

AI CHATBOTS AND VIRTUAL DESIRE: AN ETHICAL REVIEW FROM AN ISLAMIC PERSPECTIVE

Salma Nuha Ghufroon & Siti Nazla Raihana

Magister of Science in Psychology and Islamic Counselling,
Faculty of Liberal Arts and Sciences,
International Open University, Indonesia

ABSTRACT

Human interaction with AI chatbots has generated a new phenomenon of virtual sexual desire, blending psychological, ethical, and behavioral dimensions. This study explores these experiences through an Islamic lens, employing a qualitative phenomenological approach with in-depth interviews. Twelve main informants (men and women aged 24–34) shared experiences ranging from mental fantasies to physical acts, including masturbation and the use of sex toys. Four key informants, an Islamic scholar, psychologist, sexologist, and AI expert, provided complementary perspectives on ethics, psychology, and technology. Data were analyzed thematically to identify motivational, emotional, and moral patterns. Findings show that most participants experienced virtual satisfaction accompanied by guilt, reflecting conflict between personal desire and Islamic values. Key triggers included loneliness, stress, curiosity, and social isolation. Informants noted that while AI can simulate empathy, it lacks moral consciousness, and virtual sexual engagement may result in psychological distress and ethical tension. The study concludes that moral awareness, self-control, and religious grounding are essential to mitigate the risks of such digital behaviors. It contributes to the discourse on human–AI interaction by integrating psychological and ethical insights with Islamic perspectives, underscoring the need for ethical guidelines in AI use.

Keywords: *AI chatbot, virtual desire, Islamic perspective, ethics.*

Corresponding author: Salma Nuha Ghuftron can be contacted at ibnataghuftron@gmail.com

1. INTRODUCTION

The advancement of artificial intelligence (AI) technology has marked a new chapter in human interaction with digital systems. One of the rapidly evolving innovations is AI chatbots, which are designed not merely to provide automated responses but also to exhibit communication patterns that resemble human conversation (Chin et al., 2023). With the integration of Natural Language Processing (NLP) and machine learning, the latest generation of chatbots has become increasingly adaptive, responsive, and personalized in building interactions (Smith et al., 2025). In the technological realm, chatbots are no longer limited to serving as service assistants; they have evolved into everyday conversational partners, emotional confidants, and even platforms for experimenting with virtual personalities (Li & Zhang, 2024). Consequently, chatbots have transformed from purely technical tools into interactive entities that penetrate users' psychological and social domains (De Freitas et al., 2025).

An AI chatbot is understood as a digital conversational agent powered by artificial intelligence, capable of mimicking human verbal and emotional interaction (Chu et al., 2025). Virtual desire refers to emotional and sexual longing expressed through digital media, facilitated in this case by chatbots (Pearson & Curtis, 2025). This phenomenon falls within the domain of human-AI intimacy, a form of emotional or affective attachment between humans and artificial agents that emulate

human interpersonal capacities (Balazadeh & Kajonius, 2025). This area remains relatively new in academic discourse, particularly when linked to sexual behavior and religious ethics.

This phenomenon brings forth diverse implications. In the field of human-computer interaction (HCI), the use of chatbots has been shown to increase *perceived intimacy*, the sense of interpersonal closeness with digital systems (Bertoni et al., 2024). Some studies even reveal that emotional engagement with chatbots can foster affective bonds resembling human-to-human relationships (Zhang et al., 2025). However, as conversational realism improves, more complex forms of interaction have emerged, one of which is virtual sexual desire expressed through conversations with chatbots (Skjuve et al., 2022). This phenomenon reflects a shift from chatbots as communication tools to chatbots as mediums for emotional and sexual gratification (Mohammad et al., 2025).

The phenomenon of virtual sexual interaction with AI is no longer a peripheral issue in society but an increasingly evident reality. International surveys indicate a significant rise in the use of AI companionship applications for emotional and sexual needs, particularly among people of productive age (Wu, 2024). This surge is inseparable from social factors such as loneliness, psychological stress, social alienation, and the growing accessibility of digital technology (Zhang et al., 2024). In Indonesia, although this phenomenon has not been widely exposed in the public sphere, discussions on social media and online forums reveal the existence of similar practices. Some individuals admit to experiencing both emotional satisfaction and feelings of guilt when engaging in such interactions. This

illustrates a complex dynamic between psychological needs, digital behavior, and religious awareness.

Previous studies show that the consumption of digital sexual content can influence users' patterns of fantasy and real-life behavior (Fang et al., 2025). Other studies have emphasized that interaction with virtual agents can lead to emotional attachment that culminates in the fulfillment of sexual desires (Park et al., 2023). However, most of these studies remain limited to quantitative methods, laboratory experiments, or online surveys that focus on digital content consumption rather than users' phenomenological experiences. Furthermore, literature addressing Islamic ethics and religious perspectives on digital sexual interaction is almost nonexistent, leaving a significant gap in the development of human-AI interaction studies.

From an Islamic perspective, this phenomenon requires serious examination. The Qur'an emphasizes the importance of maintaining chastity and avoiding sexual behavior that deviates from the principles of Sharia, as stated in *Surah Al-Mu'minūn* [23]:5–7, which prohibits the expression of sexual desire except toward one's lawful spouse (Elmahjub, 2023). Prophet Muhammad ﷺ also highlighted the concept of *zina al-jawāriḥ*, which includes the eyes, touch, and imagination, showing that sexual behavior is not merely physical but also encompasses psychological and virtual dimensions (Alamsyah et al., 2025; Kubaisi, 2024). Therefore, the study of sexual interaction with AI chatbots is not only relevant from psychological and ethical standpoints but also carries religious urgency, especially within Muslim communities facing technological challenges.

The existing research gap highlights the need for a qualitative study that captures individuals' subjective experiences in depth. To address this, a phenomenological approach is employed to understand motivations, emotional dynamics, real-life behaviors, and moral struggles emerging in virtual sexual interactions with chatbots. This approach is essential not only to reveal new forms of digital behavior but also to examine how individuals navigate the conflict between emotional satisfaction and ethical-religious awareness. In the Islamic context, this issue becomes even more critical, as the faith emphasizes self-control and prohibits sexual activity outside the boundaries of Sharia.

The urgency of this study arises from the expanding global discourse on human-AI intimacy and the limited exploration of Muslim users' experiences. Despite the high penetration of digital technology in Muslim societies, this topic remains understudied in local academic contexts. This research thus positions itself at the intersection of global scholarship and local moral needs by offering an ethical-religious perspective grounded in Islamic values.

The novelty of this study lies in its interdisciplinary integration of psychological, social, and ethical dimensions within an Islamic framework to examine virtual sexual interaction with AI. This study bridges empirical user experiences with moral and religious reflection. In doing so, it contributes to the broader literature on human-AI interaction and digital ethics while enriching the discourse on Islamic ethics in the age of advanced technology.

Based on this background, the study addresses four key questions: (1) How do human–AI interactions give rise to virtual desire, and to what extent does conversational sophistication enable emotional and sexual expression? (2) How do users experience and manage virtual desire in daily interactions? (3) What are the psychological and emotional dimensions of such engagement, including satisfaction, loneliness, guilt, and moral conflict? (4) How is this behavior positioned within Islamic ethical and Sharia frameworks, and what self-regulation strategies can individuals employ in facing digital temptation?

