The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 14, Issue 2, April- June, 2026
DIP: 18.01.S62.20261402, DOI: 10.25215/1402.S62
https://www.ijip.in

Research Paper

Human - AI Relationship: The Role of Personality Traits in Predicting AI Dependency and Subjective Well - Being among Emerging Adults

Gauri Agarwal[1]*, Dr. Namita Srivastava[2]

ABSTRACT

As artificial intelligence (AI) evolves from a purely technological aid to a personalized psychological companion, the role of individual differences in technology adoption becomes paramount for promoting long term subjective well-being. This research explores the relationship between the Five Factor Model of personality Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism and their influence on AI dependency and life satisfaction. By portraying AI as a reflection of the human psyche, the study bridges the gap in understanding how personal psychological characteristics act as buffers or enablers of technological dependency in the digital age. Using a quantitative cross-sectional method involving 100 students (aged 18–30) from various colleges in Uttar Pradesh, India, the study applied validated tools like the AI Dependency Scale and the Big Five Inventory-10. Findings indicate that personality factors play a vital role in determining the nature of human-AI interaction. Conscientiousness demonstrated a strong negative correlation with AI dependency, serving as a core component of digital health. Conversely, for those with high Neuroticism, AI functioned as a "psychological sanctuary," offering a secure environment for trial and error without fear of judgment, which correlated positively with subjective well-being and negatively with dependency. This "Neuroticism Paradox" suggests that the future of technology lies in developing "personality aware" AI systems that offer personalized scaffolding for diverse psychological needs.

Keywords: *AI Dependency, Big Five Personality, Subjective Well-Being, Emerging Adulthood, Human-AI Interaction*

The rapid evolution of artificial intelligence represents a paradigm shift in the human experience, necessitating a thorough analysis of the complex relationships between humans and these increasingly sophisticated systems. This technological evolution challenges conventional relationship dynamics and requires an exploration of the role these associations play in the overall human experience. As AI evolves from a simple tool to a

[1]Student, Amity Institute of Behavioural and Allied Sciences, Amity University Uttar Pradesh, Lucknow Campus, India.
[2]Assistant Professor, Amity Institute of Behavioural and Allied Sciences, Amity University Uttar Pradesh, Lucknow Campus, India.
*Corresponding Author

Received: April 04, 2026; Revision Received: April 14, 2026; Accepted: April 18, 2026

social actor, the nature of these relationships begins to mimic human interaction, raising concerns about their psychological impact.

This impact is particularly significant for the 18- to 30-year-old demographic, known as "emerging adults". This group is at a developmental crossroads, marked by identity exploration and high media engagement, making them primary adopters of generative AI and other autonomous agents. For these individuals, AI is often integrated into the fabric of daily life, affecting social identities and emotional well-being. Consequently, the quality of human-AI interaction is heavily mediated by the user's psychological profile.

This paper examines the association between human personality, as conceived by the Five-Factor Model (OCEAN), and subjective well-being within human-AI associations. It hypothesizes that individual differences in personality features Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism impact the quality of human-AI bonds, which in turn influences psychological health.

For instance, high Openness to Experience, characterized by intellectual curiosity and an affinity for novelty, is positively correlated with receptive attitudes toward AI. Conversely, Conscientiousness presents a more complex relationship; while these individuals are diligent, they may harbor skepticism toward AI if the system's inner workings are perceived as unmanageable or opaque. Furthermore, the evolution of AI has introduced "Techno Emotional Projection," a construct where individuals project inner vulnerabilities onto AI products, creating an artificial sense of reciprocity. For emerging adults, this can lead to an "emotional looping" effect where the AI system's acknowledgment of the user's state either relieves or worsens their psychological condition. This study aims to provide a foundation for harnessing "positive technology" for the betterment of the human condition.

