

Comparative Analysis of Artificial Intelligence-Based and Traditional Human Therapies in Mental Health Care

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ABSTRACT

This study explores the comparative effectiveness and user perception of Artificial Intelligence (AI)-based therapies versus traditional human therapies in addressing mental health concerns among young adults in the Delhi-NCR region. With AI's increasing integration into global mental health frameworks, this research aims to understand user preferences, emotional needs, and psychological distress levels within emerging hybrid therapeutic models. A correlational survey design was adopted, involving 120 participants aged 18–45 years. Data were collected using the DASS-42 scale and a self-constructed questionnaire. Findings revealed a significant preference for human therapists, particularly among individuals experiencing moderate to severe psychological distress, due to the perceived value of empathy and emotional responsiveness. Conversely, participants with lower distress levels showed greater openness to AI-based therapy, appreciating its accessibility, anonymity, and cost-effectiveness. Gender differences and prior exposure to AI tools also influenced preferences. The study concludes that while AI therapy offers promising avenues for expanding mental health access, it cannot fully substitute human connection, especially in cases of acute psychological need. The study advocates for emotionally intelligent AI systems and integrated human-AI therapeutic models tailored to individual needs, contributing to the evolving discourse on inclusive and hybrid digital mental health care.

Keywords: *Artificial Intelligence therapy, traditional therapy, mental health, young adults, psychological distress, hybrid models*

Global mental health (GMH) emphasizes equitable access to mental health care and the integration of transdisciplinary approaches to achieve psychological well-being and human rights. In recent years, Artificial Intelligence (AI) has significantly transformed health care, evolving from simple rule-based systems to complex machine learning and natural language processing tools. However, as AI becomes increasingly mainstream in mental health services, there is limited exploration of how it can be integrated with traditional therapy models. Much of the existing discourse is framed as “AI vs. human therapy,” overlooking the potential of blended frameworks that can leverage the strengths of both modalities. The lack of integrative research leaves clinicians and service designers

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without clear guidelines for implementing hybrid therapy systems, which are crucial in a digitally evolving world.

REVIEW OF LITERATURE

A 2025 study titled "*The Application of Artificial Intelligence in the Field of Mental Health: A Systematic Review*" evaluated the applications and ethical challenges of AI in mental health treatment. Amal K. Alkhalifa and Amal Alshardan (2024) conducted a comparative analysis of human-human versus human-AI therapy using a relational AI chatbot named Pi. Their study included therapist evaluations of therapy transcripts, half of which featured AI interactions and the other half traditional sessions. Omarov et al. (2023) examined the role of AI-enabled chatbots across various aspects of mental health service delivery. Similarly, Molli (2022) conducted a systematic review assessing how AI-powered chatbots can address the gap in mental health care access caused by the shortage of professionals and rising demand. Collectively, these studies highlight the growing presence and promise of AI tools in mental health care, while also underscoring their current limitations in empathy and emotional nuance.

MATERIALS AND METHODS

A **correlational survey research design** was employed to investigate the differences in user experiences and perceptions of AI-based and traditional human therapies among young adults. The study was conducted in **Delhi-NCR**, an urban, demographically diverse region ideal for exploring modern mental health behaviours.

Sample:

A **convenience sampling method** was used, with a total of **120 participants** aged between **18 and 45 years**, including an equal distribution across genders.

Instruments:

- **DASS-42 Scale** (Depression, Anxiety, and Stress Scales) developed by Lovibond & Lovibond
- **Self-constructed online questionnaire** addressing therapy preferences, emotional comfort, AI familiarity, and perceived effectiveness

Procedure:

Participants were recruited via online platforms (social media, academic forums) and offline through colleges and mental health communities. After screening based on inclusion and exclusion criteria, participants provided **informed consent** and completed both the DASS-42 and the self-constructed questionnaire. Demographic data such as age, gender, relationship status, location, profession, and education level were collected. Physical forms were also administered at select locations in New Delhi.