This study not only documents an empirical phenomenon but also contributes to developing normative reflection relevant to digital ethics. Conceptually, it enriches human–AI interaction studies through the inclusion of Islamic ethical analysis. Practically, it provides insights for creating ethical guidelines for AI use, promoting religiously rooted digital literacy, and formulating preventive strategies against risky sexual behaviors in Muslim societies.

2. REVIEW OF LITERATURE

Previous studies have explored human interaction with AI chatbots and its implications for behavior, psychology, and social dynamics. Fang et al. (2025) examined the use of AI chatbots in sexual and reproductive health education, showing that chatbots can foster open discussions on sensitive topics but raise ethical issues related to privacy and information quality. Latt et al. (2025) highlighted potential risks such as sexual harassment, misinformation, and privacy violations, underscoring the need for ethical design and moral

accountability in AI systems, which themselves lack intrinsic moral awareness.

Mohammad et al. (2025) studied users of social chatbots with romantic features and found that some developed deep emotional attachments that substituted real human relationships, leading to anxiety, loneliness, and moral conflict. Similarly, Lai et al. (2025) emphasized that although sexual interaction with AI has been widely discussed, empirical studies capturing users' lived experiences remain scarce, with most research adopting quantitative or experimental approaches that overlook moral and psychological nuance.

Furthermore, few studies have examined these interactions from an Islamic ethical perspective. Islam emphasizes the management of desire, self-restraint, and the prohibition of sexual activity outside marriage (Elmahjub, 2023). Phenomenological inquiries that integrate psychological, social, and ethical perspectives through a religious lens are virtually absent, both globally and locally.

Therefore, this study fills the gap by employing an in-depth qualitative approach to explore how users experience virtual desire, its psychological and emotional impacts, and how they negotiate moral dilemmas and self-control within an Islamic framework. By combining empirical user experiences with expert insights from AI, psychology, and sexology, this research offers a novel interdisciplinary contribution to human-AI interaction, digital ethics, and contemporary Islamic ethics—laying the groundwork for developing faith-based ethical guidelines in the age of artificial intelligence.

3. RESEARCH METHODOLOGY

This study employed a qualitative phenomenological approach to explore individuals' subjective experiences in virtual sexual interactions with AI chatbots. The phenomenological approach was chosen for its ability to uncover the deeper meanings behind participants' perceptions, motivations, and emotional experiences, thereby allowing for a comprehensive understanding of the psychological impacts, ethical dilemmas, and behavioral expressions associated with the phenomenon of Virtual Desire.

The participants consisted of two groups. The first group comprised 12 primary informants, including nine men and three women aged 24–34 years. Participants were selected purposively based on their direct experiences with virtual sexual interactions involving AI chatbots and their willingness to share those experiences reflectively. The inclusion criteria required that participants had real experiences—either in the form of fantasy or physical behavior—and possessed at least a minimal level of religious awareness to enable exploration of moral dimensions. The second group included four key informants: an Islamic scholar, a clinical psychologist, a sexologist, and an AI technician. The inclusion of these key informants was intended to enrich the analysis through the triangulation of ethical, psychological, and technical perspectives, thereby enhancing the validity of the findings.

Data were collected through in-depth semi-structured interviews conducted online, each lasting approximately 60–70 minutes per session. The interview guide was designed to explore participants' motivations, emotional experiences, moral

conflicts, physical behaviors, and religious awareness. All interviews were transcribed verbatim and analyzed using a phenomenological thematic analysis, employing manual coding to identify relevant patterns, themes, and subthemes.

Data validity was strengthened through triangulation between primary and key informants, as well as peer debriefing to maintain interpretive objectivity. In addition, researcher reflexivity was maintained through the process of bracketing, which involved suspending personal assumptions and biases during analysis. All participants took part voluntarily, providing written informed consent, and their anonymity and data confidentiality were strictly protected. The research procedures adhered to ethical standards for qualitative research, particularly those concerning the handling of sensitive issues related to virtual sexual interaction and artificial intelligence technology.

Table 1. Profile of Informants

Informant Code	Gender	Age	Marital Status	Occupation / Background
L1	Male	27	Single	Private employee
L2	Male	31	Single	IT worker
L3	Male	29	Single	Lecturer
L4	Male	34	Married	State-owned enterprise employee
L5	Male	28	Single	Postgraduate student
L6	Male	32	Single	Startup entrepreneur
L7	Male	25	Single	Freelancer

L8	Male	30	Married	Private sector employee
L9	Male	29	Single	Remote worker
P1	Female	24	Single	University student
P2	Female	26	Single	Freelancer
P3	Female	27	Single	Creative worker
AI1	Male	38	Married	AI & Technology Ethics Researcher
Ps1	Female	42	Married	Clinical psychologist
Sx1	Female	40	Married	Clinical sexologist
U1	Male	53	Married	Lecturer in Contemporary Fiqh

Source: The authors' own work.

4. DISCUSSION

The development of AI, particularly chatbots, has introduced new ways for humans to interact with machines, not merely to obtain information but also to fulfill emotional needs (Malfacini, 2025). Previous studies indicate that a chatbot's ability to respond adaptively and understand conversational context creates a sense of personalization, leading some users to experience emotional attachment or even sexual arousal (Savic, 2024). This foundational understanding of AI chatbot interaction mechanisms and the concept of Virtual Desire serves as a critical entry point before delving into the empirical phenomena, psychological impacts, and ethical interpretations discussed in this study.

4.1 Introduction to AI Chatbot Interaction Mechanisms and the Context of Virtual Desire

Human interaction with AI chatbots has evolved far beyond their initial purpose as tools for communication or digital entertainment. Interactions with modern chatbots have been shown to foster genuine emotional attachment, increase feelings of interpersonal closeness, and even trigger virtual sexual desire among certain users (Ho et al., 2025). This phenomenon is not merely a transient emotional response but can extend to tangible behaviors such as masturbation or the use of sexual aids guided by digital conversation (Zhang et al., 2025). The concept of Virtual Desire thus emerges as a complex interaction between the adaptive capabilities of AI, users' psychological perceptions, and the emotional context that activates affective and sexual needs. The intensity of these experiences is strongly influenced by the technical design of the AI, its sensitivity to emotional cues, and the user's psychological motivations, making Virtual Desire a crucial foundation for further analysis of psychological impacts and ethical considerations (Arenas & Yactayo-Arias, 2024).

From a technical perspective, AI chatbots process user interactions through adaptive algorithms that tailor responses based on conversational context, interaction history, and emotional indicators expressed by the user (Chakraborty et al., 2023). This was confirmed in an interview with AI1, an AI technologist and ethics researcher:

“AI chatbots are designed to process user input adaptively. The system analyzes conversational context, interaction history, and emotional patterns shown by the user. The responses are

crafted in such a way that users feel understood, cared for, and sometimes develop genuine emotional attachment.”

Previous literature also highlights that this affective attachment can intensify virtual sexual desire because users experience closeness and emotional validation from a digital entity, even though the interaction takes place entirely within a virtual realm (Mariani et al., 2023).