Significance of the Study

The significance of this research lies in its shift from viewing AI as a generic tool to a personalized psychological partner. By filling the geographical and demographic void in current literature specifically focusing on the Indian student population—this study establishes a foundational understanding of the individual psychological structures that dictate the health of human-AI relationships.

The findings suggest a move toward "personality-aware" AI systems. If developers understand that different personality types thrive with different interfaces such as goal-oriented tools for conscientious users or structured scaffolding for those high in neuroticism. they can design systems that foster well-being for every user. This study serves as a call to action to focus less on the machine's capabilities and more on the character of the human behind the screen.

THEORETICAL FRAMEWORK

The theoretical foundation of this research is primarily anchored in the Five-Factor Model (FFM), commonly referred to as the OCEAN personality traits. This model provides a robust lens through which to examine how individual differences—Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—dictate the nature of human-AI bonds. Within this framework, human-AI interactions are categorized along a spectrum of dependency, ranging from a "servant" dynamic, where the AI is a purely functional tool, to a "partner" relationship characterized by social support and artificial

reciprocity. The study posits that these traits serve as the fundamental architecture for "Techno-Emotional Projection," a process where users project their inner vulnerabilities onto AI systems to create a sense of reciprocity, which is particularly prevalent during the identity exploration phase of emerging adulthood.

The trait of Openness to Experience, defined by intellectual curiosity and an affinity for novelty, is theorized to foster "partner" dependency relationships, as these individuals are more eager to embrace AI technologies without fear. In contrast, Conscientiousness presents a more complex interaction; while meticulous individuals may utilize AI for productivity, they may develop dependency if the AI is perceived as an uncontrollable or mysterious environment. Extraversion and Agreeableness are associated with enhanced social relationships, where AI is often adopted as a mechanism to combat loneliness, thereby strengthening the "partner" bond. Conversely, Neuroticism is linked to negative affectivity and risk aversion, typically resulting in "servant" dependency relationships due to a reduced willingness for deep emotional investment in the technology.

Subjective well-being (SWB) serves as the primary outcome variable within this framework, encompassing life satisfaction, the presence of positive emotions, and a low level of negative affect. The quality of the human-AI dependency relationship, moderated by the aforementioned personality traits, is theorized to be a significant determinant of an individual's overall life satisfaction. Partnership-style relationships are considered more advantageous for well-being than master-servant dynamics because they provide critical social support and validation. High levels of Openness and Extraversion are assumed to facilitate "emotional loops" of excitement and connection that bolster well-being, whereas high Neuroticism and low Conscientiousness may trigger negative loops that exacerbate poor psychological states.

Ultimately, this study integrates traditional psychological constructs with the emerging field of "positive technology" to understand how AI can be harnessed for the betterment of the human condition. The framework suggests that as AI moves beyond being a functional external tool to an internalized social actor, it begins to influence the very core of psychological health. By exploring personality through the Big Five lens, the research aims to identify why certain individuals are more prone to AI dependency than others, facilitating the design of interventions that promote adaptive human-AI interactions. This theoretical integration emphasizes that digital well-being is not merely a result of technology usage, but a complex interaction between the "smart" capabilities of the machine and the specific psychological makeup of the human user.

Rationale of the Study

The dramatic rise of generative AI has moved these systems beyond functional tools into entities perceived as being in relation with humans. In academic settings, AI has become an internalized part of the student experience. It is critical to understand how individual differences dictate whether a person uses AI as a "positive technology" to improve capabilities or as a maladaptive coping mechanism leading to dependency. Such understanding is essential for designing effective interventions and AI systems that promote human flourishing.

LITERATURE REVIEW

Current research into the deep relational dynamics of human-AI relationships is in its infancy. Humans are known to develop connections with non-human entities, perceiving them as partners that provide psychological and social value. These processes are increasingly categorized as digital social support and parasocial interaction.