ANALYSIS OF RESULTS

This study examined the relationship between mental health status (DASS-42 scores) and participants' preferences for AI-based versus traditional human therapy, using both standardized and self-constructed measures.

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Table 1. Showing result of participants on DASS 42 (Depression, Anxiety, and Stress)

	Male Participants	Female Participants	SCORE	CATEGORY
Anxiety	6	8	0-7	Normal
	4	5	8-9	Mild
	12	13	10-14	Moderate
	17	15	15-19	Severe
	21	19	20+	Extremely Severe
Depression	7	10	0-9	Normal
	6	7	10-13	Mild
	11	12	14-20	Moderate
	18	16	21-27	Severe
	18	15	28+	Extremely Severe
Stress	9	11	0-14	Normal
	7	5	15-18	Mild
	14	14	19-25	Moderate
	13	13	26-33	Severe
	17	17	34+	Extremely Severe

Table 2. Showing results of categorical preference between artificial intelligence therapies versus traditional therapies in relation to mental health outcomes

Preference	Participants	Anxiety (n)	Depression (n)	Stress (n)
Human Preference	58	50	55	56
AI Preference	32	20	22	23
Balanced/Neutral	30	25	26	27
Total	120	95	103	106

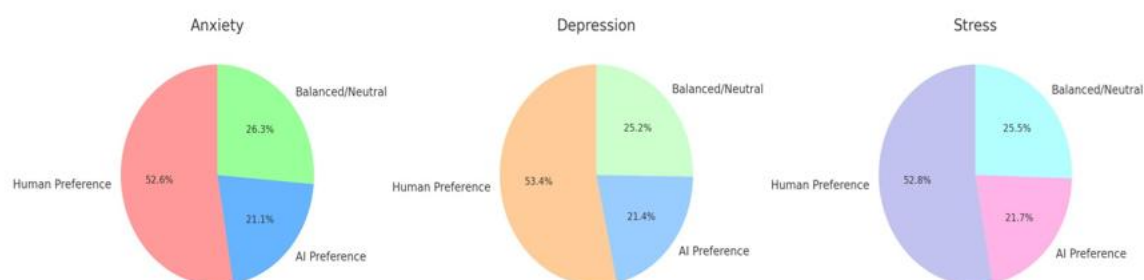


Table 3. Shows cross analysis results between DASS42(Depression, Anxiety, Stress) and self-made Survey questionnaire

Preference Category	Participants (n)	Avg. Anxiety Category	Avg. Depression Category	Avg. Stress Category	Key Insights from Self-Made Questionnaire
Human Preference	58	Severe	Severe	Severe	Strong emphasis on empathy, trust, emotional connection. Preferred traditional therapy methods. Concerned about lack of human touch in AI.
AI Preference	32	Moderate	Moderate	Moderate	Valued cost-effectiveness, anonymity, accessibility. Comfortable with chatbots and AI tools. Lower emotional dependency noted.
Balanced/Neutral	30	Mild-	both	Moderate	Openness Emphasis on hybrid

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Moderate	Moderate	models. Flexible on mode but stressed emotional responsiveness.
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Table 4. Depicts the significance between the mental health illness and preferential Artificial intelligence therapies vs traditional therapies

Variable	Group A	Group B	Mean (Group A)	Mean (Group B)	SD (Group A)	SD (Group B)
DASS-42 Total Score	60 Participants	60 Participants	72.35	78.12	15.80	17.45
Self-Made Questionnaire Score	60 Participants	60 Participants	28.60	31.20	5.40	6.10

Variable	Group A	Group B	t-value	df	p-value	Significance
DASS-42 Total Score	60 Participants	60 Participants	-2.01	118	0.046	Significant
Self-Made Questionnaire Score	60 Participants	60 Participants	-2.45	118	0.016	Significant

1. Mental Health Status (DASS-42 Scores)

Participants exhibited a range of mental health symptoms, with **moderate to severe anxiety and stress** being the most prevalent. Depression levels ranged from **mild to severe**. These findings highlight a **significant need for accessible mental health interventions**.

