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The Shift From Human to AI Support in Gen Z Mental Health Coping: A Comparative Study on Trust, Stigma, and Generational Perception Gaps

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Abstract: ***Generation Z (Gen Z) faces unprecedented levels of academic and psychological stress, yet traditional familial support structures are often underutilized due to a widening cross-generational communication gap and deep-seated cultural stigma. Concurrently, conversational Artificial Intelligence (AI) tools have emerged as highly accessible alternatives for emotional venting. This empirical study investigates the specific factors driving Gen Z's preference for AI-based emotional coping mechanisms over traditional family support, directly evaluating the contrasting perceptions between youth and older educators. A primary quantitative survey was executed across an engineering institution, capturing a validated dataset of N = 132 respondents. The sample was split into a student cohort (n_1 = 87) representing Gen Z and a faculty/staff cohort (n_2 = 45) representing the older adult demographic. The data reveals a significant perceptual divergence. While 54.5% of faculty respondents believe family structures offer safe environments for emotional dialogue, a critical 32.1% of Gen Z students report active discomfort in parental discussions, driven by a fear of causing parental worry (32.6%) and generational gaps (31.4%). Consequently, 64.3% of students utilize generative AI tools for emotional regulation, prioritizing absolute anonymity, 24/7 availability, and a perceived lack of judgment over traditional human interaction. The findings indicate that AI tools are actively filling a communication vacuum within households. While AI serves as a low-barrier, short-term comfort mechanism, it introduces structural risks of emotional overreliance on non-empathetic algorithms among undergraduate youth.***
Keywords: Generation Z, Mental Health, Artificial Intelligence, Generational Gap, Emotional Coping, Stigma.

I. INTRODUCTION

The intersection of youth mental health and digital technology has accelerated rapidly over the last decade. In traditional socio-cultural environments, such as the Indian familial setup, open conversations surrounding psychological stress, academic anxiety, and emotional well-being are frequently hindered by deep-seated generational gaps and social stigma.[2] Consequently, a significant communication vacuum exists between Generation Z (Gen Z) youth and older parental or educator cohorts. This vacuum forces undergraduate students to navigate complex academic and emotional challenges without a reliable, judgment-free human sounding board.

Simultaneously, the democratization of Generative Artificial Intelligence (AI) and natural language processing tools—such as ChatGPT, Claude, and specialized conversational chatbots[1]—has fundamentally altered how youth seek information and comfort. Beyond academic and technical assistance, Gen Z individuals are increasingly utilizing these autonomous systems as immediate, low-barrier emotional outlets. AI platforms offer distinct structural advantages that human communication channels often lack, including absolute 24/7 availability, total digital anonymity, and a complete absence of emotional or societal judgment.

While existing literature broadly addresses social media's impact on youth psychology, there is a critical research gap in understanding the precise cross-generational perception variance regarding AI as an emotional coping tool. Educators and parents often view AI strictly through the lens of academic integrity, productivity, or data security. Meanwhile, students view these algorithms as emotionally neutral, safe configurations for self-disclosure. This study serves as an empirical, localized investigation aimed at mapping this exact systemic disconnect. By analyzing primary data from both a student cohort and an academic faculty cohort within an engineering institution, this paper evaluates why digital algorithms are increasingly supplementing, or replacing, traditional human support structures among engineering undergraduates.

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II. METHODOLOGY

This study employs a primary, quantitative cross-sectional research design to examine cross-generational divides in mental health communication and the subsequent adoption of Artificial Intelligence (AI) as an emotional coping mechanism. Data collection was executed using a structured digital questionnaire distributed via convenience sampling within an engineering college campus community. Informed consent was obtained from all participants prior to data collection, and participation was entirely voluntary and anonymous. The survey was administered digitally via Google Forms.

