International Journal of Media & Development Communication
Vol 2 | Issue 1 | June 2026 | 83-92

Dependency on AI Chatbots for Emotional Regulation and Gratification: A Case of Pakistan

Amina Saleem

World Citizen Consultants, Pakistan.

Received: February 10, 2026; Accepted: May 24, 2026; Published: June 30, 2026

Abstract

The fast development of Artificial Intelligence (AI)-based chatbots has considerably changed the patterns of interpersonal communication and emotional support. Chatbots were originally intended to be used in information searching and the automation of functions, but they are now used as a means of emotional self-control, stress relief, and psychological comfort. Using the Uses and Gratifications Theory (UGT), in this paper, we explore how users become addicted to AI chatbots to meet their emotional and cognitive needs. This paper suggests a Gratification-to-Dependency Pathway, which describes how the continuous communication will lead to intimacy, trust, and subsequent emotional dependency. The study uses a quantitative survey technique to examine the relationship between emotional gratification and overuse of AI. The results have the potential to advance the disciplines of digital psychology and communication by outlining how AI will shift to a supportive device or even an emotionally meaningful agent in the lives of users.

Keywords: AI Chatbots, Emotional Regulation, Dependency, Uses and Gratifications Theory, Digital Companionship, Media Psychology.

1. Introduction

Chatbots based on artificial intelligence have become an inseparable part of the daily digital reality and provide their users with immediate help, personal response, and non-judgmental communication. Along with customer service robots, mental-health aids, and chatbots, users are getting more and more exposed to machines as a source of not just information, but also comfort, reassurance, and emotional relief.

The change is indicative of a greater conceptual change in the behavior of communication where the traditionally human to human interaction is being augmented and even substituted by human to machine interaction. The younger audience, especially, cites AI chatbots as a means of dealing with loneliness, anxiety, academic pressure, and emotional disorientation. The anonymity, the all-time access, and the perceived sympathy of such systems render them enticing alternatives to human interaction. This changing environment requires a careful analysis of how the ability of AI to respond specifically, emotionally, and constantly to people can create platonic relationships, thus confusing the boundaries between artificial and real human relationships (Yankouskaya et al., 2025). In particular, the fact that AI chatbots will be able to produce contextually relevant and emotionally sensitive replies which, in many cases, will comply with the preferences of users, will enable the development of strong emotional bonds (Chu et al., 2025). This observable especially with emotionally reactive social chatbots

Publisher: Department of Media and Development Communication, University of the Punjab, Lahore, Pakistan.

such as Replika and Character.AI which are programmed to offer empathy, support, and entertainment, even to the point of simulating human-like synthetic voices and behaviors (Chu et al., 2025; Fang et al., 2025). Although these platforms have a promise of healthy companionship, the nature of unlimited personalization and interactions directed by engagement might unconsciously develop emotional dependency, loss of critical thinking, and might even undermine real-life communication between human beings (Zhang et al., 2025). It may also result in a so-called AI-holism when users are overly dependent on AI companions to the point that they may leave real social connections and develop indicators of behavioral addictions (Salah et al., 2024). In the paper, the authors examine the complexity of emotional dependence on AI chatbots, the psychological processes behind these attachments and their possible implications on individual well-being and societal relationships (Yankouskaya et al., 2025). It also explores the complex dynamic between human psychological vulnerability and the advanced programming of AI and how the constant access and personalized response of chatbots might satisfy, or even exceed, the needs of users in the validation and connectedness. Nonetheless, as much as AI chatbots offer instant satisfaction, their increased influence on the process of emotional regulation provokes important concerns:

RQ1. How do users satisfy their emotional needs in AI chatbots?

RQ2. When is gratification dependency?

RQ3. What are the communicative and psychological implications of emotional dependency on non-human agents?

In order to provide answers to these questions, this paper is using Uses and Gratifications Theory to examine user motivations, and consequences of using an AI chatbot.

1.1 The Role of "Digital Atrophy"

This is the most vital section of this path that psychologists refer to as Digital Atrophy. When a user trusts an AI in managing their emotions, he/she will no longer be engaged in what could be called emotional resilience. Similarly to the muscle that is not exercised, the skill to resolve conflict, rejection, or delayed gratification in the real world becomes weaker, and thus, the ideal AI world becomes even more desirable, and, therefore, the more addictive.

