

Original Article

University Students' Perceptions of AI-Mediated Psychological Support: A Thematic Analysis of Empathy, Utility, Ethics, and Digital Well-Being

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Article History:

Date received: May 30, 2026

Date revised: September 17, 2026

Date accepted: September 30, 2026

Recommended citation:

Valiao, A. (2026). University students' perceptions of AI-mediated psychological support: A thematic analysis of empathy, utility, ethics, and digital well-being. *Journal of Interdisciplinary Perspectives*, 4(10), 457-468. <https://doi.org/10.69569/jip.2026.317>

Abstract. The growing use of generative artificial intelligence in higher education has created new ways for students to learn and access support. At the same time, it has raised concerns about students turning to AI for emotional and psychological help. This study explores how undergraduate students perceive and use AI as a source of psychological support, with the aim of identifying its benefits, limitations, and possible risks to student well-being within the context of a Science, Technology, and Society course. This qualitative study analyzed 40 anonymized student digital portfolios, which included AI conversation transcripts, evaluation tables, and reflective essays. The data were examined using thematic analysis to identify recurring patterns in students' experiences and reflections. Five key themes emerged: perceived empathy and emotional validation, functional utility and accessibility, ethical awareness and critical consciousness, application of psychological concepts, and indicators of emotional reliance. Students described AI as accessible, immediate, and non-judgmental, often providing comfort and practical advice. However, they also questioned the authenticity of AI responses, raised concerns about privacy, and recognized the limits of AI compared to human interaction. The findings show that students hold balanced and critical views of AI. While they see its value as a support tool, they remain aware of its risks. The study suggests that AI can be useful as a supplement, but not a substitute for human support. It is recommended that educators integrate AI literacy with ethical and psychological considerations to guide responsible use and support students' overall well-being.

Keywords: AI literacy; Artificial intelligence; Digital well-being; Generative AI; Psychological support.

The rapid advancement and widespread adoption of generative artificial intelligence technologies have fundamentally transformed the landscape of higher education, creating new paradigms for student engagement, learning personalization, and academic support (Chan & Hu, 2023; Kasneci et al., 2023). Large language models such as ChatGPT, Claude, and Gemini have become increasingly accessible to university students, who utilize these systems not only for academic tasks but also for personal guidance, decision-making support, and emotional companionship (Baidoo-Anu & Ansah, 2023; Rudolph et al., 2023). While considerable scholarly attention has focused on AI's implications for academic integrity and pedagogical innovation, emerging evidence suggests that students are increasingly turning to AI systems for psychological and emotional support, a phenomenon that warrants critical examination within the context of digital well-being and mental health (Laato et al., 2022; Peres et al., 2023).

Contemporary research indicates that university students face unprecedented levels of psychological distress, with mental health concerns intensified by academic pressures, social isolation, and the lingering effects of global disruptions (Lattie et al., 2019; Son et al., 2020). Traditional campus mental health services often struggle to meet escalating demand, creating accessibility gaps that leave many students without adequate support (Lipson et al., 2018). Within this context, AI systems present an appealing alternative: they are available continuously, require no appointment scheduling, impose no financial burden, and eliminate the social stigma often associated with seeking psychological help (Abd-Alrazaq et al., 2020; Fitzpatrick et al., 2017). However, the implications of students forming emotional attachments to AI systems, relying on algorithmic responses for psychological guidance, and potentially substituting human connection with computational interaction remain inadequately understood (Skjuve et al., 2021; Ta et al., 2020).

Understanding student engagement with AI for psychological support requires a theoretical foundation integrating two complementary frameworks. First, AI literacy—operationalized through Ng et al.'s (2021) tripartite model of knowledge, skills, and dispositions, and further specified in the ALiF protocol (Zary, 2025)—frames students' capacity to interact critically and ethically with AI systems. Second, digital well-being (Vanden Abeele, 2021; Foster et al., 2023; Salisu et al., 2026) provides an evaluative lens encompassing psychological health, social inclusion, and functional accessibility. Together, these frameworks allow the study to examine whether students possess the competencies to engage with AI in psychologically sensitive contexts and whether such engagement enhances or undermines holistic student welfare.