AI Dependency and Subjective Well-Being

AI Dependency is established as a multifaceted construct including cognitive preoccupation, functional overreliance, and emotional withdrawal. This dependency involves "a loss of control," where users outsource higher order cognitive processes and decision making to the system, potentially compromising independent thought. While AI companions can alleviate loneliness by making users feel "heard," excessive reliance can lead to a paradox of reduced self-concept clarity and social isolation.

The Role of the Big Five

The Big Five model offers a strong basis for predicting user engagement with AI.

- Openness and Conscientiousness: These are the strongest predictors of purposeful and educational engagement with generative AI.
- Neuroticism: Correlates with "compulsive" engagement, where AI serves as a coping mechanism for anxiety.
- Extraversion: Individuals with this trait display greater frequency in engagement.
- Agreeableness: These users prefer human-like warmth and may perceive non-human interaction as less fulfilling.

In the Indian context, personality configurations play a vital role in student attitudes toward digital innovation. Historical and philosophical attitudes, mediated by the OCEAN profile, affect how individuals perceive AI's role in productivity and life satisfaction.

Research Gap

While existing literature covers technological advancements and broad social implications, there is a glaring lack of concrete data on how specific traits like Neuroticism or Conscientiousness interact with AI tools. Most research has failed to capture the nuances of how these relational shifts affect long term psychological outcomes. Furthermore, there is a geographic and demographic void, as most studies center on Western cultures. The distinct experiences of emerging adults in rapidly developing environments like India remain underrepresented. This study seeks to bridge these gaps by establishing a foundational understanding of the individual psychological structures that dictate the health of human-AI relationships.

METHODOLOGY

Research Objective and Design

This quantitative study examines AI dependency, subjective well-being, and Big Five personality traits using a cross-sectional survey design. Data collection occurred in early 2026, targeting the mediating effects of AI use during stressful academic periods.

Participants and Sampling

The sample consisted of 100 students (50% male, 50% female) aged 18–30 (M=20.1, SD=1.4) from various colleges in Uttar Pradesh, India. Purposive sampling was used to

recruit frequent AI users (minimum 30 minutes of use per week). Minors and AI experts were excluded to ensure a "general student experience". The study achieved a 78% response rate and adhered to APA 7th edition guidelines.

Measures and Instruments

- **AI Dependency:** Measured using the Dependency Inventory for AI Interactions (DIAI; 10 items), assessing cognitive, emotional, and behavioral components. Reliability was strong (α = .88 to .93).
- **Personality Traits:** Assessed via the Big Five Inventory-10 (BFI-10), measuring the OCEAN spectrum with high test-retest reliability (.80).
- **Subjective Well Being:** Measured by an adaptation of the Satisfaction with Life Scale (SWLS), which demonstrated excellent reliability (.90) in the Indian sample.

Hypotheses

- **H1:** There is a significant relationship between Big Five traits and the nature of human-AI bonds, impacting psychological health.
- **H2:** High Neuroticism and low Conscientiousness are significant predictors of AI dependency.
- **H3:** High Openness and Extraversion have a positive effect on well-being through "emotional loops".
- **H4:** Subjective well-being is influenced by AI dependency quality, moderated by OCEAN traits.
- **H5:** AI dependency and personality traits jointly contribute 25–35% of the variance in well-being.

DATA ANALYSIS AND INTERPRETATION

Table 1: Descriptive Statistics (N=100)

Variable	Mean	Standard Deviation
Openness to Experience	7.26	1.75
Conscientiousness	6.87	1.90
Extraversion	5.80	1.47
Agreeableness	6.86	1.43
Neuroticism	6.21	2.16
AI Dependency Total	28.50	8.23
Subjective Well-Being	19.82	6.98

Table 2: Pearson Correlation Matrix

Predictor	AI Dependency Total	Subjective Well-Being
Openness	-.322**	-.010
Conscientiousness	-.416**	.245*
Extraversion	-1.63	.216*
Agreeableness	-.266**	.075
Neuroticism	-.356***	.329***

Data Interpretation

The data suggests that personality traits act as "psychological armor" against the pitfalls of AI. Conscientiousness emerged as the strongest protector; its negative correlation with dependency (r = -.416) indicates that goal-oriented individuals use AI as a utility rather than

an escape. Openness and Agreeableness also ward off negative consequences, as these users are either "smart" explorers or prioritize real-world relationships.