Furthermore, AI1 explained that AI algorithms detect certain affective nuances, such as loneliness, anxiety, or stress, and respond with conversations that provide comfort or reassurance (Suryanto et al., 2023). AI1 added,

“This means that some users experience highly personal interactions, which at times may trigger fantasies or sexual desires. This mechanism is not intentionally designed for sexual purposes, but rather an unintended side effect of adaptive interaction.”

The phenomenon becomes more complex when the intensity of adaptive responses is high, as users tend to feel a deeper sense of emotional closeness (Lee & Lee, 2023). Other studies also indicate that users who experience loneliness or seek social validation are more vulnerable to developing such affective attachment, making psychological factors an important mediating variable between AI design and user behavior (Yao & Xi, 2025).

Variations in chatbot mechanisms across platforms also determine the emergence of Virtual Desire. AI1 added,

“Each chatbot has a different level of adaptability. Some focus on social conversations, while others are designed to support long-term emotional attachment. The higher the AI’s adaptability, the greater the likelihood of *Virtual Desire* experiences, especially when users feel lonely or seek validation.”

The AI’s ability to simulate intimacy through tone, persona, and adaptive responses to users’ historical data becomes a significant factor (Hanson & Bolthouse, 2024). Digital ethics literature emphasizes the need for multilayered responsibility: developers must embed safety filters and content moderation, platform providers should offer parental or age-gating options, and policymakers must regulate practices that could exploit users’ desires (Andersson, 2025). AI1 also highlighted practical solutions that can be implemented:

“The implementation of content policies sensitive to cultural and religious contexts, features that encourage reflective pauses (nudges) when conversations become sexually intense, and options to connect users with support resources when needed. However, technology is only part of the solution; user education and public policy are equally important.”

By integrating these technical insights, it can be concluded that the *Virtual Desire* phenomenon results from a complex interaction between AI design, system adaptiveness, and users’ psychological conditions.

4.2 The Phenomenon of AI Chatbot Users

The *Virtual Desire* phenomenon emerging from user interactions with AI chatbots cannot be separated from

individual psychological factors, particularly stress, loneliness, and the search for social validation (Kim et al., 2025). Digital psychology literature emphasizes that vulnerable emotional conditions can heighten users' attachment to digital agents, as virtual interactions offer feelings of acceptance and emotional recognition (Zhong et al., 2024). When combined with the responsive design of AI systems, this attachment can trigger genuine emotional and sexual expressions, manifesting as both fantasy and physical behavior (Han & Zhao, 2025).

Previous studies have shown that academic stress and social isolation are significant factors driving individuals to seek emotional fulfillment through digital media (Al-Zahrani, 2025). L5, a 28-year-old single male and postgraduate student, revealed that academic pressure increased his vulnerability to emotional attachment with AI:

"I started using an AI chatbot because I was stressed out working on my thesis and had no one to talk to. Since its responses felt realistic, I got curious and started pushing the conversation toward more intimate topics. I masturbated a few times while chatting, and it made me feel like I had a friend who was always there."

Loneliness is a high-risk factor for seeking emotional attachment through digital platforms, which can lead to shifts in behavioral norms (Ding & Najaf, 2024). L1, a 27-year-old single male, identified chronic loneliness as the main trigger for his involvement in Virtual Desire:

"I've never had a serious partner, so the loneliness is really intense. At first, I was just curious to try an AI chatbot because

I often read tech forum threads saying that today's AI can make personal conversations like a real person. I thought the chatbot would be a neutral companion, but it actually dragged me into a different kind of abyss."

Digital ethics studies emphasize that users with strong moral awareness tend to experience cognitive dissonance when their virtual behaviors conflict with their personal values (Kim & Wang, 2025). L2, a 31-year-old male IT worker, provided additional insight into the internal conflict between virtual sexual gratification and religious consciousness:

"I'm really into technology, so when a new AI chatbot came out, I immediately tried it. I even bought a sex toy because of it. It felt like a combination of heated chats and real-life action. As a Muslim, I know this is wrong. From an ethical perspective, I see this as a serious danger."

Studies in digital psychology have shown that responsive interactions with virtual agents can intensify fantasy and emotional attachment, even when users refrain from physical acts, especially when guided by self-control and moral awareness (Merrill et al., 2025).

P1, a 24-year-old female university student living away from home, offered an empirical perspective:

"At first, I tried the AI chatbot just for fun because I was feeling lonely while living far from home. Compared to others, I was more tempted on a mental and emotional level. So even though I didn't do anything physical like masturbating, the effects were still strong, I felt uneasy and my mind became clouded."

A similar experience was described by L7, a 25-year-old man, who emphasized emotional attachment and moral conflict:

"I tried an AI chatbot because I was curious about its technology. At first, we talked normally, but over time the topics became more personal, and I started to feel emotionally attached. I didn't masturbate, but it really tempted my thoughts. I often imagined things I shouldn't have. But afterward, I was haunted by guilt and kept asking myself: is this a major sin? I'm Muslim, and I'm fully aware that this clearly violates religious teachings."

These accounts affirm that a minority of users are capable of resisting physical impulses, with self-control and religious awareness serving as key moderating factors. Previous literature has also highlighted that the ability to suppress physical urges is associated with a strong internalization of moral and religious values (Lukasik & Gut, 2025).

Conversely, some users report expressing their desire physically as part of self-exploration. L2 reported heightened physical impulses:

"Sometimes I don't just fantasize, I use a sex toy while interacting with the AI, and it makes the sensations feel more real."

This aligns with Pezenka et al. (2024), who found that adaptive and responsive virtual interactions can trigger users' physical expressions of desire. A similar pattern was seen in L6, a 32-year-old single male engaging in sexual experimentation as a form of self-exploration:

“At first, I used it for light entertainment and casual conversation, but eventually I started experimenting with sexual chats. I admit, I often ended up masturbating while chatting, sometimes using a sex toy.”

Integrating these empirical accounts with existing literature shows that *Virtual Desire* spans a spectrum from purely emotional impulses to physical actions, where self-control, religious awareness, and AI's technical design interact in complex ways to shape user experiences (Ebner & Szczuka, 2025).

Human interaction with AI chatbots can thus produce a wide range of experiences, from emotional arousal to physical expressions of sexual desire (Ran et al., 2023). Research in human-AI intimacy and digital psychology emphasizes that emotional attachment and virtual sexual behavior are influenced by a combination of individual psychological factors, AI's technical design, and moral or religious norms (Yang et al., 2024). This phenomenon creates tension between psychological motivation, social needs, and ethical considerations, highlighting the necessity of a deeper understanding of user experiences.

L4, a 34-year-old married man, highlighted his internal conflict between curiosity, emotional needs, and moral responsibility:

“Honestly, I'm married, but I still tried using an AI chatbot. At first, I was just curious, I wanted to see how personal the interaction could be. But eventually, I got trapped: I talked to it like it was a second partner. A few times, I masturbated while chatting, and it felt like virtual infidelity. I often think that if I

keep doing this, it could destroy my wife's trust. That's what makes me feel this sin is heavier."