A total of N = 132 unique responses were validated and locked for statistical analysis. The demographic distribution comprises 57.6% male (n = 76) and 42.4% female (n = 56) respondents. Age distribution analysis indicates 10.6% under 18 years, 50.8% aged 18–22 (representing the primary Gen Z undergraduate bracket), 14.4% aged 23–29, and 24.2% aged 30–45.

The survey design incorporated smart logic routing to partition respondents by operational role, resulting in two distinct comparison cohorts:

1) Student Cohort (n_1 = 87, 65.9%): Representing the target Generation Z youth demographic facing academic and developmental stressors.

2) Faculty and Staff Cohort (n_2 = 45, 34.1%): Representing the older adult, educator, and parental demographic bracket.

Data points were collected using 5-point Likert scales (ranging from 1: Extremely Uncomfortable/Strongly Disagree to 5: Extremely Comfortable/Strongly Agree), categorical check-boxes for behavioral drivers, and binary filters. Analysis was executed via descriptive statistics, aggregating percentage majorities and frequency counts to evaluate cross-generational divergence.

III. RESULTS AND DATA ANALYSIS

A. *Evaluation of the Student (Gen Z) Cohort*

The student data reveals deeply polarized comfort levels regarding familial emotional support. When rating their comfort level discussing mental health with parents on a 1-to-5 scale, a critical 32.1% of students expressed low comfort, with 21.4% (n = 18) reporting being completely uncomfortable (Score 1) and 10.7% (n = 9) reporting low comfort (Score 2). The underlying barriers preventing transparent communication are distributed across multiple systemic issues:

- Fear of causing parents unnecessary worry or stress: 32.6% (n = 28)
- Generational gaps in understanding modern pressures: 31.4% (n = 27)
- Fear of negative judgment or being misunderstood: 27.9% (n = 24)
- Dismissive parental attitudes: 26.7% (n = 23)

Regarding digital technology adaptation, a dominant majority of 64.3% of students confirm using AI tools (such as ChatGPT, Claude, or Snapchat AI) for emotional venting, with 24.1% utilizing them frequently and 40.2% using them a few times.

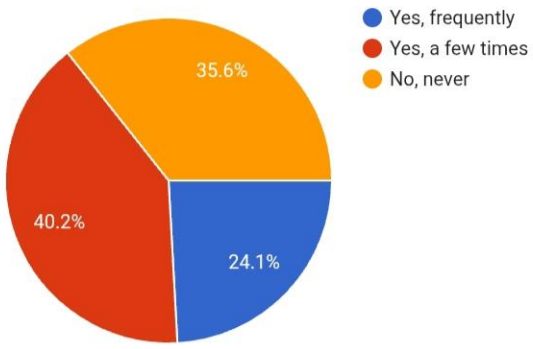


Figure 1: Distribution of AI Tool Usage for Emotional Venting Among Gen Z Students

When asked why they choose AI platforms over talking to an adult, the primary behavioral driver is the absolute friction-free environment: 24.4% (n = 21) prioritize the psychological safety of complete privacy and zero fear of being judged, 19.8% (n = 17) favor the absolute 24/7 immediate availability, and 14.0% (n = 12) cite objective and neutral responses. Notably, 30.2% of students explicitly agree (Scores 4 and 5) that AI chatbots provide a safer, more comforting immediate environment to express feelings than their traditional household environments, while 37.2% (n = 32) remain neutral (Score 3).

B. Evaluation of the Faculty and Staff Cohort

In sharp contrast to student apprehensions, the educator and staff cohort views the familial communication ecosystem much more optimistically. A significant majority of 54.5% of faculty respondents agree or strongly agree (Score 4: 31.8% / n = 14; Score 5: 22.7% / n = 10) that today's youth can openly communicate their stress to families without fear of stigma, exposing a significant blind spot regarding actual student anxiety.