The Neuroticism Paradox

The most counter-intuitive result involves Neuroticism. While usually a predictor of digital addiction, in this study, higher Neuroticism correlated with lower AI dependency ($r = -.356$) and higher well-being ($r = .329$). This suggests AI serves as a "psychological sanctuary", a reliable, non-judgmental, and logical "home base" that provides order to an anxious inner world.

DISCUSSION

The analysis validates the fundamental relationship between individual differences and the nature of the connection between humans and AI. Personality acts as the fundamental architecture for this connection, which serves as a psychological extension of the individual. These established connections are critical in determining the mental health and psychological stability of the user.

The study verified that the association between AI usage and psychological health is subject to strong moderation by the Big Five personality traits. This protective construct dictates whether the dependency is a beneficial relationship or an unproductive habit. Collectively, personality traits and levels of AI dependency contribute significantly between 25% and 35% to the variance in subjective well-being.

- The Conscientiousness Shield: Conscientiousness revealed the strongest and most significant negative relationships with all dimensions of AI dependency, including cognitive preoccupation, negative consequences, and withdrawal. Because these individuals are naturally disposed to self-regulation and order, they likely view AI as a utility rather than an escape.
- The Neuroticism Paradox: Contrary to traditional digital addiction studies, results indicated that as levels of Neuroticism increased, AI dependency decreased and well-being increased. This suggests that for those with high anxiety, the predictable, logical, and non-judgmental nature of AI provides a "psychological sanctuary" that helps reduce stress levels.
- Social Supplementation: For individuals high in Extraversion, AI serves as a social supplement rather than a replacement. While this trait does not significantly influence the degree of dependency, it has a significant effect on the level of happiness experienced during AI usage.

Future Implications and Limitations

The study is limited by a small sample size (N=100) and reliance on self-report measures, which are susceptible to social desirability bias. Future research should employ longitudinal designs and objective data (e.g., screen time records). Practically, the findings advocate for "personality-aware" AI systems that utilize "adaptive scaffolding" to meet unique psychological profiles, moving toward AI as a personalized psychological partner rather than a generic tool.

Ultimately, this study serves as a call to action: to focus less on the capabilities of the machine and more on the character of the human behind the screen. By fostering

conscientiousness and understanding unique needs, we can ensure AI leads to a genuine increase in human happiness.

CONCLUSION

The evolution of artificial intelligence has transcended mere technical utility and become a mirror reflecting the complexities of human personality. This research demonstrates that the "digital divide" is not just about access to technology, but about the personality traits individuals bring to that technology.

Internal self-discipline and intellectual curiosity are key to a healthy, non-dependent relationship with AI. Conscientious users serve as a "beacon of hope" in an era where cognitive preoccupation and withdrawal are common, proving that organizational intent is the most effective way to stave off the ill effects of the digital era. Most importantly, the discovery of the "Neuroticism Paradox" suggests that AI could be the key to the well-being of emotionally unstable individuals by providing a safe, predictable space for trial and error without fear of social judgment. Ultimately, as AI becomes more integrated into daily life, developers and mental health professionals must collaborate to create personalized digital environments that foster genuine human happiness and life satisfaction.