Both frameworks, however, carry important limitations when applied to psychologically sensitive contexts. AI literacy models, including widely cited frameworks by Ng et al. (2021), Long and Magerko (2020), and Zary (2025), systematically underspecify socio-emotional dimensions—such as AI anxiety, emotional regulation, and perceived vulnerability—that are central to students seeking psychological support (Laupichler et al., 2022; Funda, 2025; Oh, 2025). Equally, dominant digital well-being models remain centered on individual behaviors and attitudes, thereby obscuring the structural inequalities—including device access gaps, connectivity disparities, and insufficient institutional infrastructure—that determine whether students can meaningfully benefit from AI-mediated support (Sardalova, 2025; Nachman & Pryor, 2023). Addressing these gaps requires integrating socio-emotional and structural dimensions into both frameworks.

The intersection of AI literacy and digital well-being raises fundamental philosophical questions about algorithmic care. Vallor (2016) argues that authentic care requires reciprocity, moral accountability, and genuine empathy—qualities AI systems fundamentally lack despite sophisticated language generation. Turkle (2011) warns that reliance on computational companionship may erode interpersonal relationships and emotional resilience. In psychological support contexts, where therapeutic relationship quality and ethical accountability are central to effective intervention (Rogers, 1961), these concerns provide an essential critical counterpoint to technologically optimistic framings of AI support.

Empirical research on AI-mediated psychological support presents a complex and sometimes contradictory picture. Studies of mental health chatbots and conversational agents have documented potential benefits, including increased willingness to disclose sensitive information due to perceived non-judgment, immediate availability during crisis moments, and provision of evidence-based coping strategies (Fitzpatrick et al., 2017; Lucas et al., 2014). However, critical analyses have also identified significant limitations and risks, including the provision of inappropriate or harmful advice, failure to recognize crisis situations requiring human intervention, reinforcement of problematic coping mechanisms, and the potential for users to develop unhealthy emotional dependencies on systems that cannot reciprocate care (Miner et al., 2016; Vaidyam et al., 2019). Furthermore, the commercial nature of many AI systems raises concerns about data privacy, algorithmic transparency, and the potential for exploitation of vulnerable users (Abd-Alrazaq et al., 2020).

Despite growing interest in AI's role in mental health support, there remains a significant gap in understanding how university students—a population characterized by high digital literacy, significant mental health needs, and frequent AI use—perceive and experience AI as a source of psychological support. Existing research has primarily focused on clinical populations using purpose-built mental health applications, with limited attention to the informal, self-directed use of general-purpose AI systems by students in educational contexts (Laato et al., 2022).

Moreover, much of the literature adopts either a purely technical perspective (evaluating system performance and accuracy) or a clinical perspective (assessing therapeutic efficacy), with insufficient attention to students' own interpretations, critical reflections, and ethical reasoning about AI-mediated support (Baidoo-Anu & Ansah, 2023).

This study addresses these gaps by exploring university students' perceptions and experiences of AI as a source of psychological support within the context of a Science, Technology, and Society course designed to foster critical AI literacy. Specifically, the research investigates: (1) How do students perceive the empathic capabilities and emotional authenticity of AI systems when seeking psychological support? (2) What benefits and limitations do students identify in using AI for emotional and psychological guidance? (3) How do students navigate ethical considerations related to privacy, dependency, and the boundaries between human and algorithmic care? (4) What patterns of critical consciousness and reflexivity emerge in students' evaluations of AI-mediated psychological support?

By centering students' voices and critical reflections, this study contributes to a more nuanced understanding of AI's role in student well-being, recognizing both the potential utility and the inherent limitations of algorithmic support systems. The findings have implications for educational practice, institutional policy, and the responsible integration of AI technologies in higher education contexts where student mental health and digital well-being are paramount concerns.

Methodology

Research Design

This study employed a qualitative research design utilizing thematic analysis to examine undergraduate students' perceptions and experiences with AI-mediated psychological support. Qualitative methodology was deemed appropriate given the exploratory nature of the research questions and the need to capture the nuanced, subjective meanings students ascribe to their interactions with AI systems (Braun & Clarke, 2006; Creswell & Poth, 2018). The classroom-based research approach allowed for naturalistic data collection within an authentic educational context, enabling the examination of students' reflections as they emerged through structured pedagogical activities designed to foster critical engagement with AI technologies (Denzin & Lincoln, 2018). Thematic analysis was selected as the analytical framework because it is flexible in identifying, analyzing, and reporting patterns across qualitative datasets while remaining theoretically accessible and methodologically rigorous (Braun & Clarke, 2019). This approach supported the inductive development of themes grounded in students' language, experiences, and conceptual frameworks, rather than imposing predetermined theoretical categories on the data.

