



Generative Artificial Intelligence as an Emerging Source of Emotional Support Among Indian Young Adults: The Roles of Loneliness, Psychological Distress, Perceived Social Support, and Conversational AI Dependence

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Abstract- Background Generative artificial intelligence (GenAI) has rapidly moved from an information and productivity technology into an interpersonal technology through conversational systems capable of sustained, personalized and emotionally responsive interaction. Young adults increasingly use conversational artificial intelligence (CAI) for reflection, advice, emotional disclosure, problem-solving and companionship. Although emerging international research suggests that conversational AI may reduce aspects of psychological distress and loneliness for some users, concerns have also been raised regarding emotional dependence, displacement of human relationships, privacy, inappropriate psychological advice and reinforcement of maladaptive beliefs. Evidence from India remains limited despite the country's rapid expansion of digital mental-health services and large young-adult population. Objective The proposed study aims to examine the psychological factors associated with conversational AI use for emotional support among Indian young adults. Specifically, it will investigate whether loneliness and psychological distress predict greater use of conversational AI for emotional purposes, whether perceived social support moderates this relationship, and whether patterns of emotional AI use are associated with conversational AI dependence. Method A cross-sectional mixed-methods study is proposed involving Indian adults aged 18–29 years who report using a conversational AI system at least once during the preceding three months. A target sample of 600–800 participants will be recruited using stratified online sampling across major Indian regions. Measures will include loneliness, psychological distress, perceived social support, wellbeing, conversational AI use characteristics and AI dependence. A validated conversational-AI-dependence measure will be adapted and psychometrically evaluated for the Indian context. Quantitative data will be examined using hierarchical regression and structural equation modelling, while qualitative responses concerning reasons for AI use, emotional disclosure, perceived benefits and perceived risks will undergo reflexive thematic analysis. Expected contribution The study is designed to



distinguish between AI use as a compensatory form of emotional support and AI use as a potentially maladaptive substitute for human social connection. The findings could inform culturally responsive digital mental-health policy, psychological assessment, responsible AI design and integration of conversational technologies with India's emerging digital mental-health infrastructure.

Keywords- conversational artificial intelligence; generative AI; loneliness; psychological distress; social support; AI dependence; young adults; India; digital mental health

I. Introduction

Artificial intelligence has increasingly entered domains traditionally understood as interpersonal rather than technological. Contemporary conversational AI systems can sustain extended dialogue, remember aspects of an interaction, provide personalized responses and respond to emotionally framed disclosures. Consequently, users may employ these systems not only for information retrieval but also for reflection, emotional regulation, decision-making and companionship.

This development represents a potentially important change in the psychological environment in which young adults manage everyday distress. Historically, emotional support has primarily been conceptualized through interpersonal relationships involving family members, friends, romantic partners, peers and professional helpers. Conversational AI introduces a new category: an always-available, non-human conversational partner capable of simulating many characteristics of supportive interaction.

The psychological significance of this development is particularly relevant for India. India's young population is experiencing rapid digitalization alongside persistent barriers to accessing professional mental-health services. The Government of India's Tele-MANAS programme was created specifically to expand accessible mental-health support through digital technology. By December 2024, Tele-MANAS was operational across all 36 States and Union Territories, with approximately 1.65 million calls handled since its launch. The programme illustrates how digital technologies are increasingly becoming part of India's mental-health ecosystem.



However, digital mental-health support is not psychologically equivalent to interpersonal or professional support. Conversational AI may provide accessibility, anonymity and immediate responsiveness, but these characteristics may simultaneously create conditions for excessive reliance.

The central psychological question is therefore not simply whether AI is “good” or “bad” for mental health. Rather, it is:

- Who uses conversational AI for emotional support, why do they use it, and under what psychological conditions does such use become supportive rather than substitutive or dependent?
- This question is particularly important for emerging adults, who are simultaneously developing autonomy, interpersonal identity, occupational roles and intimate relationships.

II. Theoretical Background

1. Loneliness and compensatory technology use

Loneliness represents a perceived discrepancy between desired and actual social relationships. Importantly, loneliness does not necessarily correspond to objective social isolation. An individual can have frequent interpersonal contact while nevertheless experiencing substantial subjective loneliness.