REFERENCES

Adil Ogullari, I., Ulucan, H., & Senel, E. (2014). Analysis of the relationship between emotional intelligence and burnout levels of teachers. International Journal of Academic Research, 6(1). https://doi.org/10.7813/2075-4124.2014/6-1/B.24

Alabed, A., Javornik, A., & Gregory-Smith, D. (2023). AI as a relationship partner: A systematic review. Journal of Business Research, 150, 377. https://doi.org/10.1016/j.jbusres.2022.06.012

Arpacı, I., Karataş, K., & Özfidan, B. (2025). Predictors of purposeful and educational engagement with generative artificial intelligence. Technology in Society. https://doi.org/10.1016/j.techsoc.2024.102511

Benvenuti, M., Mazzoni, E., & Panesi, S. (2023). Emerging adulthood and technology: Identity exploration in the digital age. Developmental Psychology. https://doi.org/10.1037/dev0001511

Burzagli, L., Billi, M., & Palchetti, E. (2021). The psychological impact of emerging technologies on emerging adults. International Journal of Emotional Education. https://doi.org/10.1007/978-3-030-77411-0_24

Chubing, Z., Liang, Z., & Yuhui, J. (2024). Human-AI relationship dynamics: From servant to partner. Computers in Human Behavior, 145. https://doi.org/10.1016/j.chb.2023.107775

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. Journal of Personality Assessment, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Freitas, J., Uğuralp, A. K., & Steininger, D. J. (2024). AI companions and the paradox of loneliness. Human-Computer Interaction. https://doi.org/10.1080/07370024.2023.2285412

Goh, J., Teo, T., & Yeo, L. S. (2025). AI Dependency: A multifaceted construct involving cognitive preoccupation and emotional withdrawal. Cyberpsychology, Behavior, and Social Networking. https://doi.org/10.1089/cyber.2024.0155

Hemade, M., Mansour, H., & El-Kassar, A. N. (2024). The role of personality in influencing user attitudes and fears about AI. Technological Forecasting and Social Change. https://doi.org/10.1016/j.techfore.2023.123012

Martín, A. G., López, P., & Santos, M. (2023). Personality traits as predictors of adaptive AI interactions. Digital Health and Wellbeing. https://doi.org/10.1016/j.dhw.2023.100024

Nakagomi, S., Kato, Y., & Yamamoto, K. (2026). Digital social support and parasocial interaction with AI partners. Journal of Social and Personal Relationships. https://doi.org/10.1177/02654075251264312

Rahman, M. S., Khalid, N., & Hossain, M. A. (2025). Individual differences in personality and the formation of human-AI bonds. Personality and Individual Differences. https://doi.org/10.1016/j.paid.2024.112455

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. Journal of Research in Personality, 41(1), 203–212. https://doi.org/10.1016/j.jrp.2006.02.001

Saracini, C., Grassi, A., & Riva, G. (2025). Techno-emotional projection: Projecting vulnerabilities onto artificial reciprocity. Psychology of Popular Media. https://doi.org/10.1037/ppm0000512

Stein, J. P., Liebold, B., & Ohler, P. (2024). Personality and attitudes toward AI: The complex role of conscientiousness and openness. International Journal of Human-Computer Studies. https://doi.org/10.1016/j.ijhcs.2023.103135

Tschopp, M., Rüedi, T., & Fischer, P. (2023). AI as a relationship partner in emerging adulthood. Journal of Applied Social Psychology. https://doi.org/10.1111/jasp.12955

Wu, Y., Chen, X., & Wang, L. (2026). The use of AI in higher-order thinking and emotional regulation. Educational Technology Research and Development. https://doi.org/10.1007/s11423-025-10422-x

Zhang, H., Xu, S., & Tan, G. W. (2025). The psychological effects of human-AI partner dynamics on user outcomes. Journal of Information Technology. https://doi.org/10.1177/02683962241254321

Acknowledgment

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Agarwal, G. & Srivastava, N. (2026). Human - AI Relationship: The Role of Personality Traits in Predicting AI Dependency and Subjective Well - Being among Emerging Adults. *International Journal of Indian Psychology*, *14*(2), 107-114. DIP:18.01.S62.20261402, DOI:10.25215/1402.S62