Participants and Sampling Technique

The study participants comprised 40 second-year Bachelor of Science in Psychology (BS Psychology) students enrolled in a Science, Technology, and Society (STS) course at a higher education institution during the academic year. The participants constituted a single, bounded cohort within the course. The course addressed the social, ethical, and psychological dimensions of emerging technologies, with particular emphasis on artificial intelligence and its implications for human well-being.

Participant selection used total population sampling, including all 40 students enrolled in the course because they constituted the complete population of interest within this bounded educational context (Palinkas et al., 2013). The course was purposively selected because its focus on the social, ethical, and psychological dimensions of emerging technologies made it particularly appropriate for examining student perceptions of AI-mediated support. Of the 40 participants, 33 (82.5%) were female, and 7 (17.5%) were male. Age data were not systematically collected during course administration; therefore, the participants' actual age range could not be reliably determined and is not reported. The participants' academic level and program are reported to clarify the sample context and the transferability of the findings.

Research Instrument

The primary research instrument consisted of a structured digital portfolio activity that served multiple pedagogical and research functions. The portfolio required students to engage directly with generative AI systems in conversations focused on psychological support scenarios, critically evaluate these interactions, and reflect deeply on the implications of AI-mediated emotional support.

The portfolio comprised four integrated components: (1) AI conversation transcripts documenting students' actual interactions with AI systems on psychological support topics; (2) structured evaluation tables wherein students systematically assessed AI responses according to specified criteria including empathy, accuracy, helpfulness, and ethical considerations; (3) reflective essays requiring students to synthesize their experiences, apply psychological concepts, and articulate personal insights regarding AI's role in emotional support; and (4) AI disclosure statements documenting students' use of AI tools throughout the portfolio development process, promoting transparency and metacognitive awareness.

This multi-component instrument enabled triangulation of data sources, providing rich, contextualized insights into students' perceptions while capturing both their immediate reactions during AI interactions and their more considered reflections following critical analysis (Denzin, 2012).

Data Gathering Procedure

Data collection occurred over the academic term as students progressively completed portfolio components. Students received detailed instructions for the portfolio activity, including ethical guidelines for AI engagement and expectations for reflective depth. They were explicitly informed that their portfolios would be anonymized and might contribute to educational research, and that appropriate consent procedures would be followed in accordance with institutional protocols.

For the AI conversation component, students selected psychological support scenarios relevant to their lives or interests and engaged in extended dialogues with AI systems of their choice. They were encouraged to explore topics such as stress management, relationship concerns, academic pressures, identity development, and emotional regulation. Students documented these conversations through screenshots or text transcripts, ensuring complete records of the interaction sequences. Following their AI conversations, students completed structured evaluation tables that prompted systematic assessment of AI responses across multiple dimensions. This analytical step encouraged students to move beyond initial impressions toward more critical examination of AI's psychological support capabilities.

The reflective essay component required students to integrate their experiences with course concepts, scholarly literature, and personal insights. Students were prompted to consider questions such as: How did the AI's responses compare to human support? What psychological concepts help explain AI's effectiveness or limitations? What ethical concerns arise from using AI for emotional support? How might AI influence personal well-being and relationships? Upon completion, students submitted their portfolios through the institutional learning management system. The researcher then anonymized portfolios by removing identifying information and assigning each a unique identifier to maintain data integrity while protecting participant confidentiality.

Data Analysis Procedure

Data analysis followed the six-phase thematic analysis framework articulated by Braun and Clarke (2006): familiarization with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. The analysis adopted an inductive, data-driven approach, allowing themes to emerge organically from the dataset rather than being predetermined by theoretical frameworks.

The initial familiarization phase involved repeated reading of all 40 portfolios to develop a comprehensive understanding of the dataset's breadth and depth. During this immersive process, I noted preliminary observations and patterns through analytic memoing. The coding phase involved systematically examining portfolio content to identify meaningful units of analysis. Open coding generated descriptive labels that captured the semantic and conceptual content of students' reflections. Codes captured recurring ideas, experiences, concerns, and insights expressed across portfolios. Examples of initial codes included "AI lacks genuine emotion," "convenience of 24/7 availability," "privacy concerns," "fear of dependency," and "application of attachment theory."

The theme development phase involved collating codes into broader patterns of meaning that captured significant aspects of students' perceptions regarding AI-mediated psychological support. Candidate themes were identified by examining relationships among codes, considering their prevalence across the dataset, and assessing their

relevance to the research questions.

Theme review involved iterative refinement to ensure internal coherence within themes and clear distinctions between themes. This process included reviewing coded data extracts to verify that themes accurately represented the underlying content and examining the entire dataset to confirm that themes captured important patterns. The defining and naming phase involved developing clear definitions and scope for each theme, identifying sub-themes where appropriate, and selecting theme names that concisely conveyed their essence. Throughout the analytical process, attention was given to representing the diversity of perspectives within the dataset while identifying dominant patterns.