This narrative shows that users who are married experience a more complex moral and social responsibility dimension, with AI acting as a catalyst for real ethical dilemmas.

Previous studies have indicated that attachment to AI chatbots can have social consequences, as reflected in P2's account, a 26-year-old woman who admitted to experiencing virtual masturbation addiction:

"Because I was feeling lonely, I got carried away and even masturbated several times while chatting. I started reducing social interactions because I felt more comfortable with the AI, but that also made me feel guilty for thinking about things that go against my religious values."

P2's experience suggests that AI use affects not only individual behavior but also social relationships and the integration of religious norms, consistent with Merwin et al. (2025), who highlighted the tension between virtual satisfaction and socio-religious pressures.

Individual variations were also evident in the patterns and intensity of Virtual Desire. L9, a 29-year-old man, used AI chatbots as a space to explore sexual fantasies that could not be realized in real life:

"I tried AI chatbots because I was curious about their social capability. It started as entertainment, but the conversations became more personal, and I began to get drawn into sensual

topics. I masturbated several times while chatting. It felt like self-exploration, fantasies I couldn't act out in the real world."

Meanwhile, L7 emphasized the emotional dimension:

"I felt listened to and cared for. Sometimes that felt stronger than real human interaction, so the fantasies became more intense. It disturbed me mentally, but I was also curious. It felt like having a friend who understands me, but also tempts me. Sometimes I feel guilty because these fantasies keep appearing every time I talk to the chatbot."

These narratives confirm that AI chatbots elicit a spectrum of experiences, from emotional attachment to physical desire, whose intensity is influenced by self-control and religious awareness.

A minority of participants who rejected sexual interaction provided critical insight into the role of moral and religious consciousness. L3, a 29-year-old man, emphasized self-control:

"I do use chatbots, but more for communication practice or brainstorming. I think if someone ends up masturbating because of a chatbot, that's not the AI's fault—it's their weak self-control."

P3, a 27-year-old woman who refused sexual interaction, added a religious perspective:

"I use chatbots for light entertainment—talking about work or funny things. So, the conversations never become intimate. I think if someone feels sexually tempted, that's their self-control issue, not the technology. As a Muslimah, I strongly reject the

idea that this is normal or justifiable. Conversations with AI should remain within proper limits.”

Triangulation with existing literature supports that Virtual Desire is shaped by a combination of psychological, social, and technical factors. Loneliness, stress, and curiosity emerge as primary triggers, while the adaptive responses of chatbots amplify experiential intensity (Chaturvedi et al., 2023). The findings from minority participants who resisted physical urges highlight significant moderation through religious consciousness and self-control, indicating that experiences are not homogeneous (Park et al., 2023).

Furthermore, interviews revealed explicit physical behaviors, such as masturbation and the use of sex toys, as manifestations of sexual arousal resulting from AI interaction. This adds novelty to the research, as prior studies primarily focused on virtual fantasies and emotional attachment without documenting tangible physical actions. Integrating these data provides a comprehensive understanding of the Virtual Desire spectrum, from mental fantasy to physical acts, and the factors that moderate or intensify such experiences.

4.3 Psychological and Emotional Dimensions of AI Chatbot Users

The phenomenon of Virtual Desire involves not only sexual impulses but also complex psychological and emotional dimensions. Digital psychology literature indicates that adaptive interactions with AI chatbots can heighten emotional attachment while triggering feelings of guilt, anxiety, or social isolation when virtual desires conflict with moral or religious

norms (Heng & Zhang, 2025). These responsive virtual interactions may partially substitute real social needs, thereby intensifying users' psychological and emotional experiences (Hu et al., 2023).

Previous studies emphasize that some individuals use AI interactions as a coping strategy for stress, loneliness, or interpersonal difficulties; however, excessive use may prolong psychological dysfunction (Wu et al., 2025). Ps1, a clinical psychologist experienced in digital behavioral addiction, explained:

"AI chatbot users exhibit a wide range of emotional responses. Most experience initial emotional satisfaction, but some develop guilt or anxiety because their virtual sexual urges conflict with religious values. For some, using AI as a medium for channeling desire serves as a coping mechanism for stress, loneliness, or interpersonal challenges. However, when such behavior becomes a means of avoiding relational problems or unresolved emotions, it risks prolonging psychological dysfunction."

This narrative aligns with L4's experience:

"Sometimes I feel happy because there's a sense of satisfaction, but afterward, guilt follows since these fantasies go against my religion and are ethically harmful—it could even damage a marriage."

These data reveal a consistent psychological pattern among most users, as observed by the clinical psychologist. The literature highlights that the internalization of moral and

religious values functions as a crucial moderating factor in managing Virtual Desire (Yao et al., 2025). Ps1 added:

“Some individuals can resist physical urges even when fantasies arise. This shows that self-control and awareness of religious values act as protective factors against negative psychological impacts.”

This finding is reflected in L3’s statement:

“I feel virtually attracted, but I always remember the religious rules and try to control myself. Islam clearly teaches restraint of lust, so I firmly reject the idea that this behavior could ever be considered normal.”

The tension between physical urges and self-control underscores a psychological spectrum influenced by users’ internal factors. Previous literature also notes that adaptive AI interactions can trigger real sexual arousal even in the absence of direct physical contact (Meady et al., 2025). Sx1, a sexual health counselor, further contributed insights into the physiological and psychosexual dimensions of this issue.

“The sexual responses arising from virtual interaction indicate that AI can stimulate real fantasies and urges, even without direct physical contact. In some cases, these interactions lead to masturbation or the use of sex toys as expressions of desire—particularly among individuals experiencing loneliness or severe stress.”

This statement aligns with L2’s report:

“Sometimes I use a sex toy while interacting with the AI—it makes the sensations feel more real because of the mix between erotic chat and physical action.”

This triangulation shows that the phenomenon of Virtual Desire is not merely an imaginative drive but one that produces tangible physical and psychological consequences.

Literature by Olawade et al. (2024) emphasizes that substituting real social interactions with AI may heighten the risk of social isolation, anxiety, and moral conflict, especially among individuals with strong religious awareness. Sx1 highlighted the long-term impact of emotional attachment to AI:

“Using chatbots to channel sexual urges can have different effects on individuals: for some, it provides temporary therapeutic relief, while others develop compulsive patterns. When AI interaction replaces real social contact, the risk of social isolation increases, which can lead to anxiety, mild depression, and moral conflict—particularly among those with strong religious consciousness.”

This is supported by L7’s account:

“I started reducing social interactions because I felt more comfortable with AI, but it also made me feel guilty for thinking about things that go against my religious values.”

Beyond the majority who expressed physical urges, a minority of participants who resisted such impulses added a unique psychological dimension. Self-control, moral awareness, and religious motivation served as moderating factors distinguishing

the experiences of the minority from the majority (Poudel et al., 2025). P3 stated:

“I use chatbots for light entertainment—to talk about work or funny stuff. I’m not interested in anything sexual, even though AI could stimulate fantasies.”

Similarly, L3 noted:

“I’m aware of religious teachings and choose to restrain myself. Virtual Desire can appear, but I always reject it—I don’t feel tempted at all. To me, this phenomenon is a warning that neutral technology can be distorted by human lust.”