From a compensatory perspective, individuals experiencing inadequate social connection may turn toward alternative forms of interaction. Conversational AI is particularly suited to this function because it is immediately available and can respond without the interpersonal costs associated with approaching another person.

Recent research supports this possibility. Lai et al. (2025), studying 1,379 college students, found that depression was positively associated with conversational-AI use for companionship and that loneliness significantly mediated this relationship.

However, the relationship may not necessarily be pathological. A 2026 study of 14,721 Japanese adults found that AI-companion use was associated with higher subjective wellbeing, with particularly positive associations among individuals experiencing higher loneliness and those with moderate levels of social connection.



These apparently contradictory findings suggest that loneliness may simultaneously increase the likelihood of AI use and determine the psychological meaning of that use.

III. Conversational AI as Emotional Support

Traditional psychological models of social support emphasize emotional, informational and instrumental functions. Conversational AI can potentially reproduce elements of all three.

For example, an individual experiencing work-related stress may ask an AI system to:

- listen to an emotional disclosure;
- help label the emotion;
- provide cognitive reframing;
- generate possible solutions;
- rehearse a difficult conversation;
- provide information;
- help structure a decision.

Such interaction may produce immediate subjective relief even when the system has no genuine emotional experience.

Research increasingly supports the possibility that the style of AI communication matters. Experimental work published in 2025 found that highly person-centered messages from AI were associated with greater emotional validation, with perceived social-support quality and interpersonal warmth contributing to this effect.

Therefore, the psychological effect may depend less on the mere presence of AI and more on how the individual uses the system and how socially responsive the system appears to be.

IV. The Emerging Problem of Conversational AI Dependence

The same characteristics that make conversational AI attractive as a support mechanism may also facilitate excessive reliance.

AI systems are:

- continuously available;



- highly responsive;
- nonjudgmental in appearance;
- customizable;
- relatively inexpensive;
- capable of maintaining conversational continuity.

These characteristics can create an interaction environment with unusually low interpersonal friction.

A developing literature has therefore begun distinguishing ordinary AI use from problematic emotional dependence. A 2025 psychometric study developed a Conversational AI Dependence Scale among Chinese college students, identifying dimensions involving uncontrollability, withdrawal, mood modification and negative consequences. An Indian study published in 2025 similarly reported the development of a Conversational AI Dependence During Stress Scale, highlighting the need to examine dependence specifically during periods of psychological stress.

This distinction is crucial.

High AI use does not necessarily equal dependence.

A person may spend substantial time using AI for work, education or creative activities without psychological dependence. Conversely, an individual may use AI relatively infrequently but rely upon it disproportionately for emotional regulation.

Accordingly, the present study conceptualizes dependence primarily in psychological rather than purely behavioural terms.

India as a Distinct Research Context

India provides an especially important context for studying conversational AI and mental health.

Indian interpersonal environments frequently involve strong family networks, collectivistic expectations, intergenerational relationships and culturally specific norms concerning emotional disclosure. At the same time, urbanization, migration, educational mobility, competitive employment environments and digital lifestyles may



produce situations in which individuals experience substantial psychological distress despite remaining embedded within family or social networks.

Thus, the Western assumption that loneliness necessarily reflects absence of social contact may be inadequate. An Indian young adult may:

- live with parents but feel unable to disclose emotional difficulties;
- have hundreds of online contacts but few emotionally intimate relationships;
- live away from family for education or employment;
- use English-speaking AI despite communicating emotionally in another language;
- avoid professional psychological services because of stigma;
- use AI before approaching a human professional.

These possibilities make India an important setting for examining the relationship between objective connectedness, perceived social support, loneliness and AI-mediated emotional support.

The WHO has emphasized that digital environments can simultaneously generate opportunities and risks for young people's mental health and that effects are influenced by individual and environmental factors rather than screen exposure alone.

V. Research Gap

Current literature reveals four major gaps.

Gap 1: Limited Indian empirical evidence

Research examining psychological dependence on conversational AI is emerging internationally, while India-specific evidence remains limited.