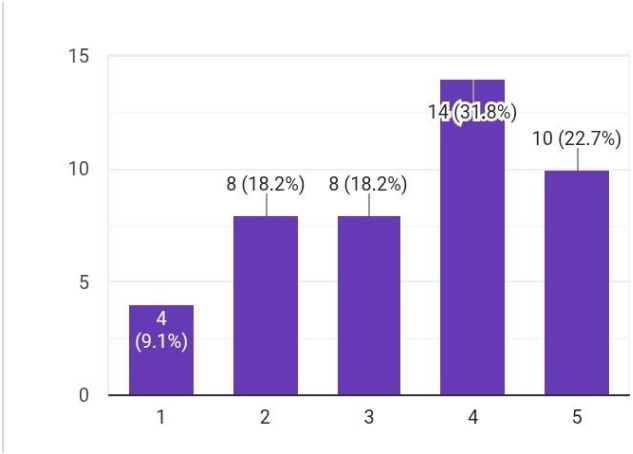


Figure 2: Faculty Perception Regarding Openness of Student-Family Communication Channels

When asked why they think students mask their struggles, faculty attribute it heavily to structural communication issues within modern households (40.9% / n = 18) and a fear of disappointing parents (31.8% / n = 14).

Furthermore, 55.6% of the faculty are fully aware that students are substituting human companionship with generative AI tools. Their primary structural concerns regarding youth relying on AI for emotional regulation include:

- AI providing wrong, unscientific, or emotionally harmful advice: 51.1% (n = 23)
- Increased social isolation from family and real-world peers: 42.2% (n = 19)
- Overreliance on algorithms instead of human coping mechanisms: 28.9% (n = 13)

IV. DISCUSSION

The empirical data collected in this study highlights a striking cross-generational disconnect regarding mental health communication and digital coping mechanisms. The most significant finding is the perception gap between faculty assumptions and student realities. While over half of the faculty and staff cohort (54.5%) firmly believe that modern youth face minimal barriers when speaking to family, a substantial segment of the student cohort (32.1%) explicitly reports intense discomfort and an active avoidance of familial support systems.

This communication vacuum is heavily driven by traditional Indian household dynamics, where students actively hide their emotional struggles to protect their families from a perceived burden (32.6%) or to avoid generational misunderstandings (31.4%).[3] Rather than processing these anxieties alone or through formal, high-barrier professional therapy, Gen Z students are leveraging technology to build alternative coping systems. The data indicates that 64.3% of students have adopted generative AI tools as an emotional outlet.

The psychological draw toward AI is fundamentally rooted in its structural neutrality. For a demographic hyper-sensitive to social stigma, AI provides a friction-free environment featuring absolute anonymity, no emotional feedback loops, and constant availability. The algorithm serves as an artificial, non-judgmental outlet for venting. However, as noted by 51.1% of the faculty cohort, this dependency presents significant clinical risks. Generative AI tools lack genuine emotional empathy, operate on data-driven processing parameters rather than clinical judgment, and offer no safeguards for serious psychiatric crises. Furthermore, substituting human relational support with algorithmic processing threatens to exacerbate long-term social isolation among undergraduate engineering students.

V. CONCLUSION AND FUTURE SCOPE

This study successfully maps a critical behavioral shift among Gen Z undergraduates, demonstrating that conversational AI tools are no longer restricted to academic or professional productivity.