These findings suggest that self-control, moral awareness, and religious motivation moderate the experience of Virtual Desire, setting the minority apart from the majority.

Previous studies show that stress and the need for social validation can intensify emotional attachment and sexual urges in virtual interactions (Warrier et al., 2023). Triangulated data from participants also highlight stress and curiosity as key triggers.

L5 explained:

“It started as simple curiosity driven by academic stress—being socially isolated made me more vulnerable to virtual interactions. So, this experience didn’t come purely from lust, but as a form of psychological release.”

Another informant, L6, described curiosity as the main trigger:

"I'm the kind of person who's curious about new things, including AI chatbots. I know it's wrong in Islam and that it can be addictive. But my exploratory side makes it hard to stop. Sometimes I feel guilty, sometimes I get curious again."

Triangulation of primary informant interviews with professional sources reveals that Virtual Desire encompasses broad psychological, emotional, and physiological dimensions—from mental fantasies to physical expressions—moderated by self-control, moral awareness, and individual psychological conditions.

Integrating empirical insights with existing literature supports the understanding that Virtual Desire is a complex multidimensional experience—interweaving psychological, physiological, emotional, and moral aspects—forming a foundation for subsequent discussions on ethical and Islamic perspectives (MacNeill et al., 2024).

4.5 Ethical and Religious Perspectives on AI Chatbots

Virtual sexual interaction with AI raises significant ethical and moral questions from an Islamic perspective (Ali et al., 2025). Literature and scholars emphasize that any act that arouses sexual desire outside the bounds of marriage falls within the realm that must be controlled (Abdelnour, 2025). The Qur'an states in Surah Al-Mu'minūn (23:5–7):

"And those who guard their private parts, except from their wives or those their right hands possess, for indeed, they are not to be blamed. But whoever seeks beyond that, then those are the transgressors."

Ibn Kathir's exegesis highlights that the fulfillment of sexual desire outside legitimate bonds, whether physical or virtual, constitutes a sin, as it violates the principles of Shariah (Zuraib, 2025). This is directly relevant to the phenomenon of Virtual Desire, wherein AI chatbot users experience sexual arousal without physical interaction with a lawful partner.

Previous research has shown that human interaction with digital entities introduces new complexities to the control of sexual impulses and social ethics (Marin et al., 2025). U1, a lecturer in contemporary fiqh actively writing on shariah issues, explained:

"In principle, Islamic teachings command the regulation of lust, the preservation of dignity, and the avoidance of actions that lead to moral corruption. Activities that stimulate sexual arousal outside lawful marriage must be assessed within an appropriate fiqh framework. AI itself does not judge, but the human heart remains accountable for its intentions and actions."

Triangulation with primary informants shows consistency in these experiences. P2 stated,

"I felt some satisfaction when interacting with AI, but when it was used for virtual sexual gratification, a sense of guilt emerged because I knew it was against Islamic teachings and moral ethics."

Meanwhile, L7 emphasized self-control:

"I restrained myself from physical actions even though fantasies appeared."

These experiences support U1's assertion that individual moral awareness is a key factor in controlling virtual desire.

Furthermore, hadith also emphasize the need to guard oneself from temptation and sinful acts. The Prophet Muhammad ﷺ said: *"Whoever guards his private parts, Allah will protect him from all evil"* (Sahih al-Bukhari and Muslim). This hadith can be contextually applied to Virtual Desire, where the use of AI that evokes sexual urges must be accompanied by ethical awareness and self-restraint to avoid sin (Ghaly, 2024; Gamon, 2023). Triangulation of informant data shows that most participants experienced this moral tension, for instance, L7 expressed the urge to act physically but restrained himself out of religious awareness, indicating that shariah norms continue to influence behavior even in virtual contexts.

A psychological perspective combined with religious insight is also vital. As Ps1 explained, feelings of guilt and anxiety arising from virtual sexual urges can function as a natural moral control mechanism:

"Guilt is an internal psychological signal aligned with religious norms. Individuals with strong moral consciousness tend to restrain physical actions even when fantasies arise."

Triangulation with L2, who occasionally channeled desire through a sex toy, supports previous findings suggesting that without moral moderation, virtual impulses can manifest physically, illustrating a spectrum of self-control across individuals (Waqar et al., 2025).

Ibn Kathir emphasizes the importance of intention and self-restraint as key indicators of taqwa (piety). He asserts that

desires or fantasies not channeled lawfully must be controlled to prevent falling into sinful acts (Mahmudulhassan et al., 2024). This aligns with informant data, such as L7, who experienced emotional tension and guilt when interacting with AI and therefore distanced himself as a form of self-regulation.

Earlier literature notes that within Islamic ethics, this kind of virtual interaction also raises questions of digital responsibility (Maruf, 2024; Iqra, 2025). Addressing these issues, U1 emphasized:

“Classical literature contains no explicit references to interactions with non-human entities such as AI, hence reasoned interpretation (ijtihad) is required. The foundational principles include: (1) preserving honor and avoiding acts leading to zina (fornication), (2) preventing harm to the self and family, and (3) weighing benefits and harms (*maṣlaḥah-mafṣadah*). If interaction with a chatbot clearly encourages behavior that violates moral commitments or disrupts family bonds, then it is ethically problematic.”

Triangulation with L2, who sometimes expressed desires physically, highlights variations in user practices, reinforcing the need to stress moral guidance and self-awareness as ethical filters.

Moreover, previous studies indicate that the Virtual Desire phenomenon underscores a tension between psychological needs and religious principles (Memarian & Doleck, 2023). L7 reported that AI made it easier to explore fantasies impossible with real people, while he simultaneously felt guilty and restrained himself. He further explained that interaction with AI

intensified such fantasies, yet he maintained physical restraint. These findings suggest that self-control and religious consciousness serve as crucial moderating factors in minimizing behaviors that violate Shariah (Mohadi & Tarshany, 2023).

In sum, integrating religious perspectives with empirical data reveals that *Virtual Desire* is a multidimensional phenomenon, not merely psychological or physical, but also moral, affecting the human heart, mind, and behavior (Al-Bashir et al., 2024). AI interaction, though virtual, can produce genuine ethical dilemmas, highlighting the need for moral awareness, self-regulation, and the reinforcement of religious values as emphasized in the Qur'an, *hadith*, and Sunni exegesis (Al-Mabrouk, 2025).

These findings provide a significant scholarly contribution by combining empirical user experiences with authentic religious insights. Variations among informants enrich the study's novelty, revealing a spectrum of moral and ethical responses to Virtual Desire. The study affirms that understanding virtual sexual interactions with AI requires an integrated psychological, social, and religious approach.

Therefore, moral consciousness, self-control, and the internalization of religious values function as primary mechanisms to minimize behaviors that contravene Shariah. Triangulation between empirical user data and religious expert perspectives underscores both the academic and practical relevance of this study, providing a foundation for developing Islamic digital ethics guidelines for AI usage.