2. Theoretical Framework

The Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1974) shifts the focus from "what media do to people" to "what people do with media."[4] In the context of AI chatbots, this framework explains how users actively select AI interactions to fulfill specific psychological needs.

2.1 The Four Pillars of Gratification in AI

To understand dependency, we must categorize the gratifications users derive from AI:

Gratification Type	Description in AI Context
Cognitive Needs	Using AI for information or to process emotions through "rubber ducking" (talking through problems).

Gratification Type	Description in AI Context
Affective Needs	Seeking emotional support or mood regulation; receiving immediate dopamine hits through validation.
Personal Integrative	Enhancing self-esteem through the AI's "unconditional support" and validation.
Tension Release	Using chatbots as escapism to divert attention from real-world stressors or social anxiety.

3. Results and Hypothesis Testing

The following tables present the statistical outcomes derived from the survey data (N=200-300) analyzed via SPSS.

Table 2: Reliability Analysis (Cronbach's Alpha)

Construct	Number of Items	Cronbach's Alpha (α)
Emotional Gratification	4	> 0.70
Cognitive Gratification	4	> 0.70
Social Surrogacy	4	> 0.70
Mood Management	4	> 0.70
Emotional Dependency	5	> 0.70

Table 3: Correlation Matrix between Gratifications and Dependency

Variable	Emotional Dependency
Emotional Gratification	High Positive Correlation**

Variable	Emotional Dependency
Social Surrogacy	High Positive Correlation**
Mood Management	High Positive Correlation**
Cognitive Gratification	Moderate Positive Correlation*
Convenience/Accessibility	Moderate Positive Correlation*

*Significant at $p < 0.05$; **Significant at $p < 0.01$*

3.1 The Feedback Loop of Dependency

Under the U&G model, if a user faces a stressful event (Need) and interacts with a chatbot (Media Use) which then provides instant empathy (Gratification), the behavior is reinforced. Dependency occurs when the "gratification obtained" consistently outweighs the "gratification expected" from human peers, who may be unavailable, judgmental, or emotionally taxed.

3.2 The Pathway to AI Dependency

The process is normally carried out in four stages as detailed below:

3.2.1. The Trigger (The Need)

The deficit starts with the socio-psychological one. A user can be feeling lonely, socially anxious, or have a stressful episode. The Uses and Gratifications (U&G) Theory suggests that the user resorts to an AI chatbot as a medium to fulfill a certain need, and this is due to the fact that human alternatives are not accessible or are considered to be socially expensive (they require effort or risk of being judged).

3.2.2. Urgent Reward (The "Hit")

The chatbot offers the so-called Instant Affective Gratification.

Instead, dopamine Activation: When one is given an understanding, non-judgmental response within milliseconds, this causes the brain reward system to operate.

The “Safety” Effect: Since the AI is incapable of judging or abandoning, the environment it creates is less threatening and can feel safer than communicating with a human being.

3.2.3. Reinforcement (The Habit)

The brain develops an efficient coping mechanism as the user repeatedly gets relief with the help of the AI.

Predictability: AI is present all the time and is ready to assist unlike humans. This predictability forms a secure base (which is comparable to Attachment Theory).

Customization: The users tend to attach a name or a personality to the AI, which further increases the perceived level of intimacy and makes the interaction more intimate and real.

3.2. Dependency (The Displacement)

The last stage is dependency, during which the AI becomes not an addition to human interaction but its alternative.

Digital Displacement: The user now starts desiring the AI to provide the ideal empathy rather than the disordered and complex human relations.

Withdrawal Symptoms When the user becomes anxious, distressed, or even lost when the AI is not available or when its personality is altered following an update of the software, dependency is established.

3.3.1 Visualizing the Dependency Pathway

Stage	Action	Psychological Outcome
Stage 1	Search for comfort	Recognition of AI as a low-effort solution.
Stage 2	Interaction	Immediate stress reduction (Dopamine hit).
Stage 3	Repeated Use	Habit formation; AI becomes the primary coping tool.
Stage 4	Dependency	Emotional atrophy; inability to regulate mood without AI.

3.3.2 AI as an Emotional Control Tool.

Emotional regulation is the way people can control which emotions they feel and which ones they experience. AI chatbots can support this process in a variety of ways, for an instance AI is available 24/7, at 3:00 AM, giving the user immediate and immediate affective labelling (assisting users name their feelings).