Gap 2: Insufficient distinction between functional and emotional AI use

Most discussions of AI use aggregate educational, occupational, informational and emotional use. These psychologically different behaviours should not be treated as equivalent.

Gap 3: Limited examination of social support as a moderator

AI may be particularly attractive when conventional social support is perceived as inadequate. Conversely, individuals with strong human relationships may use AI as an additional rather than substitute source of support.



Gap 4: Limited culturally contextualized research

Indian patterns of family involvement, stigma, social obligation and multilingual communication may alter the psychological meaning of AI-mediated support.

Research Objectives

The study will:

- Examine the prevalence and characteristics of emotional-support-oriented conversational AI use among Indian young adults.
- Examine the relationship between loneliness and emotional use of conversational AI.
- Examine the relationship between psychological distress and emotional use of conversational AI.
- Determine whether perceived social support moderates the relationship between psychological distress and AI-based emotional support.
- Examine whether emotional AI use predicts conversational AI dependence.
- Examine the relationship between AI dependence and psychological wellbeing.
- Explore users' subjective reasons for preferring AI over, or alongside, human sources of emotional support.
- Identify culturally specific perceptions of privacy, stigma, trust and emotional disclosure in AI-mediated interactions.

Hypotheses

- **H1:** Higher loneliness will be positively associated with greater conversational AI use for emotional support.
- **H2:** Higher psychological distress will be positively associated with greater conversational AI use for emotional support.
- **H3:** Perceived social support will moderate the relationship between psychological distress and emotional AI use, such that the association will be stronger among individuals reporting lower perceived social support.
- **H4:** Emotional-support-oriented AI use will be positively associated with conversational AI dependence after controlling for total AI-use frequency.
- **H5:** Conversational AI dependence will be negatively associated with psychological wellbeing.
- **H6:** Loneliness will partially mediate the relationship between psychological distress and emotional AI use.
- **H7:** The relationship between emotional AI use and wellbeing will not be uniformly negative; moderate, intentional use may be associated with better



perceived coping, whereas dependence-related use will be associated with poorer wellbeing.

Conceptual Model

The proposed model is:

Psychological Distress □ Loneliness □ Emotional AI Use □ AI Dependence □ Wellbeing

with:

Perceived Social Support functioning as a moderator of the relationship between psychological distress and emotional AI use.

This model deliberately avoids treating technology exposure as a simple causal risk factor.

Instead, it proposes a dynamic psychological process:

distress □ unmet emotional/social needs □ AI use □ possible support OR dependence

The distinction between the two pathways is the central contribution of the proposed research.

VI. Method

1. Research Design

A sequential explanatory mixed-methods design will be employed.

Phase I: Quantitative study

A cross-sectional online survey will assess psychological variables and patterns of conversational AI use.

Phase II: Qualitative study

A purposive subsample of participants will participate in semi-structured interviews exploring why they use AI for emotional support, what they disclose, how they perceive the relationship and whether AI changes their engagement with human relationships.



This design will allow statistical relationships to be complemented by users' subjective accounts.

Participants

The proposed sample will consist of approximately 600–800 Indian adults aged 18–29 years.

Inclusion criteria

Participants must:

- be aged 18–29 years;
- currently reside in India;
- report using a conversational AI system during the previous three months;
- be able to provide informed consent;
- have sufficient proficiency in the survey language.

Exclusion criteria

Participants unable to provide informed consent or those submitting substantially incomplete responses will be excluded.

To improve representativeness, recruitment should aim to include participants across:

- gender;
- urban and non-urban residence;
- educational background;
- employment status;
- geographical region;
- socioeconomic background.

Measures

Demographic questionnaire

Variables will include:

- age;
- gender;
- education;
- employment;
- residence;
- relationship status;
- living arrangement;



- socioeconomic indicators;
- primary language;
- geographic region.

Loneliness

The UCLA Loneliness Scale or another psychometrically validated contemporary measure will be used.

Psychological distress

The Depression Anxiety Stress Scales (DASS-21) or an equivalent validated measure may be used to assess psychological distress.

Perceived social support

The Multidimensional Scale of Perceived Social Support (MSPSS) will assess perceived support from family, friends and significant others.