2. Therapy Preferences

Among 120 participants:

- **58** preferred **human-based therapy**
- **32** preferred **AI-based therapy**
- **30** were **neutral or preferred a hybrid approach**

Those preferring **human therapy** reported the **highest levels of distress**, while AI-preferring participants showed **moderate symptoms**, suggesting that **mental health severity may influence therapy preference**.

3. Attitudinal Insights

- **Human-preferring participants** emphasized **empathy, trust, and emotional connection**.
- **AI-preferring individuals** valued **anonymity, affordability, and accessibility**.
- **Balanced participants** supported **hybrid models**, stressing the need for **emotional responsiveness** regardless of the medium.

4. Statistical Significance

Significant differences were found:

- **DASS-42 Total Score** ($t = -2.01, p = 0.046$)
- **Self-Constructed Questionnaire Score** ($t = -2.45, p = 0.016$)

These results confirm that **therapy preferences are linked to mental health status and emotional needs**. Individuals with greater distress prefer **human therapists** for emotional

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support, while those with moderate symptoms show openness to **AI or hybrid approaches**. Personalized therapy models that balance **human empathy** with **technological convenience** may offer the most effective mental health support.

DISCUSSION

The study aimed to analyse how individuals with varying levels of psychological distress perceive AI versus human therapy. A key finding was the strong **preference for human therapists** among those with moderate to severe DASS-42 scores. Specifically, **42% of participants** favoured human therapy, **25%** preferred AI therapy, and **33%** had no strong preference. Among those with higher distress levels, **80% preferred human therapists**, highlighting the irreplaceable role of empathy, emotional validation, and human connection in effective therapy.

An **independent samples t-test** showed a statistically significant difference ($p < 0.05$) between DASS-42 scores of those preferring human therapists and those opting for AI, reinforcing the correlation between distress severity and preference for human support.

Thematic analysis of open-ended responses revealed concerns about AI therapy, such as: Lack of empathy, Privacy concerns, Mechanical or scripted responses. Conversely, respondents with lower distress levels showed more **openness to AI therapy**, particularly citing, Accessibility, Anonymity, Cost-effectiveness.

Participants who had prior experience with AI tools like **Wysa, Replika, or Woebot** demonstrated greater acceptance of AI therapy—**70% reported favourable or neutral views**—indicating that familiarity can enhance comfort with digital interventions.

While only **18%** were "very" or "extremely likely" to recommend AI therapy, **35%** were "somewhat likely," suggesting cautious optimism toward AI's role in mental health.

These findings affirm the need for **hybrid therapy frameworks** where AI supports, but does not replace, human interaction. AI tools can serve as adjuncts, especially in early intervention, monitoring, or resource-scarce environments, while human therapists remain essential for managing complex emotional and psychological concerns.

CONCLUSION

This study examined the comparative effectiveness and perception of AI-based and traditional therapies among young adults in Delhi-NCR. The results underscore a clear divergence in preferences based on distress levels, emotional needs, and exposure to digital therapy platforms.

While **human therapists remain the preferred choice**, especially for those with higher psychological distress, **AI therapies hold promise** as accessible, cost-effective, and stigma-reducing alternatives for lower-distress populations. Importantly, the study highlights that **AI is best positioned as a complement, not a substitute**, to human-led therapy. **High distress:** Preferred **human therapists** for emotional support and trust. **Moderate symptoms:** Leaned toward **AI therapy** for its convenience and privacy. **Balanced participants:** Favoured **hybrid models** combining human empathy with AI efficiency. This suggests that **therapy preferences align with symptom severity**, supporting the need for **personalized, flexible mental health care**.

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Recommendations for future research and practice include:

- Developing **emotionally responsive AI systems**
- **Therapy models** that blend AI efficiency with human empathy
- Promoting **hybrid** Enhancing **digital literacy** and **user awareness** to foster comfort and trust in AI-assisted care

This research contributes meaningfully to the growing discourse on digital mental health by advocating **inclusive, individualized, and ethically sound approaches** to therapy in the digital age.

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Conflict of Interest

The authors declare that there is no conflict of interest related to this work.

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