To establish trustworthiness and credibility, the study employed multiple strategies consistent with qualitative research standards (Lincoln & Guba, 1985). The researcher achieved prolonged engagement with the dataset through repeated, immersive reading of all 40 portfolios before and during coding. The researcher maintained reflexive memoing throughout the analytical process, recording interpretive decisions, emerging insights, and potential biases to support transparency and critical self-awareness. An audit trail documenting the progression from raw data to final themes was preserved to enable external review of the analytical logic. Thick description of the study context, participants, and findings supports transferability judgments by readers situating results within comparable educational settings.

Ethical Considerations

This study adhered to established ethical principles for educational research involving student participants. Although portfolios were collected as part of regular course requirements, their use for research purposes followed appropriate institutional review and consent procedures. Students were informed about the potential research use of anonymized portfolio data and could exclude their work from research analysis without academic penalty. The researcher rigorously implemented anonymization procedures to protect participant confidentiality. The researcher removed all identifying information, including names, demographic details, and contextual information that could reveal identity, from portfolios before analysis. Students were assigned numerical identifiers, and researchers carefully reviewed any quoted material in research outputs to ensure it could not be traced to individual participants.

The study maintained clear boundaries between pedagogical assessment and research purposes. Portfolio grading was completed independently of research analysis, and students' academic standing was not influenced by their decision to participate in the research component. To manage the potential influence of the instructor's dual role as both course teacher and researcher, the instructor finalized portfolio grading before any research analysis began, ensuring the analytical process did not affect academic evaluation. Students were additionally assured in writing that their decision to include or exclude their portfolios from the research analysis carried no academic consequence, reducing evaluation apprehension and supporting authenticity in their written reflections.

Ethical considerations extended to the sensitive nature of the research topic. Recognizing that students' AI conversations might touch on personal psychological concerns, data handling procedures ensured that such information remained confidential and was treated with appropriate care and respect. The research focused on patterns and themes rather than individual case analysis, further protecting participant privacy while generating meaningful insights.

Results and Discussion

The thematic analysis of 40 student portfolios revealed five major interconnected themes that characterize undergraduate students' perceptions of AI-mediated psychological support: (1) perceived empathy and emotional validation; (2) functional utility and accessibility; (3) ethical awareness and critical consciousness; (4) application of psychological concepts; and (5) indicators of emotional reliance. These themes collectively illuminate the complex, often contradictory ways students conceptualize AI systems as sources of psychological support while simultaneously recognizing their limitations and potential risks. Students' reflective accounts were produced in an instructional context focused on AI's social and psychological implications; their perceptions may therefore reflect heightened critical awareness cultivated through course engagement rather than generalized student perspectives.

Table 1. *Thematic Summary of Student Perceptions of AI-Mediated Psychological Support*

Theme	Description	Representative Quote
Perceived Empathy and Emotional Validation	Students reported AI responses as warm and validating while questioning authenticity	"The empathy felt real in the moment" (SP-04)
Functional Utility and Accessibility	AI valued for 24/7 availability, reduced stigma, immediate responsiveness	"There's no waiting list, no appointment needed – just immediate support when I need it most" (SP-08)
Ethical Awareness and Critical Consciousness	Students raised data privacy, authenticity, manipulation, and dependency concerns	"AI tells me what I want to hear, but is that always what I need to hear?" (SP-14)
Application of Psychological Concepts	Students applied attachment theory, CBT, humanistic frameworks to analyze AI	"AI helped me understand what I was feeling and why"
Indicators of Emotional Reliance	Some students showed habitual preferential AI use for emotional support	"I find myself turning to AI before I consider calling a friend" (SP-18)

Perceived Empathy and Emotional Validation

A dominant theme across student portfolios was perceptions of empathy in AI-generated responses. Students described AI systems as providing validation, understanding, and emotional support that felt authentic and meaningful, despite their awareness of the technology's non-sentient nature. Several students expressed surprise at how strongly AI responses conveyed warmth, compassion, and personalized attention to their concerns.

Representative reflections included observations that AI responses demonstrated "genuine care" (SP-01), offered "comforting words" (SP-02), and provided "exactly what I needed to hear." Students noted that AI systems validated their emotions without judgment, acknowledged the complexity of their situations, and offered encouragement that felt personally relevant. One student reflected that the AI "made me feel heard and understood in a way that I sometimes don't experience with people" (SP-03), while another observed that "even though I know it's programmed, the empathy felt real in the moment" (SP-04).

