



The Role of AI Chatbots in Emotional Support and Human Relationships: A Cross-Sectional Study

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ABSTRACT

AI chatbots are increasingly becoming a part of everyday life, with people beginning to use them not only to learn and find information but also to share feelings and seek emotional support. The study explores the prevalence of AI chatbot use for emotional support among Sri Lankans and the association between this use and social interaction and mental health. The study was cross-sectional and employed an online questionnaire completed by 31 participants with experience using AI chatbots. Responses were analyzed using frequencies, percentages, cross tabulations and exploratory statistical tests. An open-ended question was also considered to identify common experiences and perspectives related to emotional support and chatbot use. The results showed that AI chatbots were mainly used for studying, learning, obtaining information and solving problems, with the most popular chatbot being ChatGPT. But some participants also said they used AI chatbots when they were stressed, lonely or upset. Some participants said they did not typically share their thoughts or feelings with another person but did with AI chatbots. Most participants reported positive or no perceptible effects on social interactions. Similarly, 38.7% reported their mental health had somewhat improved and 16.1% reported significant improvement. However, human relationships remained the main source of emotional support, with only 9.7% of the participants selecting an AI chatbot as the primary source of support. Overall, the findings suggest that AI chatbots may provide complementary emotional support to some users, in addition to the primary role of human relationships. However, the results should be interpreted with caution because of the small sample size and cross-sectional design. Further research with larger and more diverse samples will be needed to better understand the relationship between AI chatbot use, mental health, and social interactions.

Keywords: Artificial Intelligence; AI Chatbots; Emotional Support; Social Interactions; Emotional Well-being

INTRODUCTION

Artificial intelligence has changed the ways in which people communicate, access information, and deal with challenges. New developments in AI have made chatbots such as ChatGPT, Google Gemini, Microsoft Copilot, Claude, and Character.AI increasingly popular. These systems differ from traditional chatbots that provide only fixed responses. Newer systems can engage in human-like conversations, remember previous interactions, and respond to users based on what they ask and how they feel [1]. These AI chatbots initially served as tools for learning, coding, writing, and improving productivity. However, many people now use them for companionship, to share feelings, to relax, and to seek help with personal issues. People who feel lonely, worried, or upset are increasingly turning to AI systems for comfort. These systems are readily available and allow people to discuss private matters without fear [2]. Some research suggests that AI chatbots can provide support and temporarily reduce feelings of loneliness [2]. Other findings indicate that excessive use of AI chatbots may be associated with increased loneliness, reduced interaction with real people, or stronger emotional attachment to AI among some individuals [1] [3] [4]. These findings indicate that the relationship between AI chatbot use and human emotional experiences is complex and may vary according to how individuals use these systems [5] [6]. Although AI chatbots are widely used around the world, there is limited research on how they affect emotions, social interactions, and mental health, particularly in developing countries. In Sri Lanka, most studies focus on AI in education, health, and online counseling. Few studies examine how people use chatbots for support in their

everyday lives. Therefore, there is limited evidence regarding whether AI chatbot use supports real-life relationships and emotional well-being among people in Sri Lanka. This study aims to address this gap by examining how people in Sri Lanka use AI chatbots for support. It also examines whether AI chatbot use is associated with how people interact with others and how they feel emotionally. The results are expected to contribute to the growing field of human-AI interaction and provide insights for researchers, mental health professionals, AI developers, and policymakers regarding the use of this technology.