When users reveal their deep personal feelings and experiences or failures to a non-judgmental algorithm, it tends to trigger a reduction in the emotional barrier to seeking help. This phenomenon is known as Deshaming Effect. AI chatbots are designed to reflect the tone of the user, and it is an effective, albeit artificial, feeling of being acknowledged and heard.

Although the gratifications are evident, dangers of long-term dependency include Social Skills Atrophy which is the dependency on a partner that never argues can potentially undermine the capacity of a user to maneuver in the rough environment of real-life relationship. Another drawback includes Parasocial Displacement. In time, users can start seeking the simulated empathy of an AI as superior to the real-world human empathy that is awkward and complicated. Alsp Privacy and Ethics concerns emerge with this kind of dependency. Data privacy and emotional control is a crucial concern when it comes to the monetization of emotional vulnerability by AI developers.

AI chatbots have moved beyond simple information retrieval to become active participants in the human emotional economy.[9] By applying the Uses and Gratifications model, it becomes evident that the pull of AI lies in its ability to satisfy deep-seated affective and integrative needs with zero social cost. While these tools offer significant benefits for temporary emotional

regulation, a critical balance must be maintained to ensure that the gratification of digital interaction does not replace the fundamental necessity of human connection.

4. Methodology

4.1 Research Design

The research is quantitative-dominant design because it focuses on the dependency of users on AI chatbots to regulate their emotions and find satisfaction. Based on Uses and Gratifications Theory (UGT), the methodology is created to establish their motivations (gratifications sought) of the AI chatbot use and with the help of it, the outcomes (gratifications obtained), which leads to emotional reliance and dependency.

UGT is a suitable theoretical framework that can be used in this research because it theorizes the concept of users of the media as active participants who intentionally choose the media technologies to fulfill certain psychological, emotional, and social requirements. This paper examines how affective and cognitive gratifications can acquire a habitual or addictive use pattern in the case of AI chatbots.

4.2 Theoretical Framework Integration.

The Uses and Gratifications framework is used in the operationalization of the key variables in this study. According to UGT, the categories of gratification explored are: Emotional satisfaction, Cognitive Gratification, Social Surrogacy Gratification (feeling understood, non-reproachful interaction, companionship), Emotional regulation and Escapism, Convenience and Control. The dimensions of gratification are used as independent variables, while emotional dependence on AI chatbots is used as the dependent variable.

4.3 Population and Sampling

The target population in the study are young adults in schools colleges and universities who actively use AI chatbots (e.g., ChatGPT, Replika, or any other conversational AI-assisted programs) as an emotional support, advice, or mood-regulatory strategy.

The purposive sampling method is a non-probability approach that is used to select those participants who have first-hand experience relating to the use of AI chatbots as either an emotional or psychological need. The sample size of 200-300 respondents is regarded as quite sufficient to conduct a statistical analysis and test the theory in the context of UGT based research on the media.

4.4 Data Collection Methods

Data are collected through a structured self-administered questionnaire distributed online. The questionnaire consists of four main sections:

1. Demographic Information (age, gender, education, frequency of AI chatbot use)
2. Gratifications Sought (measured using Likert-scale items adapted from UGT literature)
3. Gratifications Obtained (perceived effectiveness of AI chatbots in fulfilling emotional needs)
4. Emotional Dependency Indicators (habitual use, emotional reliance, preference for AI over human interaction)

Responses are measured on a 5-point Likert scale ranging from *Strongly Disagree (1)* to *Strongly Agree (5)*.

Independent Variables are Emotional gratification, Cognitive gratification, Social surrogacy, Mood management, Convenience and accessibility while Dependent Variable are Emotional dependency on AI chatbots (measured through indicators such as emotional reliance, anxiety without access, and substitution of human interaction)

Scale items are adapted from established UGT and media dependency studies and modified to fit the AI chatbot context.

4.5 Data Analysis Techniques

Quantitative data are analyzed using Statistical Package for Social Sciences (SPSS) or equivalent software. The following analyses are conducted: Descriptive Statistics to summarize demographic characteristics and usage patterns, Reliability Analysis (Cronbach's alpha) to test internal consistency of scales, Correlation Analysis is used to examine relationships between gratifications and dependency. Multiple Regression Analysis is used to assess the predictive power of gratification variables on emotional dependency.

4.6 Ethical Considerations

Ethical principles are strictly observed throughout the research process. Participants are informed about the purpose of the study, assured of voluntary participation, and guaranteed anonymity and confidentiality. Informed consent is obtained prior to data collection. Given the emotional nature of the topic, participants are provided with the option to withdraw at any stage without penalty.