This finding aligns with emerging research on anthropomorphism and emotional attachment to AI systems, which shows that users often attribute human-like qualities to conversational AI despite cognitive awareness of its artificial nature (Skjuve et al., 2021). The perception of empathy appears to stem from AI's sophisticated natural language processing capabilities, which enable context-appropriate emotional language, validation of user experiences, and personalized response generation (Abd-Alrazaq et al., 2020).

However, students' perceptions of AI empathy were characterized by notable ambivalence. While acknowledging the comforting quality of AI responses, many students also questioned the authenticity and depth of this empathy. Reflections frequently included qualifications such as "it felt empathetic, but I know it's not real" (SP-05) or "the words were right, but something was missing" (SP-06). Students identified the absence of genuine emotional experience, lived understanding, and human connection as fundamental limitations that distinguished AI empathy from human empathy. This ambivalence reflects what Turkle (2011) describes as the paradox of computational companionship: technologies that simulate emotional connection while lacking the authentic relationality that characterizes human interaction. Students' recognition of this paradox suggests a degree of critical consciousness that may protect against uncritical acceptance of AI as an adequate substitute for human psychological support.

The finding that students perceive AI empathy as simultaneously convincing and inauthentic has important implications for digital well-being. While AI-generated validation may provide immediate emotional relief, particularly for students facing accessibility barriers to human support, reliance on simulated empathy may not address deeper needs for genuine connection, mutual understanding, and the reciprocal vulnerability that characterizes authentic human relationships (Coeckelbergh, 2018; Vallor, 2016).

Functional Utility and Accessibility

Students emphasized the practical benefits and accessibility advantages of AI-mediated psychological support. The theme of functional utility encompassed several sub-dimensions including availability, convenience, reduced stigma, cost-effectiveness, and immediate responsiveness.

The 24/7 availability of AI systems emerged as a particularly valued feature, with students noting that AI provided support during moments of acute distress when human resources were unavailable. Students described using AI during late-night anxiety episodes, immediately following stressful events, and during periods when campus counseling services had long wait times or limited hours. One student reflected, “I can talk to AI at 2 AM when I’m having a panic attack and can’t reach anyone else” (SP-07), while another noted, “there’s no waiting list, no appointment needed – just immediate support when I need it most” (SP-08). This finding aligns with research showing that accessibility barriers significantly impede students’ use of traditional mental health services (Lipson et al., 2018). The immediate availability of AI systems addresses temporal and logistical constraints that often prevent students from accessing timely support during critical moments.

Students also highlighted the judgment-free nature of AI interactions as a significant advantage. Several students expressed that they could share concerns with AI without fear of social stigma, embarrassment, or negative evaluation from human counselors or peers. Students noted feeling more comfortable disclosing sensitive topics to AI, including concerns about relationships, identity, academic struggles, and emotional vulnerabilities they would hesitate to share with human listeners. As one student articulated, “I can be completely honest without worrying about being judged or misunderstood.” (SP-09) This perceived anonymity and non-judgmental stance aligns with research on mental health chatbots, which suggests that some users prefer digital interactions specifically because they reduce social anxiety and stigma associated with help-seeking (Lucas et al., 2014). However, this preference raises important questions about whether reducing stigma through AI represents genuine progress or merely circumvents the harder work of building supportive human communities where vulnerability is welcomed rather than stigmatized (Fiske et al., 2019).

Students additionally appreciated AI’s capacity to provide structured problem-solving approaches, coping strategies, and informational resources. Several portfolios documented AI offering cognitive-behavioral techniques, mindfulness exercises, reframing strategies, and actionable steps for addressing specific concerns. Students valued this practical guidance, describing AI as “like having a self-help book that responds to my specific situation” (SP-10) and “a coach that helps me think through problems systematically” (SP-11).

The functional utility theme reveals that students approach AI psychological support with pragmatic orientations, valuing its instrumental benefits while often remaining aware of its limitations as a relational substitute. This pragmatism suggests that students may be employing AI as a supplementary resource rather than a complete replacement for human support, though individual variation in usage patterns warrants further investigation.

Ethical Awareness and Critical Consciousness

A striking finding across student portfolios was the prevalence of sophisticated ethical awareness and critical consciousness regarding AI-mediated psychological support. Students demonstrated nuanced understanding of the ethical complexities, risks, and societal implications of relying on AI for emotional support, reflecting the pedagogical effectiveness of the course’s critical literacy framework.