Research Problem

Artificial intelligence chatbots have become increasingly capable of communicating with people and providing support related to their emotions. People are increasingly using AI chatbots to discuss personal problems, manage stress, and obtain emotional support. This raises questions about whether the use of AI chatbots is beneficial or harmful to emotional well-being and relationships with others. Some studies suggest that AI chatbots can be beneficial because they can listen to users and help reduce feelings of loneliness. AI chatbots can also provide support when it is needed. On the other hand, other studies suggest that excessive reliance on AI chatbots may increase loneliness and reduce the likelihood of interacting with real people. AI chatbots may also lead some individuals to develop strong emotional attachments to them. However, little is known about how people in Sri Lanka use AI chatbots to discuss their feelings and obtain emotional support. Most studies in Sri Lanka have examined the use of artificial intelligence in schools, hospitals, and counseling rather than how people use AI chatbots in their everyday lives. Therefore, further research is needed in this area. This study focuses on people in Sri Lanka and examines how they use AI chatbots when they need someone to talk to about their feelings. The study aims to determine how using AI chatbots for support affects the relationships that people in Sri Lanka have with their friends and family and how it affects their emotional health. The findings from this study will contribute to a better understanding of interactions between people and AI chatbots. This information may also help inform the development of AI chatbots and approaches to supporting people in Sri Lanka with their mental health. The study will examine AI chatbot use and its effects on participants' emotional well-being and social interactions. It will provide further insight into the use of artificial intelligence chatbots for emotional support in Sri Lanka. This is important because artificial intelligence chatbots are becoming increasingly popular, and it is necessary to understand whether they are helping or harming people. The study aims to provide insights into the effects of AI chatbots on people's lives and to determine whether AI chatbots serve as a source of emotional support or contribute to negative outcomes. By studying AI chatbot use in Sri Lanka, this research seeks to contribute to understanding how artificial intelligence chatbots can be used in ways that support people.

Research Gap

Although the use of AI chatbots to provide support has received increasing attention from researchers, several important areas remain insufficiently explored in the current research. Most studies have been conducted in Western countries such as the United States and European countries, where cultural, technological, and social contexts differ from those in developing countries [1] [3] [6]. Therefore, the findings from these studies cannot be directly applied to the Sri Lankan context. In addition, most existing research has examined how AI chatbot use relates to mental health issues such as loneliness and anxiety, emotional connections, or support obtained through virtual social interactions [1] [2] [4]. Fewer studies have examined the connections among AI chatbot use for support, real-life social interactions, and emotional well-being within a single study. Examining these connections together provides a more comprehensive understanding of how AI chatbots relate to people's mental and social experiences. In Sri Lanka, there is limited research on conversational chatbots.

Existing studies generally focus on AI applications in education, healthcare, or counseling systems. Little research has examined how people in Sri Lanka use common chatbots such as ChatGPT, Google Gemini, Claude, and Microsoft Copilot for emotional support in their daily lives. Consequently, there is limited evidence regarding how these AI chatbots may provide emotional support and how their use may be connected to people's social interactions and emotional health in Sri Lanka. Therefore, this study addresses these gaps by examining how people in Sri Lanka use AI chatbots for support and how that use is connected to their social interactions and emotional health. By providing evidence specific to the local context, this research contributes to the growing

field of human-AI interaction. It also offers insights that may support research on AI system design and approaches to mental health.

Research Aim

This study examines how people in Sri Lanka use AI chatbots when they need someone to talk to about their feelings. The study examines how using AI chatbots affects the way Sri Lankan users interact with others and how it impacts their well-being. It also examines the relationship between AI chatbot use, social interactions, and emotional well-being among Sri Lankan users.

Research Questions

This study seeks to answer the following research questions:

Q1: What are the ways that people in Sri Lanka use AI chatbots to get support?

Q2: How does using AI chatbots for support connect with the social interactions of users?

Q3: How does using AI chatbots for support connect with the emotional well-being of users?

Q4: What do people in Sri Lanka think about the future of AI chatbots as a source of support?

The goal is to investigate how AI chatbots are used for emotional support and to examine how their use is connected with social interactions and emotional well-being among people in Sri Lanka.

Specific Objectives

- To identify the ways in which people in Sri Lanka use AI chatbots to obtain support.
- To examine how using AI chatbots for support is connected with the social interactions of users.
- To examine how using AI chatbots for support is connected with the emotional well-being of users.
- To determine what people in Sri Lanka think about the future of AI chatbots as a source of support.

Significance Of The Study

Artificial intelligence is changing how people communicate, access information, and obtain support. As AI chatbots become increasingly integrated into daily life, it is important to understand how they affect people's emotional well-being and social interactions. This study examines how people in Sri Lanka use AI chatbots for support and how this use affects their social interactions and emotional well-being. This research is important because it addresses a gap in existing knowledge. Many studies in other countries have examined AI chatbots and their effects on people's psychological experiences, but there is limited information from Sri Lanka. By studying the Sri Lankan context, this research can provide insight into how cultural and social factors influence the use of AI chatbots for support and contribute to a better understanding of how people interact with artificial intelligence.