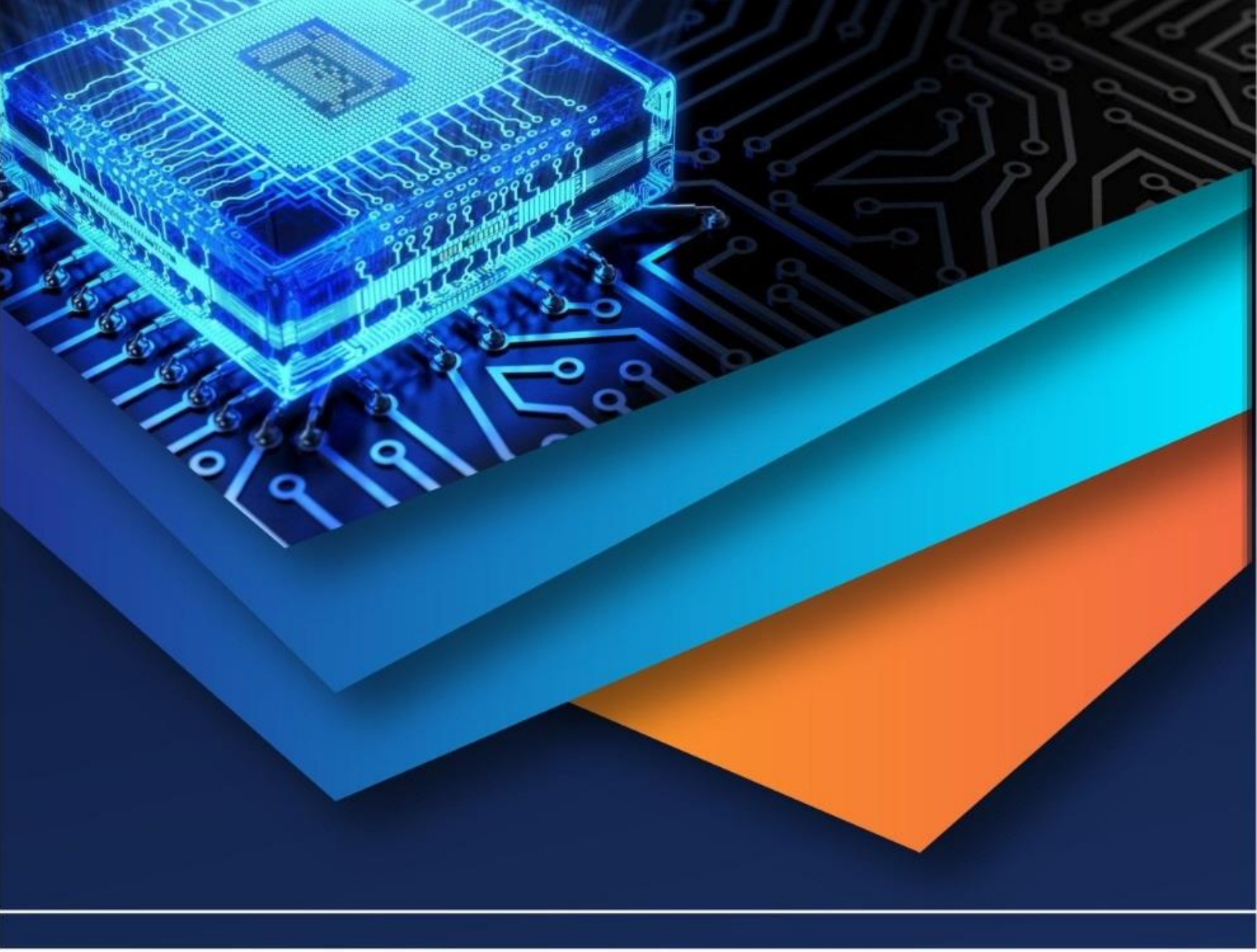
Instead, they are actively supplementing or replacing traditional family support structures during moments of acute emotional stress. The generational perception gap identified between faculty assumptions and student realities highlights a clear need to lower communication barriers within academic and home environments. While AI provides an accessible, short-term emotional outlet, it cannot replace genuine human empathy or professional psychological care.

Future research should expand this localized investigation into a broader, multi-institutional study across diverse geographic locations in India. Longitudinal studies are necessary to evaluate the long-term psychological impacts of algorithmic emotional regulation on youth social skills and cognitive development. Finally, designing ethical, privacy-first AI mental health assistants specifically tailored to navigate the unique cultural nuances of Indian student demographics presents an open and valuable avenue for future engineering and interdisciplinary research.

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