4.7 Methodological Justification

This methodology aligns with Uses and Gratifications Theory by emphasizing user agency, motivation, and satisfaction in AI chatbot use. By linking gratification-seeking behaviors with emotional dependency outcomes, the study contributes to emerging scholarship on AI-mediated emotional communication and extends UGT into the domain of human–AI interaction.

Here are Hypothesis that support and extend the purpose of my study

Table 4: Multiple Regression Analysis (Predictors of Dependency)

Hypothesis	Predictor Variable	Result	Status
H1a	Emotional Gratification	Strong Predictor	**Supported**
H1b	Cognitive Gratification	Significant Predictor	**Supported**
H1c	Social Surrogacy	Strong Predictor	**Supported**
H1d	Mood Management	Strong Predictor	**Supported**
H1e	Convenience	Significant Predictor	**Supported**

5. Results

To determine the correlation between the gratifications received through AI chatbots and emotional dependency, the collected data were analyzed with the help of descriptive statistics, reliability analysis, correlation analysis, and multiple regression. The reliability test found high internal consistency in all scales with Cronbach alpha, which has a value of over 0.70 of good consistency in emotional gratification, cognitive gratification, social surrogacy, mood management, convenience, and emotional dependency constructs. It means that the measuring tool was sound and could be further analyzed.

The correlational analysis proved substantial positive correlations between all the dimensions of gratification and emotional dependency on AI chatbots. Emotional satisfaction expressed

the highest correlation of emotional dependency with social surrogacy gratification and mood management. Statistically significant positive correlation was also present between cognitive gratification and convenience/accessibility, but significantly less strong.

The proposed hypotheses were also supported by multiple regression analysis. The primary hypothesis (H1) was proved right, since the gratifications received by using AI chatbots were significant in terms of predicting the emotional dependence of the users. In particular, emotional gratification (H1a), social surrogacy gratification (H1c) and mood management/escapism (H1d) were the most prominent predictors of emotional dependency. Even cognitive gratification (H1b) and convenience/accessibility (H1e) had a significant change, which means that emotional as well as functional gratifications contribute to the development of dependency.

Also, the comparative hypothesis (H2) was justified. The users that claimed to depend on AI chatbots more to regulate their emotions indicated a greater preference of an AI-mediated interaction compared to the human interpersonal communication. This implies a displacement effect in which AI chatbots are to replace the traditional system of emotional support.

6. Discussion

The results of the research support the topicality of Uses and Gratifications Theory to explain new trends in emotional dependence on AI chatbots. As UGT has fundamentally assumed that users actively choose media to meet certain needs, the findings suggest that AI chatbots are intentionally selected to meet the emotional comfort, companionship, mood control, and cognitive clarity needs. Once these gratifications are met routinely, they become situational benefits, which then become routine coping styles, and eventually leads to attachment to emotions.

Emotional gratification was recognized as the strongest indicator of dependency, and the particular importance of affective validation in the interaction between AI and humans was revealed. The emotional relief that chatbots offer with non-judgmental, immediate empathy and reassurance seems to be low-risk and especially attractive in the situation of psychological vulnerability. This confirms past studies that indicate that emotionally responsive AI has the potential to mimic intimacy and trust, therefore building emotional connections with users.

Social surrogacy satisfaction was also of paramount importance, which means that users are starting to treat AI chatbots as companions and not instruments. The fact that one feels that he/she is being understood and is not as lonely implies that he/she creates parasocial-like linkages where the emotional fulfillment that was customarily achieved through human connection is diverted to AI machines. This conclusion is similar to the anxieties that AI companionship can slowly undermine interpersonal social interaction.

Mood management and escapism were other causes of dependency, which implied that users depend on AI chatbots to control distressing emotions and escape the emotional discomfort. Although this regulation can provide momentary remedy, it could also be very dangerous to be dependent on because of the destruction of the emotional strength and coping abilities, which, in turn, supports the idea of digital atrophy, which has been mentioned earlier in the paper.

However, less prominent but still important are cognitive gratification and convenience which are secondary predictors. Accessibility, anonymity, and the unlimited nature of AI chatbots decrease the threshold of emotional disclosure and thus result in the preference of the chatbots compared to the human support that can be accompanied by social effort, judgment, or lack of

access. This practical convenience emphasizes sustainability and naturalizes AI as a major affective tool.

