



Artificial Intelligence as a Tool to Assist Emotional Intelligence in Human Beings: A Case Study of Gemini

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ABSTRACT

Communication is an important and all-pervasive aspect of human life. It not just helps in mutual exchange and transfer of information but has a deep psychological impact on how we cope with the everyday stress and anxieties of life. Not having anyone to share one's problems with can be a claustrophobic experience and might make situations overwhelming for the ones who are in the crisis. With the proliferation of internet and affordable technology, many are connected to a digital life. While our connections are superficially boosted to a huge extent due to the presence of social media and other platforms, it is becoming tougher for individuals to really express themselves freely. AI powered chatbots have made significant progress in the recent couple of years. Today, Chat GPT, Gemini, Meta AI are available to anyone using a smart device. The research paper delves into an exploratory search doing a case study of Gemini and tries to see if Artificial Intelligence powered chatbots can assist emotional intelligence in human beings in times of anxiety, crisis and other problems.

Keywords: Artificial Intelligence, Gemini, Emotional Intelligence, Anxiety.

Introduction:

'On the physical plane the Divine expresses himself through beauty, on the mental plane through knowledge, on the vital plane through power and on the psychic plane through love' – The Mother ('Collected Works of the Mother', 1972-80)

A chatbot is a computer program that can have a conversation with a human being in a usual manner. It has the power to imitate a living person. A chatbot is used to serve a series of purposes, like being an automated response system, assisting customers shopping and marketing on their company websites. It can be used as a complex program like Gemini that has the potential to do multiple activities from search queries to content generation. In fact, Gemini is not just a chatbot but 'a family of models' that can deliver a host of activities and tasks. With development of language models and progress of AI technology, chatbots are in a better position to assess and identify emotions. They are also able to empathically reply to the ones using it. For an individual human being, 'communication competence' is vital to overcoming mental stress and finding emotional support. Meaningful interaction between individuals can be vital in overcoming stress of everyday life. Venting emotions, discussing coping mechanism, have the power to provide therapeutic support by reducing the levels of uncertainty and diluting disruptive sentiments in the mind of people. Research conducted by Lemon, Peterson and Bengston in 1972 argues, 'Role supports are necessary for the maintenance of a positive self-concept, which in turn is associated with high life satisfaction' (Lemon et al., 1972). The power to assess, understand, control and manage our emotions is Emotional Intelligence. Emotional intelligence helps us work on our relationships and helps us in strengthening them. A person with a high level of emotional intelligence can emotionally connect better, emote better and more. They can identify causes of problems faster and work on them. They are often self-aware. In today's lifestyle, the power to decode one's emotions can be critical in helping someone have better control on themselves (Whitener, 2022). When one can control and channelize their minds they are able to tap into the powers within themselves (Sri Aurobindo Ashram, 2019). Depression affects not just the mind but also the body. According to WHO report, 4.5% of Indian population is suffering from depression while another 3.5% is bearing the problem of anxiety (Bashar et al., 2019). But sadly, while most people are comfortable talking about physical fitness and the lack of it, people often do not feel comfortable talking about depression and mental anxiety for the fear of stigma. Link and Phelan in their 2001

work, explains, 'stigma exists when elements of labeling, stereotyping, separation, status loss, and discrimination occur together in a power situation that allows them' (Link & Phelan, 2001). AI powered chatbots pitch in a solution right at this point, where they can be an alternative to a simulated conversation that imitates human interaction. The biggest advantage is the instant availability of the chatbots and ease of accessibility. But the question is can they really simulate empathetic response in a way that imitates human behavior?

The main objectives of this study are:

1. To find out if Gemini has a reply to general expressions of depression.
2. To see if the replies are practical and contain element of emotion and empathy in them.

Methodology:

Exploratory research is conducted on the Google AI engine, Gemini Pro. Structured observation is carried out by giving 25 prompts of emotional stress and distress. The feedback is studied for better understanding of the problem. The question really is whether Gemini Pro can have empathy towards the person asking the question and provide realistic answers and emotional relief to the person asking the question. A focus group discussion is conducted to understand if the replies resonate with the expectations that people have as answers to such questions or statements. The 20 distress phrases are taken from real life expression of people by observation and from a report published by Huffington post on Sept 24, 2018, titled '25 Things People Said, That Were Actually Code for I'm Depressed'.