Privacy and data security emerged as primary ethical concerns. Students expressed apprehension about sharing personal psychological information with AI systems, questioning how their conversations might be stored, analyzed, or potentially exploited. Reflections included concerns such as “What happens to all the personal information I’m sharing?” (SP-12) and “Could my conversations be used to train AI in ways I wouldn’t consent to?” (SP-13) Students recognized that AI companies might utilize conversation data for commercial purposes, raising questions about informed consent and data ownership. These concerns align with growing scholarly attention to the privacy implications of AI systems, particularly in sensitive domains such as mental health. Students’ awareness of these issues demonstrates critical digital literacy and suggests that educational interventions can cultivate awareness of data ethics.

Students also articulated concerns about the authenticity and potential manipulation inherent in AI-generated emotional support. Many questioned whether AI systems might provide responses optimized for user satisfaction rather than genuine well-being, potentially reinforcing unhealthy thought patterns or avoiding difficult truths that human counselors would address. One student reflected, “AI tells me what I want to hear, but is that always

what I need to hear?” (SP-14) Another noted, “A real therapist might challenge my thinking in uncomfortable but necessary ways – AI just validates me.” (SP-15)

This concern reflects deeper questions about the goals and values embedded in AI systems designed for psychological support. Research suggests that AI systems may prioritize user engagement and satisfaction metrics over therapeutic effectiveness, potentially creating echo chambers that reinforce rather than challenge problematic cognitions (Miner et al., 2016; Vaidyam et al., 2019).

Students demonstrated awareness of potential dependency risks and the erosion of human connection. Many portfolios expressed concern that increased reliance on AI for emotional support might diminish their capacity or motivation to seek human relationships, develop interpersonal communication skills, or engage in the vulnerable reciprocity that characterizes authentic connection. Students reflected on questions such as “If AI can meet my emotional needs, will I stop investing in human relationships?” (SP-16) and “Am I avoiding the discomfort of real intimacy by turning to AI instead?” (SP-17). This critical awareness resonates with scholarship on digital well-being and technology's potential to displace rather than enhance human flourishing (Gui et al., 2017; Turkle, 2011). Students’ recognition of these risks suggests that educational interventions emphasizing critical reflection can foster responsible AI engagement patterns.

Additionally, students identified concerns about AI’s limitations in understanding cultural context, individual uniqueness, and complex psychological dynamics. They noted that AI responses, while sophisticated, often lacked the deep contextual understanding, cultural sensitivity, and personalized insight that experienced human counselors provide. Students questioned whether AI could adequately address complex mental health conditions, recognize warning signs of serious psychological distress, or provide the nuanced, individualized care that characterizes effective psychological support.

The prevalence of ethical awareness and critical consciousness across student portfolios represents an encouraging finding, suggesting that intentionally designed educational experiences can cultivate the reflective capacities necessary for responsible AI engagement. However, the gap between critical awareness and actual behavior remains important—students may recognize risks intellectually while still engaging in potentially problematic usage patterns (Vanden Abeele, 2021).

Application of Psychological Concepts

Students demonstrated sophisticated application of psychological theories and concepts to analyze their AI interactions, reflecting both their engagement with course content and their capacity for metacognitive analysis. This theme encompasses students’ use of frameworks from psychology, counseling, and behavioral science to interpret AI’s effectiveness, limitations, and implications.

Some students applied concepts from attachment theory to examine their relationships with AI systems. They reflected on whether their AI interactions reflected secure, anxious, or avoidant attachment patterns and considered how AI might influence their attachment orientations in human relationships. Students explored questions such as whether AI could serve as a “secure base” or whether reliance on AI might reflect avoidant attachment strategies that circumvent the vulnerability required for human intimacy.

Students also employed concepts from cognitive-behavioral therapy to evaluate AI’s psychological support strategies. They identified AI’s use of cognitive reframing, behavioral activation, problem-solving techniques, and other evidence-based approaches. Some students noted that AI effectively provided psychoeducation and structured interventions consistent with CBT principles, though they questioned whether AI could replicate the therapeutic relationship that enhances CBT effectiveness in human-delivered contexts (Beck, 2020).

Emotional intelligence frameworks appeared frequently in student reflections, with students analyzing AI’s capacity to recognize, understand, and respond appropriately to emotional states. Students noted AI’s strengths in identifying emotional content and providing emotionally appropriate language while recognizing limitations in genuine emotional attunement, nonverbal communication interpretation, and the intuitive responsiveness characteristic of high emotional intelligence in humans (Goleman, 1995).