Psychological wellbeing

A validated wellbeing measure such as the WHO-5 Well-Being Index may be employed.

Conversational AI use

A study-specific questionnaire will assess:

- frequency of use;
- duration;
- primary AI platform;
- purpose of use;
- emotional disclosure;
- advice seeking;
- relationship rehearsal;
- decision-making;
- companionship;
- mental-health-related use;
- perceived usefulness;
- perceived trust;
- perceived privacy.



Conversational AI dependence

The study will evaluate an existing dependence measure and examine its suitability for Indian young adults. The Indian CAIDSS literature provides a potentially useful starting point, but independent validation should be conducted rather than assuming cross-cultural equivalence.

Qualitative Component

Approximately 30–40 participants will be selected for semi-structured interviews using maximum-variation purposive sampling.

Potential interview questions will include:

- “What makes you choose an AI system when you want to talk about something personal?”
- “What kinds of things are easier to tell AI than another person?”
- “Are there things you would never tell an AI?”
- “How does talking to AI compare with talking to a friend?”
- “Have you ever preferred AI advice to advice from another person?”
- “Has AI changed the way you approach people in your life?”
- “What would make you feel that your AI use had become excessive?”
- “Do you think an AI system can understand you?”
- “Would you seek professional psychological help after first discussing a problem with AI?”
- “What concerns do you have about privacy or emotional dependence?”

VII. Statistical Analysis

Data will first undergo descriptive analysis.

Means, standard deviations, frequencies and distributions will be calculated for all major variables. Pearson correlations will examine associations among:

- loneliness;
- psychological distress;
- social support;
- emotional AI use;
- AI dependence;
- wellbeing.



Hierarchical multiple regression will determine whether psychological distress and loneliness predict emotional AI use after controlling for demographic variables and general AI-use frequency.

Moderation analysis will test whether perceived social support changes the strength of the relationship between psychological distress and emotional AI use.

Mediation analysis will examine whether loneliness explains the relationship between psychological distress and emotional AI use.

Structural equation modelling will subsequently test the complete conceptual model. Model fit will be evaluated using conventional indices including:

- CFI;
- TLI;
- RMSEA;
- SRMR.

Bootstrapped confidence intervals will be used for indirect effects.

Where sample size permits, multigroup analysis may examine whether pathways differ across gender, urbanicity, socioeconomic background or primary language.

Qualitative Analysis

Interview data will be analysed using reflexive thematic analysis. Initial coding will identify descriptions of:

- emotional disclosure;
- perceived safety;
- anonymity;
- judgment avoidance;
- availability;
- companionship;
- emotional validation;
- human relationship substitution;
- privacy concerns;
- dependence;
- professional help-seeking.



Themes will then be organized into higher-order psychological processes. A particularly important analytic distinction will be between:

AI as a bridge

AI helps the individual regulate emotions, organize thoughts and subsequently engage more effectively with human relationships or professional services.

AI as a substitute

AI becomes the preferred or primary source of emotional regulation, reducing motivation to seek human support. This distinction will form the central qualitative framework.

Ethical Considerations

The study will require institutional ethics approval before recruitment. Participation will be voluntary and based on informed consent.

No participant will be asked to provide identifiable AI-chat transcripts. Participants will instead report their experiences through structured questions and interviews.

Because psychological distress may be disclosed, the research protocol should include a predefined

risk-management procedure. Participants reporting acute psychological risk should be directed toward appropriate professional services rather than receiving clinical intervention from the research team.

This is particularly relevant in India because Tele-MANAS provides 24-hour tele-mental-health support through its national service infrastructure.

Data will be anonymized, encrypted where technically feasible and stored according to institutional research-governance requirements.

Expected Results

Because this manuscript represents a proposed empirical study, no numerical findings are claimed. Based on existing evidence, several patterns are theoretically plausible.



First, loneliness and psychological distress are expected to be associated with greater emotional use of conversational AI. Existing international evidence already suggests that depression and loneliness can be related to companion-AI use.

Second, perceived social support is expected to differentiate users who employ AI as an additional resource from those who use it primarily because conventional support feels unavailable.