Purposive sampling has been done of 87 participants with media literacy and basic technology literacy to study the loneliness and stress conditions. Media Literacy and technology literacy was taken as a prerequisite as it was necessary that the participants were aware of the use of conventional media and the use of AI powered chatbots and other applications for their needs. They would have the basic skills to use technology in their everyday life. This prerequisite was needed to further study their level of acceptance of AI as a complimentary tool for emotional intelligence needs in everyday life.

The prompts given to Gemini Pro

1. "I don't feel well."
2. "I feel sad all the time"
3. "I'm so tired."
4. "I need to go away"
5. "I'm not doing well."
6. "I'm so exhausted."
7. "I feel so frustrated and angry."
8. "I feel I don't fit here."
9. "You don't understand, no one understands."
10. "I feel like a loser."
11. "I don't feel like going to work."
12. "I'm not hungry."
13. "It's been a long tiring day."
14. "I have no life."
15. "I'm bored"
16. "No one loves me"
17. "Hey, do you want to hang out?"
18. "My soul is tired."
19. "I hate everything."
20. "I feel like dying"

Analysis of the answers to the prompts by Gemini Pro

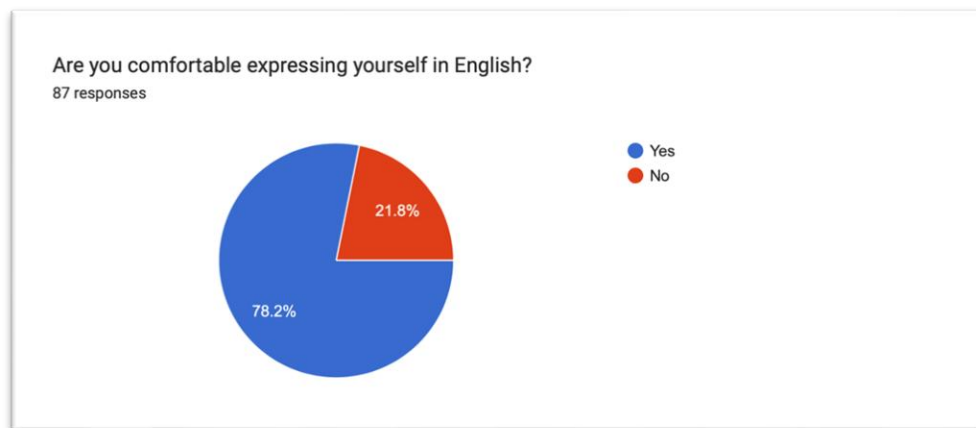
1. The immediate response to 'I Don't feel well' is mixed with empathy. The first line says, Gemini understands that the person is not feeling well and advises that if it has something to do with physical health, then one should consult a doctor. However, it is important to note that the moment, a follow-up prompt talks of mental health there is a much detailed answer given by Gemini. It points out suggestions like talking to someone, seeking professional help, practicing self-care, maintaining healthy lifestyle, connecting with others. It even gives phone numbers of crisis hotlines. But sadly they are all US based and Gemini fails to use location based information about the person using the service at that point of time.
2. The first sentence responding to 'I feel sad all the time' is of empathy that Gemini understands what it is to feel sad. It talks of acknowledging this feeling. It talks of reaching out to a therapist if the problem of feeling sad is a persistent one. Here it refers of NIMHANS, a premiere mental health institute in India. Unlike last

time it has not got the user's location wrong. It ends the first discussion with the statement that 'one is not alone' in such circumstance. Rather there are people and resources to help battle this.