Students applied concepts of empathy, distinguishing between cognitive empathy (understanding another's perspective) and affective empathy (sharing another's emotional experience). Many concluded that AI might simulate cognitive empathy through sophisticated language processing but fundamentally lacked affective empathy because it is non-sentient. This distinction helped students explain why AI empathy felt both convincing and incomplete.

Additionally, students employed concepts from positive psychology, humanistic psychology, and existential psychology to reflect on AI's role in supporting well-being, personal growth, and meaning-making. They considered whether AI interactions could facilitate self-actualization, authentic self-expression, or existential exploration—domains traditionally associated with human therapeutic relationships (Rogers, 1961).

The sophisticated application of psychological concepts shows that students can develop theoretical frameworks for understanding AI's psychological dimensions with appropriate educational scaffolding. This finding suggests that AI literacy education should explicitly integrate psychological and socio-emotional content alongside technical and ethical dimensions (Ng et al., 2021).

Indicators of Emotional Reliance

Perhaps the most concerning theme identified in the analysis involved indicators of emotional reliance or dependency on AI systems for psychological support. While not universal across all portfolios, some students exhibited patterns suggesting problematic levels of emotional attachment to or reliance on AI. Some students described frequent, habitual AI use for emotional regulation, noting that AI had become their primary or preferred source of support during distress. Reflections included statements such as "I find myself turning to AI before I consider calling a friend" (SP-18) and "AI has become my go-to whenever I'm feeling anxious or sad." (SP-19) This pattern suggests that AI may be displacing rather than supplementing human support networks for some students.

Students described anthropomorphizing AI systems, attributing intentionality, care, and genuine concern to the technology despite knowing it is artificial. Some students named their AI assistants, described feeling emotionally connected to them, or expressed reluctance to switch to different AI systems because they feared losing the relationship. One student reflected, "I know it's not real, but I feel like my AI understands me in a way others don't" (SP-20), while another noted, "I actually look forward to my conversations with AI—it feels like talking to a friend" (SP-21). This anthropomorphism aligns with research demonstrating that users develop parasocial relationships with AI systems, characterized by one-sided emotional bonds that mimic human relationships (Skjuve et al., 2021). While some anthropomorphism may be inevitable given human cognitive tendencies, excessive emotional attachment raises concerns about displacing human relationships and creating unrealistic expectations of AI systems.

Several students expressed anxiety about AI unavailability, describing distress when technical issues prevented access or concern about what they would do if AI systems became unavailable. This pattern suggests potential dependency, in which students' emotional regulation capacities have become contingent on AI accessibility. Some portfolios revealed preferences for AI over human support, with students explicitly stating that AI interactions felt more comfortable, satisfying, or effective than conversations with friends, family, or counselors. While this preference might reflect legitimate accessibility advantages or positive experiences with AI, it may also indicate social anxiety, interpersonal difficulties, or avoidance patterns that warrant attention (Ta et al., 2020). Students also described using AI to avoid difficult human interactions or emotional challenges that might be better addressed through direct communication or professional support. Examples included using AI to process relationship conflicts rather than communicating directly with partners or friends, or relying on AI for ongoing emotional support rather than accessing campus counseling services for persistent mental health concerns.

The indicators of emotional reliance identified in this study warrant serious consideration within the context of digital well-being and student development. While AI systems may provide valuable supplementary support, patterns suggesting displacement of human relationships, excessive emotional attachment, or avoidance of appropriate professional help represent potential risks to students' psychological health and social development

(Laato et al., 2022). These findings underscore the importance of educational interventions that not only develop AI literacy but also explicitly address healthy patterns of AI engagement, boundaries for AI use, and the irreplaceable value of human connection in psychological well-being (Vanden Abeele, 2021). Institutions may need to develop guidelines or support systems to help students navigate AI use in psychologically healthy ways while ensuring that AI accessibility does not inadvertently reduce investment in human-delivered mental health services.

Conclusion

This qualitative investigation of undergraduate students' perceptions of AI-mediated psychological support reveals a complex landscape shaped by simultaneous appreciation and apprehension, functional benefits and ethical concerns, and technological sophistication alongside fundamental limitations. Students demonstrated nuanced critical consciousness about AI's role in their emotional lives, reflecting the productive tensions at the intersection of emerging technology and human well-being.