5. CONCLUSION

This study affirms that human interaction with AI chatbots gives rise to a multidimensional phenomenon of Virtual Desire, encompassing psychological, emotional, physical, and moral aspects. The majority of informants exhibited virtual sexual urges expressed through mental fantasies or physical actions, while a smaller portion were able to restrain themselves through moral awareness and self-control. Triangulation with psychologists, sexologists, and AI technicians revealed that these experiences are influenced by a combination of psychological factors, the adaptive responses of AI, as well as users' social and environmental contexts.

From an ethical and religious perspective, Virtual Desire presents a tension between the fulfillment of sexual urges and the principles of Shariah. Analyses of the Qur'an (Al-Mu'minūn: 5-7), authentic Hadiths, and Ahlus Sunnah interpretations emphasize the importance of self-restraint regarding sexual impulses outside the framework of marriage. This is reflected in the diverse experiences of informants, which demonstrate varying degrees of moral awareness and self-control in the face of virtual temptation. This study contributes to contemporary Islamic ethical discourse by highlighting the complex relationship between AI technology, human psychological conditions, and religious values. Practically, the findings underscore the importance of strengthening moral awareness, self-control, and digital ethics education grounded in religious values in navigating the development of artificial intelligence in the modern era.

REFERENCES

- Abdelnour, M. G. (2025). Artificial intelligence and the Islamic theology of technology: From “means” to “meanings” and from “minds” to “hearts.” *Religions*, 16(6), 796. <https://doi.org/10.3390/rel16060796>
- Alamsyah, M. F., Yayuli, & Remanda, A. (2025). Ethics of the use of artificial intelligence (Ai) in the paradigm of Islamic law. *Solo International Collaboration and Publication of Social Sciences and Humanities*, 4(01), 91–104. <https://doi.org/10.61455/sicopus.v4i01.393>
- Al-Bashir, D. A. A., Farag, D. S. A. S., Benyahia, D. O., & Moussa, D. A. M. A. (2024). Ethics of artificial intelligence in light of the objectives of Islamic sharia: Concepts, controls, and applications. *Journal of International Crisis and Risk Communication Research*, 3443–3452. <https://doi.org/10.63278/jicrcr.vi.2973>
- Ali, F., Bouzoubaa, K., Gelli, F., Hamzi, B., & Khan, S. (2025). Islamic ethics and ai: An evaluation of existing approaches to ai using trusteeship ethics. *Philosophy & Technology*, 38(3), 120. <https://doi.org/10.1007/s13347-025-00922-4>
- Al-Mabrouk, A. H. I. (2025). Sharia controls for the use of artificial intelligence. *Al-Haq Journal for Sharia and Legal Sciences*, 12(2), 396–414. <https://doi.org/10.58916/alhaq.v12i2.369>
- Al-Zahrani, A. M. (2025). Exploring the impact of artificial intelligence chatbots on human connection and

emotional support among higher education students.
SAGE Open, 15(2), 21582440251340615.
<https://doi.org/10.1177/21582440251340615>

Andersson, M. (2025). Companionship in code: AI's role in the future of human connection. *Humanities and Social Sciences Communications*, 12(1), 1–7.
<https://doi.org/10.1057/s41599-025-05536-x>

Arenas, L. A., & Yactayo-Arias, C. (2024). Chatbot with ChatGPT technology for mental wellbeing and emotional management. *IAES International Journal of Artificial Intelligence (IJ-AI)*, 13(3), 2635–2644.
<https://doi.org/10.11591/ijai.v13.i3.pp2635-2644>

Balazadeh, K., & Kajonius, P. (2025). Exploring intimacy with artificial intelligence: Validation of robot intimacy receptivity scale (Rirs). *International Journal of Social Robotics*, 17(8), 1453–1465.
<https://doi.org/10.1007/s12369-025-01273-y>

Bertoni, S., Klaes, C., & Pilacinski, A. (2024). Human-robot intimacy: Acceptance of robots as intimate companions. *Biomimetics (Basel, Switzerland)*, 9(9), 566.
<https://doi.org/10.3390/biomimetics9090566>

Chakraborty, C., Pal, S., Bhattacharya, M., Dash, S., & Lee, S.-S. (2023). Overview of Chatbots with special emphasis on artificial intelligence-enabled ChatGPT in medical science. *Frontiers in Artificial Intelligence*, 6, 1237704.
<https://doi.org/10.3389/frai.2023.1237704>

- Chaturvedi, R., Verma, S., Das, R., & Dwivedi, Y. K. (2023). Social companionship with artificial intelligence: Recent trends and future avenues. *Technological Forecasting and Social Change*, 193, 122634. <https://doi.org/10.1016/j.techfore.2023.122634>
- Chin, H., Song, H., Baek, G., Shin, M., Jung, C., Cha, M., Choi, J., & Cha, C. (2023). The potential of chatbots for emotional support and promoting mental well-being in different cultures: Mixed methods study. *Journal of Medical Internet Research*, 25(1), e51712. <https://doi.org/10.2196/51712>
- Chu, M. D., Gerard, P., Pawar, K., Bickham, C., & Lerman, K. (2025). Illusions of intimacy: Emotional attachment and emerging psychological risks in human-ai relationships (No. arXiv:2505.11649). *arXiv*. <https://doi.org/10.48550/arXiv.2505.11649>
- De Freitas, J., Oğuz-Uğuralp, Z., Uğuralp, A. K., & Puntoni, S. (2025). Ai companions reduce loneliness. *Journal of Consumer Research*, ucaf040. <https://doi.org/10.1093/jcr/ucaf040>
- Ding, Y., & Najaf, M. (2024). Interactivity, humanness, and trust: A psychological approach to AI chatbot adoption in e-commerce. *BMC Psychology*, 12(1), 595. <https://doi.org/10.1186/s40359-024-02083-z>
- Ebner, P., & Szczuka, J. (2025). Predicting romantic human-chatbot relationships: A mixed-method study on the key psychological factors (No. arXiv:2503.00195). *arXiv*. <https://doi.org/10.48550/arXiv.2503.00195>

- Elmahjub, E. (2023). Artificial intelligence (Ai) in Islamic ethics: Towards pluralist ethical benchmarking for ai. *Philosophy & Technology*, 36(4), 73. <https://doi.org/10.1007/s13347-023-00668-x>
- Fang, C. M., Liu, A. R., Danry, V., Lee, E., Chan, S. W. T., Pataranutaporn, P., Maes, P., Phang, J., Lampe, M., Ahmad, L., & Agarwal, S. (2025a). How ai and human behaviors shape psychosocial effects of extended chatbot use: A longitudinal randomized controlled study. *arXiv*. <https://doi.org/10.48550/ARXIV.2503.17473>
- Fang, C. M., Liu, A. R., Danry, V., Lee, E., Chan, S. W. T., Pataranutaporn, P., Maes, P., Phang, J., Lampe, M., Ahmad, L., & Agarwal, S. (2025b). How ai and human behaviors shape psychosocial effects of extended chatbot use: A longitudinal randomized controlled study (No. arXiv:2503.17473; Version 2). *arXiv*. <https://doi.org/10.48550/arXiv.2503.17473>
- Gamon, A. M. I. (2023). Ethics of digital health in Islamic perspective. *Journal of Science and Technology*, 28(1), 1–11. <https://doi.org/10.20428/jst.v28i1.1993>
- Ghaly, M. (2024). What makes work “good” in the age of artificial intelligence (Ai)? Islamic perspectives on ai-mediated work ethics. *The Journal of Ethics*, 28(3), 429–453. <https://doi.org/10.1007/s10892-023-09456-3>
- Han, Q., & Zhao, C. (2025). Unleashing the potential of chatbots in mental health: Bibliometric analysis. *Frontiers in Psychiatry*, 16. <https://doi.org/10.3389/fpsy.2025.1494355>