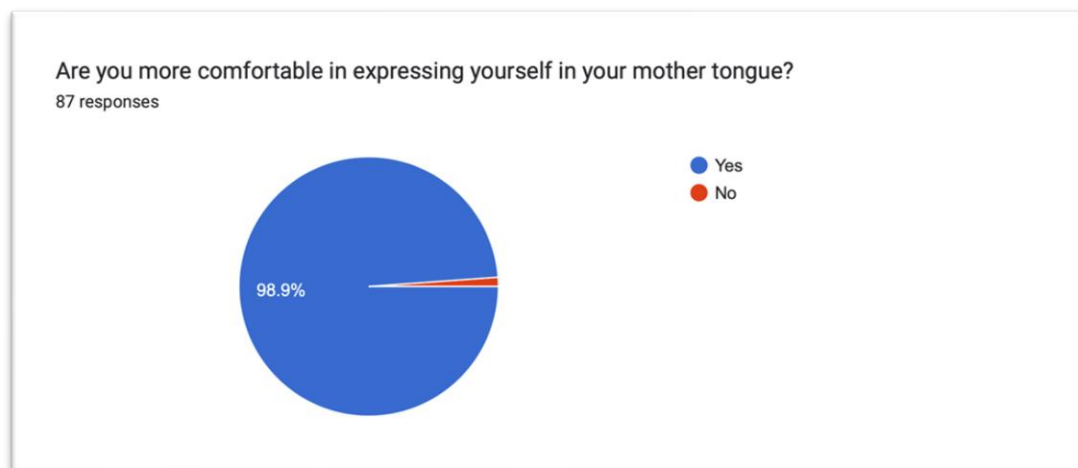
3. A basic prompt of 'I'm Tired' is met with a direct answer and probable reasons of physical tiredness like the need to take a nap, the need for a healthy snack in between exhausting work, the need for staying hydrated and overall the need to relax and techniques that help in the process like deep breathing, meditation etc. The final suggestion is to consult a doctor in case if the condition of tiredness is a regular and persistent one. However, there is a huge change when the prompt is made more specific like 'I'm so emotionally tired'. The addition of the word emotionally is the game changer. There is increased empathy. The first sentence is 'I hear you'. Then Gemini enlists a number of remedies that can help for example like figuring out the source of the problem and addressing the issue. It prioritises the need for taking rest and emphasises the importance of self-care. It talks about the need to protect one's own self and their own energy by setting boundaries for others. It suggests that connecting with friends might help in easing the tension that is working inside a person. The need for taking part in 'mindful activity', figuring out relaxing techniques like meditation, doing deep breathing exercises, or regularly spending time in nature is suggested. Gemini's search result emphasises on the need to seek 'professional help' in such cases where it might be helpful to consult a mental health professional in order to develop different coping strategies. The answer to the prompt ends with the reassurance from Gemini that I am not alone in this journey. It also suggests that its perfectly okay to feel emotionally tired.
4. The prompt 'I Need to Go Away' is met with a duality of emotion. First Gemini assesses it as a positively done input. It says the idea of considering 'going away' might be a good way to recharge one's own self. It suggests a short trip or a vacation as a solution. It talks about planning a vacation with a set of destinations, and estimated budget in mind. It asks one to be realistic about how much time we can be gone away for, without hampering too much of our usual work flow. It even goes to the extent of helping making a plan for the necessary logistics of the trip. Then it takes a more humane approach towards the input phrase of needing to going away. It gets into the emotional bit of the story. It talks about how taking a short break from the usual routine can be a good break from the overwhelming stress of work. It suggests that if taking a vacation or a break is not possible, one should try to bring in a family member or a friend to become emotional support in such times of emotional crisis.
5. The phrase input 'I am not doing well' is met with empathy from the very start of Gemini's response. It says that it is closely hearing what I am saying and it understands that I am not doing well. It immediately suggests that it's very important to acknowledge one's sentiments and feelings before anything else. It says that I am not alone in this and that there are people who actually care for my well-being and wish to support me in this tough time. It goes a step ahead and asks if I could share in more details as to what are the specifics of my feeling. It also provides a list of probable solutions like reaching out and speaking to someone I might be trusting. It asks me to seek professional help in order to get a more tailored assistance and counselling regarding my situation. But most importantly Gemini reminds me to keep in mind that I am not alone in this. It asks me to never hesitate in asking Gemini for help regarding anything that might cross my mind. It ends with a forward looking positive note that things will get better.
6. The prompt I am exhausted and I am tired are close to each other, hence their analysis is almost identical. Thereby Gemini adds nothing much extra.
7. To the prompt "I am frustrated and angry" Gemini acknowledges frustration to be a valid emotion and it's understandable to feel frustrated and angry. It suggests venting them out as a form of my own expression. It feels that trapping this emotion deep within one's own self can be harmful. It asks me to express myself and vent out the emotion in a healthy way. It keeps on emphasising the need to identify the source of this anger and frustration, in order to be able to take care of it. Gemini keeps focusing on the need to adopt 'relaxation techniques' like deep breathing, meditation, yoga. It suggests these as tools that can help reduce anger and frustration. It talks of reframing the mind by challenging all the negative thoughts that might be making the situation problematic at this point of time. It also suggested talking to a professional therapist or counsellor. It ends with reassurance that I am not alone in this difficult journey and there is help.
8. Feeling that you are not fitting somewhere can be a very painful experience for many. A lot of people when they experience loneliness or depression, feel that they do not belong to a particular place where they are currently associated with. Gemini on receiving this prompt has empathy on offer. It says that it is indeed a 'natural feeling' to feel 'left out' when things are not going well. In order to overcome this feeling that one does not fit somewhere, one has to build a community, a family of their own. It can be overwhelming for some but it means that one has to keep an eye open for people with similar likings and interests. Gemini also suggests that the best way to overcome a certain fear or thought from capsizing the mind is to find other distracting activities. It respects the individual identity of the person feeling this way and suggests that it is ok to not conform to a fixed notion of being.
9. Appreciation, acceptance, the feeling of warmth and idea of being loved where we are, is crucial to making a person feel comfortable in a given place and time. When a person feels that they are not loved, it is a deeply asphyxiating feeling. Gemini suggests that when one feels that they are not loved by the people around them, they should have a meaningful conversation with someone who they trust. Someone who would genuinely invest themselves in listening to their feeling and their problems. It suggests that in such a situation one should distract themselves from the emotion by engaging in some activity.