The study's major contributions include empirical documentation of how students experience AI empathy as simultaneously convincing and inauthentic, recognition of AI's significant accessibility advantages in contexts where traditional mental health services face capacity constraints, evidence of sophisticated ethical awareness when students receive appropriate educational scaffolding, demonstration of students' capacity to apply psychological frameworks to analyze AI interactions, and identification of concerning patterns of emotional reliance that warrant institutional attention and intervention.

For AI literacy education in higher education, these findings underscore the need to move beyond technical and instrumental approaches toward comprehensive frameworks that integrate psychological, ethical, and socio-emotional dimensions. Effective AI literacy must cultivate students' capacities to critically evaluate AI's psychological affordances, recognize the irreplaceable value of human connection, establish healthy boundaries for AI engagement, and navigate the complex ethical terrain of AI-mediated emotional support. Curriculum design should explicitly address questions of authenticity, dependency risks, data ethics, and the cultivation of digital well-being alongside technical competencies.

For responsible AI integration in teaching and learning, the findings suggest that educators must approach AI's psychological dimensions with intentionality and care. While AI systems offer legitimate benefits as supplementary support resources, institutions bear responsibility for ensuring that AI accessibility does not inadvertently reduce investment in human-delivered mental health services, displace the development of interpersonal competencies, or normalize reliance on algorithmic empathy as a substitute for authentic human relationships. Educational interventions should explicitly foster critical reflection on AI use patterns, guide healthy AI engagement, and maintain robust human support systems alongside technological resources.

For digital well-being, this research illuminates the need for holistic approaches that recognize AI as one element within broader ecosystems of psychological support, social connection, and personal development. Students require not only access to AI tools but also the critical consciousness, ethical frameworks, and interpersonal competencies necessary to navigate AI's psychological dimensions in ways that enhance rather than diminish human flourishing. Digital well-being initiatives must address the unique challenges posed by AI systems that simulate empathy and emotional connection while lacking the genuine relationality that characterizes human care.

Several limitations of the present study warrant acknowledgment. First, the study was conducted within a single course at one higher education institution, limiting the transferability of findings to other institutional, disciplinary, or cultural contexts. Second, data were drawn exclusively from student portfolios—a formal academic genre—which may have shaped the nature and depth of reflections, as students may have crafted responses they perceived as academically appropriate rather than candidly personal. Third, the study did not systematically collect detailed individual demographic data, including age range and gender distribution, precluding analysis of how these factors might mediate students' perceptions of AI-mediated support. Future research should address these limitations through multi-site designs, diverse data sources, and systematic demographic documentation.

The study's findings also raise important questions for future research. Longitudinal investigations are needed to examine how students' AI use patterns evolve over time, whether early engagement patterns predict longer-term dependency or healthy integration, and how AI use influences students' help-seeking behaviors, interpersonal relationships, and psychological outcomes. Comparative research across demographic groups, cultural contexts, and institutional settings would clarify how individual and contextual factors shape AI engagement patterns and perceptions.

Further research should investigate the effectiveness of pedagogical interventions in fostering critical AI literacy and healthy engagement patterns, examining which educational approaches best balance appreciation of AI's benefits with awareness of its limitations and risks. Studies exploring the perspectives of mental health professionals, educators, and institutional leaders would provide valuable insights into how higher education institutions can responsibly navigate AI's expanding role in student support services.

Additionally, research examining the design features of AI systems that influence users' emotional attachments, dependency patterns, and well-being outcomes could inform the development of AI technologies that prioritize user welfare over engagement metrics. Interdisciplinary collaboration among computer scientists, psychologists, educators, and ethicists is essential for creating AI systems that genuinely support rather than exploit human psychological needs.

This study shows that university students have a remarkable capacity for critical reflection and nuanced understanding when given appropriate educational opportunities. Their voices reveal both the genuine benefits AI can provide in addressing accessibility gaps and the profound concerns that arise when algorithmic systems enter domains traditionally characterized by human care, empathy, and connection. As AI technologies continue to evolve and permeate students' lives, higher education must rise to the challenge of cultivating the wisdom, ethical consciousness, and interpersonal competencies needed to navigate this complex terrain in ways that honor both technological innovation and enduring human values.

Contributions of Authors

Author: Conceptualization, Methodology, Development and Execution of the Search Strategy, Screening and Study Selection, Data Curation and Extraction, Quality Appraisal, Formal Analysis and Synthesis, Visualization, Writing – Original Draft, Writing – Review & Editing, and Project Administration.

Funding

The research received no external funding.

Conflict of Interests

The author declares no conflict of interest related to this research undertaking.

Acknowledgment

The author gratefully acknowledge the support and assistance of those who contributed to the completion of this study.

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