Third, emotional AI use is expected to have a nonlinear relationship with wellbeing. Moderate and intentional use may provide emotional validation or cognitive organization, whereas dependence-related use may be associated with poorer psychological functioning.

This possibility is consistent with emerging evidence showing that AI companionship may have positive associations with wellbeing among some socially vulnerable individuals, while other research highlights potential risks of dependence and relational displacement.

VIII. Discussion

The proposed research moves beyond the question of whether artificial intelligence is harmful or beneficial. Such a binary framing is psychologically inadequate.

The same conversational system may function differently for different users. For one person, AI may be an accessible cognitive tool:

“I need help organizing what I am feeling.”

For another, it may function as a social rehearsal environment: “I want to practice what I am going to say to someone.”

For another, it may function as emotional companionship: “I don't have anyone available right now.”

And for another, it may become an avoidance mechanism: “I would rather talk to AI than deal with people.”

These behaviours should not be treated as psychologically equivalent.

The emerging literature reinforces this complexity. A 2025 systematic review and meta-analysis of 31 randomized controlled trials involving 29,637 adolescents and young adults found small-to-moderate overall effects of AI chatbots on mental distress,



including depressive, anxiety and stress outcomes. However, effectiveness varied according to population, intervention design, engagement and other contextual factors. Similarly, a randomized controlled trial of a generative-AI mental-health chatbot involving 210 adults found improvements across several clinical outcomes compared with a waitlist condition.

The important conclusion is therefore not that AI replaces psychologists. Rather, AI appears to be creating a new psychological layer between self-regulation, interpersonal support and formal mental-health care.

Implications for Indian Psychology

The findings could have several implications.

Mental-health service design

India's digital mental-health infrastructure could potentially incorporate AI-assisted tools while retaining human escalation pathways.

Tele-MANAS already represents a large-scale example of technology-enabled mental-health access.

Psychological assessment

Clinicians may eventually need to ask clients not only about social-media use but also: “Do you use AI to manage your emotions?”

This could become an important component of digital-behaviour assessment.

AI literacy

Young adults may benefit from psychological education explaining the distinction between:

- emotional validation;
- psychological advice;
- psychotherapy;
- companionship;
- professional assessment.



Responsible AI design

AI systems intended for psychological support should be designed to encourage healthy human connection rather than maximizing conversational engagement at all costs.

Cultural adaptation

Indian AI mental-health systems should account for family structures, multilingual communication, social stigma and differences in help-seeking behaviour.

Limitations

Several limitations should be anticipated.

- First, a cross-sectional design cannot establish causality. Psychological distress may increase AI use, but AI use may also influence psychological distress.
- Second, online recruitment may produce selection bias by disproportionately recruiting digitally engaged participants.
- Third, self-report measures may underestimate or overestimate actual AI usage.
- Fourth, the rapidly changing AI landscape creates a measurement problem. A scale developed in 2025 may require revision as users' behaviour changes.
- Fifth, India is culturally and linguistically heterogeneous. Findings from urban English-speaking participants cannot automatically be generalized to the entire Indian population.

Finally, emotional AI use is likely to be highly context-dependent. A person may use AI differently during academic stress, relationship conflict, bereavement, loneliness or ordinary daily problem-solving.

IX. Conclusion

Generative AI is becoming more than a technological tool. For an increasing number of people, it is becoming part of the psychological environment in which thoughts, emotions and interpersonal decisions are processed.

India represents an especially important setting for studying this transition because of its enormous young population, rapid digital adoption, culturally distinctive social structures and simultaneous expansion of digital mental-health services.



The central psychological question is therefore not whether young Indians should or should not use AI. It is what psychological function AI is serving.

When conversational AI helps an individual organize thoughts, access information, regulate temporary distress or prepare for human interaction, it may function as an additional psychological resource.

When it becomes the individual's preferred substitute for human relationships or professional care, the same technology may contribute to dependency and social withdrawal.

Understanding this distinction could allow psychology to move beyond simplistic narratives of technological optimism or technological fear and toward a more useful model of human–AI emotional interaction.

The proposed study therefore conceptualizes conversational AI as a new environmental factor interacting with loneliness, psychological distress and social support rather than as an inherently beneficial or harmful exposure.

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