10. Upon being emotionally exhausted, one is often deprived of the strength to perform their usual activities. At times it might be difficult to understand if he is physically drained or emotionally tired. It is natural for a person to feel that his soul is too tired or exhausted. Gemini suggests in such circumstances one should either seek professional help, connect with family and loved ones or simply take a break and break away from the monotony and exhaustion of everyday life and work.
11. Similar to the feeling of frustration and anger is the feeling of hatred towards everything. Gemini suggests similar response to the previous one.
12. Moving to the more extreme emotion from feeling of frustration, sadness or anger is the feeling of complete hopelessness where one feels like 'dying'. To my prompt where I typed, " feel like dying", Gemini gives a direct answer with the number and details of a local helpline where one can call. There is no advice or suggestion or words of wisdom or empathy here. It is too serious for automation to handle and Gemini suggests the name of iCALL with the phone number and link to their website. But it is also worth noting that the suggested services are only available till 8pm. So what if someone needs help after this time is not clear. It is also closed on Sunday.

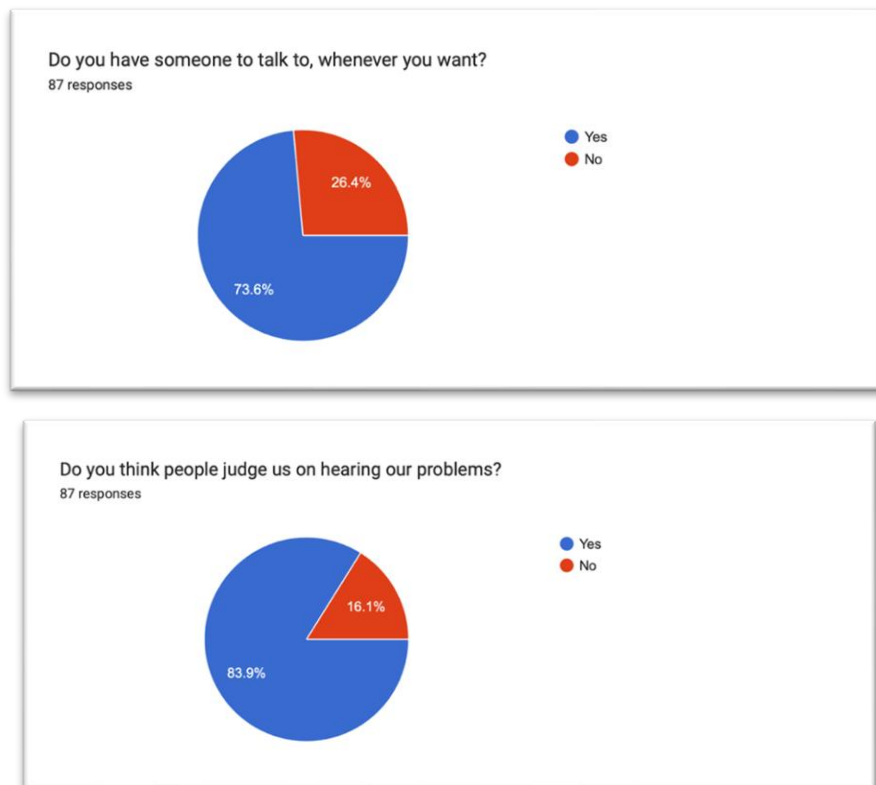
Analysing the Survey Results:



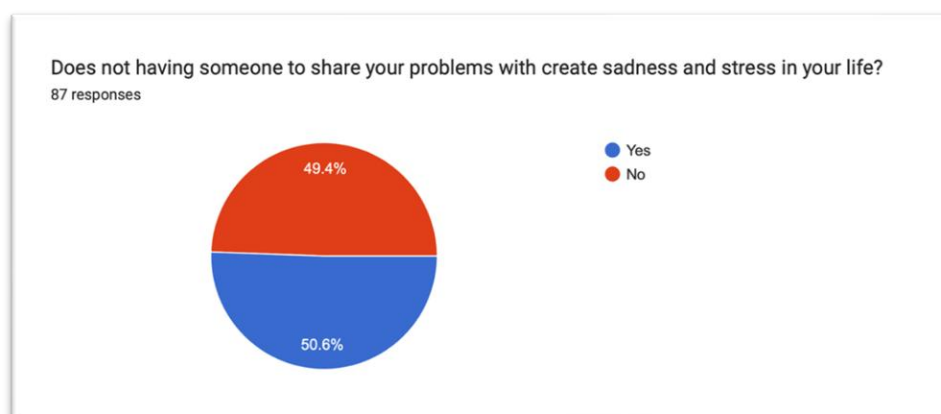
Language can be one of the biggest deterrents in the ease of use of technology like AI. 78.2 % participants said that they are comfortable expressing themselves in English, which means they should not have a problem in using Geminin or ChatGPT. They would be having the basic skills to engage in a heart to heart conversation with Gemini, Chat GPT or any other generative AI chatbots.



But this language barrier of knowing and not knowing English should not lead to further digital divide. It has often been argued that in a country with as diverse languages like India, real empowerment can happen if the use of regional language is integrated within evolving technology. It is clear from the survey results that almost 99% participants are more comfortable expressing themselves in their mother language. According to Business Standard report published on June 18, 2024, Google's Gemini app is available for 9 major Indian languages – Kannada, Gujarati, Malayalam, Bengali, Marathi, Hindi, Urdu, Telugu and Tamil. Through Natural Language Processing, Large Language Models there would be much more diverse options in Indian context.



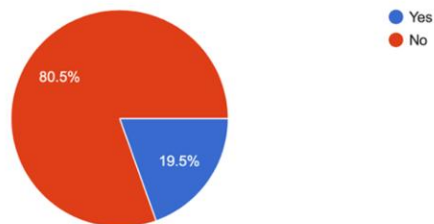
This is one of the most important aspects that can shape our need to rely on AI based chatbots for emotional support. The availability of technological access and ease of access is undeniably one of the major factors that can be a game changer for AI chatbots in context of supporting emotional quotients of human beings. While 73.6% participants admit that there is someone to talk to whenever they want, but there is a 26.4% population who do not have anyone to talk to. An AI chatbot specially ones like Gemini and ChatGPT are available 24 hours all the days of the year. But the second chart shows something even more incredible. While 73.6% people might have someone to talk to, 83.9 % participants feel that the ones we talk to judge us when they hear our problems. This is interesting as these same people would not be comfortable sharing their problems with a real person for the fear of being judged, even though they might be lucky enough to have someone around them who would listen to them.



This is almost a 50-50 equation. 50.6 % of the participants undergo emotional stress and experience sadness as they do not have anyone to share their personal problems with. Not having anyone to share life problems with might be a serious problem for many. But this brings us to the bigger question. Why aren't people sharing their problems. The answer lies in the next few questions.