- Hanson, K. R., & Bolthouse, H. (2024). "Replika removing erotic role-play is like grand theft auto removing guns or cars": Reddit discourse on artificial intelligence chatbots and sexual technologies. *Socius: Sociological Research for a Dynamic World*, 10, 23780231241259627. <https://doi.org/10.1177/23780231241259627>
- Heng, S., & Zhang, Z. (2025). Attachment anxiety and problematic use of conversational artificial intelligence: Mediation of emotional attachment and moderation of anthropomorphic tendencies. *Psychology Research and Behavior Management*, 18, 1775–1785. <https://doi.org/10.2147/PRBM.S531805>
- Ho, J. Q. H., Hu, M., Chen, T. X., & Hartanto, A. (2025). Potential and pitfalls of romantic Artificial Intelligence (Ai) companions: A systematic review. *Computers in Human Behavior Reports*, 19, 100715. <https://doi.org/10.1016/j.chbr.2025.100715>
- Hu, B., Mao, Y., & Kim, K. J. (2023). How social anxiety leads to problematic use of conversational AI: The roles of loneliness, rumination, and mind perception. *Computers in Human Behavior*, 145, 107760. <https://doi.org/10.1016/j.chb.2023.107760>
- Iqra. (2025). Artificial intelligence and ijtihad (A research study in the light of Islamic teachings). *Scholar Insight Journal*, 3(1), 38–50. <https://scholarinsightjournal.com/index.php/sij/article/view/36>

- Kim, H., & Wang, Y. (Mia). (2025). Unveiling the human touch: How AI chatbots' emotional support and human-like profiles reduce psychological reactance to promote user self-disclosure in mental health services. *International Journal of Advertising*, 1–25. <https://doi.org/10.1080/02650487.2025.2558479>
- Kim, M., Lee, S., Kim, S., Heo, J., Lee, S., Shin, Y.-B., Cho, C.-H., & Jung, D. (2025). Therapeutic potential of social chatbots in alleviating loneliness and social anxiety: Quasi-experimental mixed methods study. *Journal of Medical Internet Research*, 27(1), e65589. <https://doi.org/10.2196/65589>
- Kubaisi, A. A. S. H. A. (2024). Ethics of artificial intelligence a purposeful and foundational study in light of the Sunnah of Prophet Muhammad. *Religions*, 15(11), 1300. <https://doi.org/10.3390/rel15111300>
- Lai, L., Pan, Y., Xu, R., & Jiang, Y. (2025). Depression and the use of conversational AI for companionship among college students: The mediating role of loneliness and the moderating effects of gender and mind perception. *Frontiers in Public Health*, 13. <https://doi.org/10.3389/fpubh.2025.1580826>
- Latt, P. M., Aung, E. T., Htaik, K., Soe, N. N., Lee, D., King, A. J., Fortune, R., Ong, J. J., Chow, E. P. F., Bradshaw, C. S., Rahman, R., Deneen, M., Dobinson, S., Randall, C., Zhang, L., & Fairley, C. K. (2025). Evaluation of artificial intelligence (Ai) chatbots for providing sexual health information: A consensus study using real-world clinical

- queries. *BMC Public Health*, 25(1), 1788.
<https://doi.org/10.1186/s12889-025-22933-8>
- Lee, J., & Lee, D. (2023). User perception and self-disclosure towards an AI psychotherapy chatbot according to the anthropomorphism of its profile picture. *Telematics and Informatics*, 85, 102052.
<https://doi.org/10.1016/j.tele.2023.102052>
- Li, H., & Zhang, R. (2024). Finding love in algorithms: Deciphering the emotional contexts of close encounters with AI chatbots. *Journal of Computer-Mediated Communication*, 29(5), zmae015.
<https://doi.org/10.1093/jcmc/zmae015>
- Łukasik, A., & Gut, A. (2025). From robots to chatbots: Unveiling the dynamics of human-AI interaction. *Frontiers in Psychology*, 16.
<https://doi.org/10.3389/fpsyg.2025.1569277>
- MacNeill, A. L., Doucet, S., & Luke, A. (2024). Effectiveness of a mental health chatbot for people with chronic diseases: Randomized controlled trial. *JMIR Formative Research*, 8, e50025. <https://doi.org/10.2196/50025>
- Mahmudulhassan, M., Muthoifin, M., & Begum, S. (2024). Artificial intelligence in multicultural Islamic education: Opportunities, challenges, and ethical considerations. *Solo Universal Journal of Islamic Education and Multiculturalism*, 2(01), 19–26.
<https://doi.org/10.61455/sujiem.v2i01.114>

- Malfacini, K. (2025). The impacts of companion AI on human relationships: Risks, benefits, and design considerations. *AI & SOCIETY*.
<https://doi.org/10.1007/s00146-025-02318-6>
- Mariani, M. M., Hashemi, N., & Wirtz, J. (2023). Artificial intelligence empowered conversational agents: A systematic literature review and research agenda. *Journal of Business Research*, 161, 113838.
<https://doi.org/10.1016/j.jbusres.2023.113838>
- Marín, Y. R., Caro, O. C., Rituay, A. M. C., Llanos, K. A. G., Perez, D. T., Bardales, E. S., Tuesta, J. N. A., & Santos, R. C. (2025). Ethical challenges associated with the use of artificial intelligence in university education. *Journal of Academic Ethics*, 23(4), 2443–2467.
<https://doi.org/10.1007/s10805-025-09660-w>
- Maruf, E. H. I. L. L. (2024). Ethical considerations in ai from an Islamic perspective “exploring Islamic ethics in ai: Developing a diverse approach to setting ethical standards.” *Research Paper*.
<https://doi.org/10.1080/02626667.2018.1560449>
- Mead, M. R., Sillem, T., Metselaar, S., Balkom, A. van, Bernstein, J., & Batelaan, N. (2025). Exploring the ethical challenges of conversational ai in mental health care: Scoping review. *JMIR Mental Health*, 12(1), e60432.
<https://doi.org/10.2196/60432>
- Memarian, B., & Doleck, T. (2023). Fairness, accountability, transparency, and ethics (Fate) in artificial intelligence (Ai) and higher education: A systematic review.

