated intimate and sexual practice. Narrative and theoretical research provided strong conceptual frameworks. Some identified common strengths across all studies included the presence of clear definitions of tech-mediated intimate and sexual practice, integration of technological and

sociocultural factors, and identification of behaviors associated with tech-mediated intimate and sexual practice. There were small sample sizes, inconsistent reporting of ethical practices, and limited empirical validation of the concepts presented within theoretical research as the primary limitations of the studies. Overall, these studies built a solid base of scientific evidence to support the existence of techno-mediated intimate and sexual practices while identifying opportunities for improved methodologies in the area.

DISCUSSION

The purpose of this systematic review was to explore the emerging spectrum of digital intimacy, as well as the use of artificial intelligence (AI) technology to mediate sexual behavior among adolescents and young adults in relation to their mental health, emotional health, and relationship wellbeing. Digital technologies and AI-powered platforms provide a new avenue for individuals to express their sexual identity and explore their emotional expressions, as well as develop relationships.^{1,20,28} For individuals who reside in a geographical, social and/or cultural area that restricts their ability to interact offline, this avenue of digital engagement can provide the opportunity to make meaningful connections with other individuals based on similar interests but will also introduce novel types of risks including emotional dependency, violations of privacy, disclosure of non-consensual content (e.g., video streaming/photography of sexual behaviors without consent), and manipulation of algorithms; therefore, the definition of a sexual risk will need to be extended to take into account both digital and AI-mediation contexts.²⁹⁻³¹

Adolescent risk-taking theories suggest that both structural and psychological factors influence AI-mediated sexual behavior and digital intimacy.^{32,33} Psychological factors include loneliness, anxiety, and low self-esteem, while structural factors include access to private devices, the type of platforms being used, and digital literacy.³ According to the Technology Acceptance Model, utilizing digital intimacy involves both perceived usefulness and ease of use, which facilitates the use of AI-mediated intimacy.³ The uncanny valley effect can affect an individual's willingness to engage in this kind of interaction

and how satisfied they are with engaging in the interaction. These research findings illustrate how an individual, digital contexts, and technology all influence intimate experience creation.^{34,35} Sociocultural and demographic characteristics also influence engagement. For example, males engage in AI companionships or sexualised engagement more than females, who reported greater negative emotional effects from their experiences (e.g., harassment or coercion).^{32,36} LGBTQ+ youth *prima facie* will use digital platforms to explore identity/relationship experiences, but they take on additional discrimination-related risks, including cyberbullying and mental health challenges.⁹ Therefore, additional culturally-relevant frameworks need to be created to enhance understanding of how to mediate technology-mediated sexual behaviors.

The fast pace of smartphone and internet use in India, along with the continuing presence of social taboos regarding sex create both opportunities as well as hardships. Digital platforms and AI-mediated interactions offer new ways to explore sexually and express emotions in ways that are difficult offline; Although, exposure to sexual content at an early age, lack of sexual education and lack of awareness of consent can create a greater risk for individuals becoming victims of abuse, emotional distress and unsafe behaviors.^{12,20} These behaviors demonstrate a correlation with global trends but also identify unique cultural vulnerabilities. Digital intimacy now includes multiple subtypes (i.e., online sexual behaviors, digital romantic intimacy, AI-assisted companionship, and seeking out digital sexual health information), with each subtype having its own psychological, relational and sociological effects.^{26,27} Digital technologies can also provide individuals the opportunity to improve their emotional support networks, self-discovery through sexual exploration and overall health; however, negative aspects of these technologies include excessive reliance on algorithmically driven services, unrealistic expectations, and being exposed to potentially damaging content.^{7,29} Interventions need to find a balance between leveraging the benefits of these technologies while trying to minimize the associated risks. The literature is limited in that much of the existing research on these behaviors is focused on Europe, North America and East Asia, with very few studies

exploring these behaviors in the context of South Asia, Africa and other low-income to middle-income countries, making it especially important to contextualize the issue further.^{12,20} In addition, most studies focus on specific behaviors, precluding comprehensive understandings and the fast-changing nature of AI-mediated intimacy requires ongoing evaluation.

CONCLUSION

The purpose of this systematic literature review was to identify and consolidate data regarding digital intimacy and AI-enabled sexual experiences of young adults and adolescents; detail the various opportunities and risks for mental health and psychosocial health; identify the role of digital technologies including social media, instant messaging applications, online dating sites/apps, and AI computers in facilitating sexual identity development, emotional expression and relationship building amongst adolescents/young adults.^{1,20,28} Identify the new challenges created by using these technologies; call for a re-conceptualization of sexual risk-taking to account for the role of the digital space, including AI, along with traditional definitions of sexual risk-taking.^{7,29} Understand how individuals' psychological states like anxiety, loneliness, low self-esteem interact with structural and technological factors such as digital literacy in relation to how these affect their willing to engage in techno-sexuality; examine how social typologies for example gender and sexual orientation impact adolescents' and young adults' experiences and associated risks; underscore the need for inclusive and contextually relevant approaches to research and prevention with adolescents and young adults related to digital-connected relationships; and characterize the dichotomous nature of rapid digitalization in India, including the existence of significant social taboos regarding sexual exploration, which will create an array of both opportunities for safe exploration of sexuality and vulnerabilities to sexual harm, exploitation and misinformation.^{12,20} Technology-facilitated intimacy represents a continuum of behaviors that may be both harmful and beneficial; both will have significant implications for psychosocial well-being. Interventions promoting digital literacy, awareness towards consent, safer involvement, and sensi-

tive sexual education are needed urgently. Future research should employ longitudinal, cross-cultural designs to find out the long-term effects of digital intimacy and AI-mediated sexual experiences, integrating ethical and sociocultural perspectives to guide evidence-based policy and practice.

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