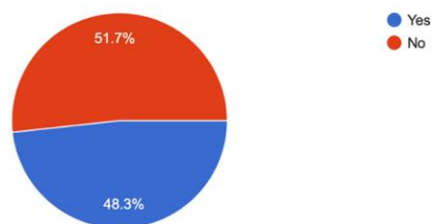
Are you comfortable sharing your family problems with others?

87 responses



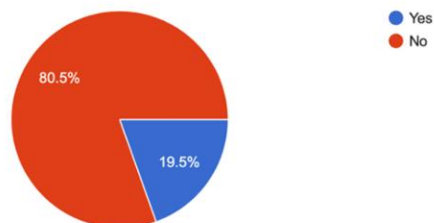
Are you comfortable sharing your medical problems with others?

87 responses



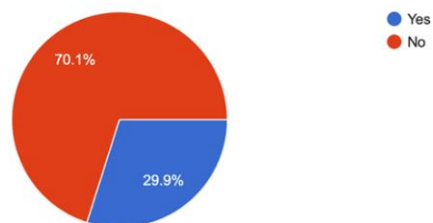
Can you share your relationship problems openly with others?

87 responses

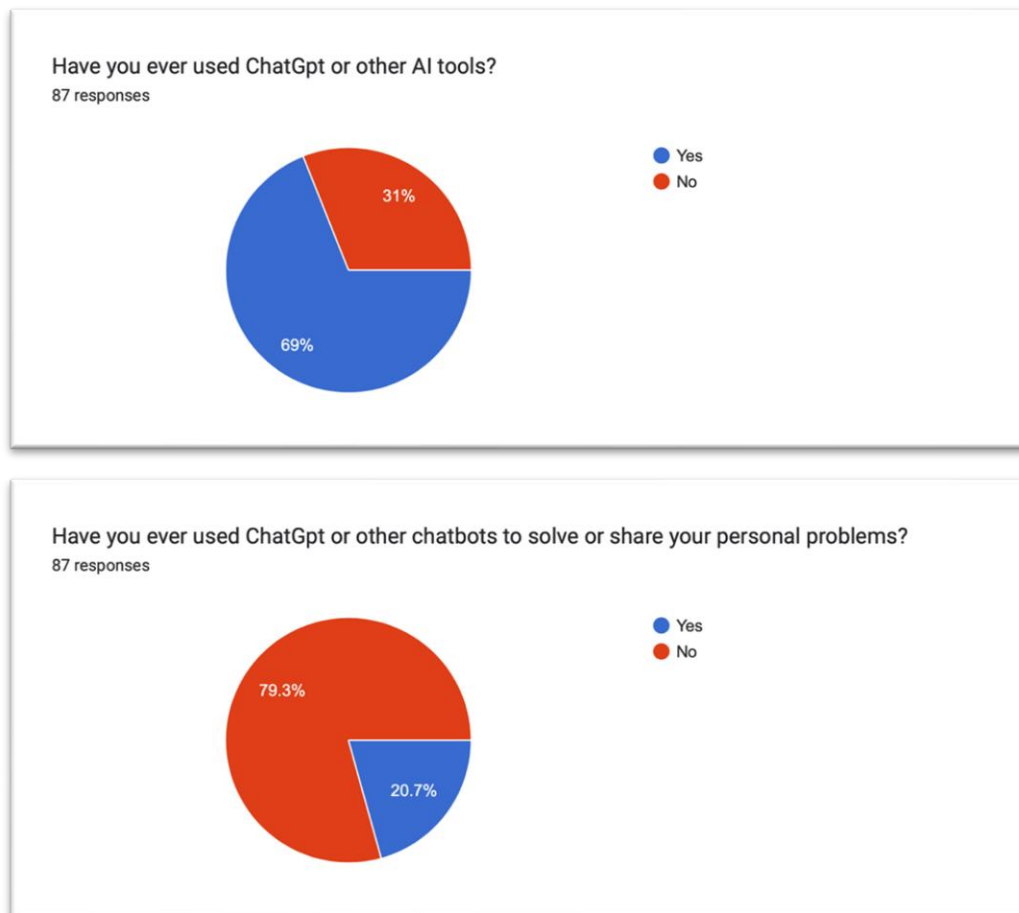


Can you share your financial problems with others?