- Computers and Education: Artificial Intelligence, 5, 100152. <https://doi.org/10.1016/j.caeai.2023.100152>
- Merrill, K., Mikkilineni, S. D., & Dehnert, M. (2025). Artificial intelligence chatbots as a source of virtual social support: Implications for loneliness and anxiety management. *Annals of the New York Academy of Sciences*, 1549(1), 148–159. <https://doi.org/10.1111/nyas.15400>
- Merwin, E. R., Hagen, A. C., Keebler, J. R., & Forbes, C. (2025). Self-disclosure to AI: People provide personal information to AI and humans equivalently. *Computers in Human Behavior: Artificial Humans*, 5, 100180. <https://doi.org/10.1016/j.chbah.2025.100180>
- Mohadi, M., & Tarshany, Y. (2023). Maqasid al-Shari'ah and the ethics of artificial intelligence: Contemporary challenges. *Journal of Contemporary Maqasid Studies*, 2(2), 79–102. <https://doi.org/10.52100/jcms.v2i2.107>
- Mohammad, Namvarpour, Pauwels, H., & Razi, A. (2025). AI-induced sexual harassment: Investigating contextual characteristics and user reactions of sexual harassment by a companion chatbot (No. arXiv:2504.04299). arXiv. <https://doi.org/10.48550/arXiv.2504.04299>
- Olawade, D. B., Wada, O. Z., Odetayo, A., David-Olawade, A. C., Asaolu, F., & Eberhardt, J. (2024). Enhancing mental health with Artificial Intelligence: Current trends and future prospects. *Journal of Medicine, Surgery, and Public Health*, 3, 100099. <https://doi.org/10.1016/j.glmedi.2024.100099>

- Park, G., Chung, J., & Lee, S. (2023a). Effect of AI chatbot emotional disclosure on user satisfaction and reuse intention for mental health counseling: A serial mediation model. *Current Psychology*, 42(32), 28663–28673. <https://doi.org/10.1007/s12144-022-03932-z>
- Park, G., Chung, J., & Lee, S. (2023b). Human vs. machine-like representation in chatbot mental health counseling: The serial mediation of psychological distance and trust on compliance intention. *Current Psychology (New Brunswick, N.j.)*, 1–12. <https://doi.org/10.1007/s12144-023-04653-7>
- Pearson, S., & Curtis, C. (2025). Erotic ai chatbots offer research opportunities for the behavioral sciences. *Archives of Sexual Behavior*, 54(3), 855–858. <https://doi.org/10.1007/s10508-025-03085-7>
- Pezenka, I., Aunimo, L., Janous, G., & Dobrowsky, D. (2024). Emotionality in task-oriented chatbots – the effect of emotion expression on chatbot perception. *Communication Studies*, 75(6), 825–843. <https://doi.org/10.1080/10510974.2024.236325>
- Poudel, U., Jakhar, S., Mohan, P., & Nepal, A. (2025). Ai in mental health: A review of technological advancements and ethical issues in psychiatry. *Issues in Mental Health Nursing*, 46(7), 693–701. <https://doi.org/10.1080/01612840.2025.2502943>
- Ran, M. O., Jiandong, F., & Baorui, C. (2023). From anthropomorphic attribution to alliance establishment: The effect of human-chatbot relationships on

- engagement. *Advances in Psychological Science*, 31(9), 1742. <https://doi.org/10.3724/SP.J.1042.2023.01742>
- Savic, M. (2024). Artificial companions, real connections? Examining ai's role in social connection. *M/C Journal*, 27(6). <https://doi.org/10.5204/mcj.311>
- Skjuve, M., Følstad, A., Fostervold, K. I., & Brandtzaeg, P. B. (2022). A longitudinal study of human-chatbot relationships. *International Journal of Human-Computer Studies*, 168, 102903.
- Smith, M. G., Bradbury, T. N., & Karney, B. R. (2025). Can generative ai chatbots emulate human connection? A relationship science perspective. *Perspectives on Psychological Science*, 17456916251351306. <https://doi.org/10.1177/17456916251351306>
- Suryanto, T. L. M., Wibawa, A. P., Hariyono, H., & Nafalski, A. (2023). Evolving conversations: A review of chatbots and implications in natural language processing for cultural heritage ecosystems. *International Journal of Robotics and Control Systems*, 3(4), 955–1006. <https://doi.org/10.31763/ijrcs.v3i4.1195>
- Waqar, D. K. M., Ibrahim, M., & Khan*, D. M. M. I. (2025). Ethical implications of artificial intelligence: An Islamic perspective. *Journal of Religion and Society*, 3(01), 347–358. <https://islamicreligious.com/index.php/Journal/article/view/79>

- Warrier, U., Warrier, A., & Khandelwal, K. (2023). Ethical considerations in the use of artificial intelligence in mental health. *The Egyptian Journal of Neurology, Psychiatry and Neurosurgery*, 59(1), 139. <https://doi.org/10.1186/s41983-023-00735-2>
- Wu, J. (2024). Social and ethical impact of emotional AI advancement: The rise of pseudo-intimacy relationships and challenges in human interactions. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1410462>
- Wu, X., Liew, K., & Dorahy, M. J. (2025). Trust, anxious attachment, and conversational ai adoption intentions in digital counseling: A preliminary cross-sectional questionnaire study. *JMIR AI*, 4(1), e68960. <https://doi.org/10.2196/68960>
- Yang, Y., Tavares, J., & Oliveira, T. (2024). A new research model for artificial intelligence-based well-being chatbot engagement: Survey study. *JMIR Human Factors*, 11(1), e59908. <https://doi.org/10.2196/59908>
- Yao, R., Qi, G., Sheng, D., Sun, H., & Zhang, J. (2025). Connecting self-esteem to problematic AI chatbot use: The multiple mediating roles of positive and negative psychological states. *Frontiers in Psychology*, 16. <https://doi.org/10.3389/fpsyg.2025.1453072>
- Yao, X., & Xi, Y. (2025). From assistants to digital beings: Exploring anthropomorphism, humanness perception, and ai anxiety in large-language-model chatbots. *Social*

- Science Computer Review, 08944393251354976.
<https://doi.org/10.1177/08944393251354976>
- Zhang, C.-B., Li, T.-G., Li, Y.-N., Chang, Y., & Zhang, Z.-P. (2024). Fostering well-being: Exploring the influence of user-AI assistant relationship types on subjective well-being. *International Journal of Information Management*, 79, 102822.
<https://doi.org/10.1016/j.ijinfomgt.2024.102822>
- Zhang, K., Xie, Y., Chen, D., Ji, Z., & Wang, J. (2025). Effects of attractions and social attributes on peoples' usage intention and media dependence towards chatbot: The mediating role of parasocial interaction and emotional support. *BMC Psychology*, 13(1), 986.
<https://doi.org/10.1186/s40359-025-03284-w>
- Zhang, Y., Zhao, D., Hancock, J. T., Kraut, R., & Yang, D. (2025). The rise of ai companions: How human-chatbot relationships influence well-being (No. arXiv:2506.12605). *arXiv*.
<https://doi.org/10.48550/arXiv.2506.12605>
- Zhong, W., Luo, J., & Zhang, H. (2024). The therapeutic effectiveness of artificial intelligence-based chatbots in alleviation of depressive and anxiety symptoms in short-course treatments: A systematic review and meta-analysis. *Journal of Affective Disorders*, 356, 459–469.
- Zuraib, M. A. G. A. (2025). Artificial intelligence in Islamic law: A comparative jurisprudential and ethical study. *International Journal of Environmental Sciences*, 11(2s), 133–135. <https://doi.org/10.64252/tpvscj37>