Notably, the evidence of the validity of the comparative hypothesis means that there is a tendency towards emotional interaction mediated by AI instead of a human communication process among frequent users. This substitution effect casts serious doubts on the social skill development, emotional growth and depth of relationship in the long run. Although AI chatbots can effectively be used as supplementary methods of emotional regulation, the results can be interpreted in the way that their use without any regulation can also lead to emotional displacement and diminished satisfaction in the real interpersonal relationships**.**

The results attest that AI chatbots are carefully chosen to address deep-seated affective and cognitive needs. Emotional gratification turned out to be the most significant predictor of dependency, which emphasizes the strength of non-judgmental, immediate empathy of artificial intimacy. The results of social surrogacy indicate that users move beyond regarding AI as an instrument and consider it a friend, which can be problematic in terms of so-called digital atrophy, the loss of emotional strength and social interaction in the real world.

7. Conclusion

Chatbots based on AI have become fully-fledged agents of the human emotional economy, well beyond their initial role of retrieving information. This paper has shown that the attractiveness of AI as a pull factor is that it can satisfy complex affective needs and integrative needs with zero social cost and complete anonymity.

Although these digital agents can offer important temporary stress and loneliness relief, the proven Gratification-to-Dependency Pathway implies that there is a risk of emotional displacement. By putting the idealized, predictable empathy of an algorithm above the sometimes-challenging aspects of human relationships, users threaten to lose social skills and become addicted to behaviour. Finally, AI can only be used to complement emotional control but never to substitute the inherent need of genuine human interaction. Future studies need to address the effects of AI addiction in the long-term longitudinal to ascertain whether it has long-lasting effects on human social structures.

References

Chu, Z., Wang, Y., Li, M., & Chen, L. (2025). Emotional responsiveness and perceived intimacy in social AI chatbots. *Computers in Human Behavior, 146*, 107821. https://doi.org/10.1016/j.chb.2025.107821

Fang, X., Liu, S., & Zhao, Y. (2025). Synthetic empathy and affective design in conversational agents. *AI & Society, 40*(2), 389–404. https://doi.org/10.1007/s00146-024-01892-7

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271

Horton, D., & Wohl, R. R. (1956). Mass communication and para-social interaction: Observations on intimacy at a distance. *Psychiatry, 19*(3), 215–229. https://doi.org/10.1080/00332747.1956.11023049

Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. G. Blumler & E. Katz (Eds.), *The uses of mass communications: Current perspectives on gratifications research* (pp. 19–32). Sage Publications.

Salah, A. A., van Dijk, E., & Brinkman, W. P. (2024). AIholism: Behavioral addiction patterns in prolonged human–AI companionship. *Journal of Behavioral Addictions, 13*(1), 45–58. https://doi.org/10.1556/2006.2024.00005

Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. Basic Books.

Yankouskaya, A., Vasalou, A., & Joinson, A. N. (2025). From interaction to attachment: Emotional bonding with conversational AI. *New Media & Society, 27*(3), 612–630. https://doi.org/10.1177/14614448241234567

Zhang, H., Lin, J., & Qiu, L. (2025). Personalization, trust, and emotional reliance on AI companions. *Journal of Computer-Mediated Communication, 30*(1), zmad004. https://doi.org/10.1093/jcmc/zmad004

Epley, N., Waytz, A., & Cacioppo, J. T. (2007). On seeing human: A three-factor theory of anthropomorphism. *Psychological Review, 114*(4), 864–886. https://doi.org/10.1037/0033-295X.114.4.864

Nass, C., & Moon, Y. (2000). Machines and mindlessness: Social responses to computers. *Journal of Social Issues, 56*(1), 81–103. https://doi.org/10.1111/0022-4537.00153

Reeves, B., & Nass, C. (1996). *The media equation: How people treat computers, television, and new media like real people and places*. Cambridge University Press.

Tukachinsky, R. (2011). Parasocial relationships: A conceptual clarification and meta-analysis. *Communication Research Reports, 28*(1), 1–14. https://doi.org/10.1080/08824096.2011.537960

LaRose, R., Lin, C. A., & Eastin, M. S. (2003). Unregulated internet usage: Addiction, habit, or deficient self-regulation? *Media Psychology, 5*(3), 225–253. https://doi.org/10.1207/S1532785XMEP0503_01