87 responses



An overwhelming majority is not comfortable sharing their financial problems, relationship problems, family problems and medical problems with anyone else. So there is a new question which arises, if people are not comfortable sharing their most critical problems with people around them, whom would they go to for discussion and relief. This is exactly where the role of AI powered chatbots become extremely important. As we saw in the case of prompts, an AI Chatbot like Gemini is perfectly capable of reasoning and talking to people who need to talk to someone about their problems.



The last two questions show, that while 69% of participants have used AI in some form in their life there is an overwhelming 31% people who haven't used it yet. More importantly, 79.3% participants still haven't used an AI chatbot to solve their personal problems. This means that the market is relatively untapped and there is tremendous scope of improvement here.

Conclusion

AI Powered chatbot 'Gemini' by Google is a potent tool that can become a complimentary assistant, supporting Emotional Intelligence in human beings, in times of stress, depression or anxiety. In the experiment with prompts, it had a reply to almost all the prompts. Each prompt dealt with stress, anxiety and depression in the paper's exploratory study. In its instantaneous replies Gemini has the power to ease the momentary stress of the person typing these prompts and helps them in feeling better. Not just that, further investigation with the prompts showed, that it also has the potential to assist in overcoming the immediate problems that the person using it might be facing. It suggests immediate solutions to most of them. The question is why would one at all want an AI powered chatbot for emotional relief when they could talk to a human or to be specific with someone they care for. It becomes clear from the survey that people do not feel comfortable sharing their deepest fears and problems with people who are around them. This creates a tremendous opportunity and need to develop a technical alternative to human communication that would make people feel comfortable sharing their deepest secrets and problems with. The main issue with sharing personal information is the fear of being judged. A system like Gemini would not possess this quality of a human being. It can be non-judgemental in talking to an individual and thus might be able to provide a comfortable environment to facilitate free conversation. Gemini does all of it with a lot of empathy too. At every point it gives an impression that Gemini is a patient listener, feeling my problem. It also keeps emphasising that I am not alone in the crisis. This is a huge boost for someone who might be in an emotional crisis. It even goes to the extent of suggesting that there are people who care for me. It does not try to snub my feelings like anger, frustration as wrong sentiments, it in a way first legitimises my feelings, then helps me overcome them. But, the solutions are mostly generalised and do not necessarily reflect anything specific based on the personality of the individual using it. It might be possible in the future to have an even more personal experience based on the person's browser history. But using a person's browser history or online footprint to generate specific prompts might seem like an infringement to privacy for many. Although Gemini makes it clear that the user should refrain from sharing any data that might be sensitive and personal on the Gemini platform. However, it is possible to willingly help the chatbot, Gemini personalise and make our prompts even more specific by focusing on the right words. Say, for example the concept of

moving from a general statement of stress to a more specific one can help get more specific solutions. But it must also be acknowledged that the technology available till date is not able to have the informal warmth that a human to human communication has. It still has a formal way of answering our queries. May be in the future this would be resolved through better modelling of the LLM and data sets.

References

1. Bashar, M., Mehra, A., & Aggarwal, A. (2019). Integrating mental health into primary care for addressing depression in a rural population: An experience from North India. *Indian Journal of Psychiatry/Indian Journal of Psychiatry*, 61(3), 319. https://doi.org/10.4103/psychiatry.indianjpsychiatry_374_18
2. Lemon, B. W., Bengtson, V. L., & Peterson, J. A. (1972). An exploration of the activity Theory of aging: activity types and life satisfaction among in-movers to a retirement community. *Journal of Gerontology*, 27(4), 511–523. <https://doi.org/10.1093/geronj/27.4.511>
3. Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27(1), 363–385. <https://doi.org/10.1146/annurev.soc.27.1.363>
4. Patel, F., Thakore, R., Nandwani, I., & Bharti, S. K. (2019). Combating Depression in Students using an Intelligent ChatBot: A Cognitive Behavioral Therapy. In 2019 IEEE 16th India Council International Conference (INDICON). <https://doi.org/10.1109/indicon47234.2019.9030346>
5. Sri Aurobindo Ashram. (2019). *Powers Within* (2nd ed.) [English]. Sri Aurobindo Asram Publication Department.
6. Whitener, S. (2022, December 30). Why is emotional intelligence important? Forbes. <https://www.forbes.com/sites/forbescoachescouncil/2022/12/30/why-is-emotional-intelligence-important/>