The results of this study will be useful to several groups. For researchers, this study provides evidence that can contribute to research on artificial intelligence and emotional support. For health professionals, the results can provide insight into how AI chatbots are used to support people emotionally and highlight their potential benefits and drawbacks. For AI developers and technology designers, the findings may help inform the development of conversational artificial intelligence systems that are more ethical and user-friendly. Policymakers and educators may also use the findings to promote responsible use of artificial intelligence and increase awareness of the potential benefits and drawbacks of AI chatbots. Overall, this study contributes to understanding how people in Sri Lanka use AI chatbots for support. The results can inform future research, support professionals working in this field, and encourage responsible use of artificial intelligence. As artificial intelligence becomes an increasingly important part of everyday life, it is important to ensure that it is used in ways that benefit people.



Studying the relationship between artificial intelligence and human experiences is therefore important, and this research contributes to this area.

METHODS

Review Design

This study used a cross-sectional research design to examine the use of AI chatbots for emotional support and companionship among users in Sri Lanka. The study focused on four areas: patterns of AI chatbot use, the use of AI chatbots for emotional support, perceived effects of AI chatbots on real-life social interactions, and perceived effects of AI chatbots on emotional well-being. The study also explored participants' views about the role of AI chatbots as a source of emotional support. Data were collected at a single point in time using a structured online questionnaire. The questionnaire included closed-ended questions together with one open-ended question that allowed participants to describe their personal experiences or views regarding AI chatbots and emotional support. A total of 31 responses were collected and analyzed using Python in a Jupyter Notebook environment. Descriptive statistical techniques, including frequencies and percentages, were used to summarize responses about AI chatbots. Cross-tabulations and exploratory statistical testing were used to examine relationships between selected variables. Because the sample size was relatively small, the statistical findings were interpreted cautiously. Emphasis was placed on descriptive patterns rather than broad population-level generalizations.

Participants and Sample

The study included 31 participants who completed the questionnaire. These participants had experience using AI chatbots. The questionnaire collected details such as age, gender, and relationship status to describe the characteristics of the sample. The study used a voluntary response approach, with participants completing the questionnaire through Google Forms. The sample was therefore treated as a sample rather than a probability-based representation of the Sri Lankan population.

Data Collection

Data were collected through an online questionnaire developed using Google Forms. The questionnaire was designed based on the research aim, research questions, and objectives of the study. It included closed-ended questions about participants' age, gender, and other background details; how they use AI chatbots; whether they use AI chatbots for emotional support or companionship; how AI chatbots may affect real-life social interactions; their feelings of emotional well-being; and what they think AI chatbots might do in the future for emotional support. The questionnaire also included a question that allowed participants to share additional thoughts or personal experiences regarding the use of AI chatbots for emotional support or companionship. Participation was voluntary. Participants answered the questionnaire anonymously. In total, 31 responses were used in the analysis.

Questionnaire Structure

The survey was divided into several parts. The first questions collected information such as age, sex, and relationship status. The next questions examined how people use AI chatbots and why, including which chatbot they preferred, how much time they spent using it each day, and what they used it for. There were also questions about whether participants turned to AI chatbots when they were feeling stressed or going through difficult times, whether they shared personal information with chatbots, whether they felt comfortable talking to AI, and what type of support they preferred. Additional questions examined how AI chatbot use affected real-life friendships and feelings of happiness, as well as whether participants would want to continue using AI chatbots or recommend them for support in the future.

Data Analysis

The data collected through Google Forms were saved as a CSV file and analyzed using Python in a Jupyter Notebook. The first step was to examine the data and assess its quality. This included checking the structure of

the data, identifying missing information, checking for duplicate responses, and examining the types of responses provided. The data were then prepared for analysis while the original responses were retained. Descriptive statistical analysis was conducted using counts and percentages to summarize the age and background characteristics of participants, frequency of AI chatbot use, experiences of obtaining support, perceived effects of chatbot use on social life, feelings of well-being, and views regarding the future use of AI chatbots for emotional support. Cross-tabulations were used to examine how frequently participants used chatbots and how this related to their experiences and feelings. Chi-square tests were also conducted to examine these relationships. Because the number of participants was small and some cell frequencies were very low, the results of these tests were interpreted cautiously. The results were therefore primarily presented in terms of descriptive patterns. The responses to the open-ended question were examined using a simple thematic approach. The responses were read to identify ideas and experiences related to emotional support, ease of chatbot use, relationships with people, emotional dependence on chatbots, privacy and trust, and whether participants felt that the chatbot helped or harmed them emotionally.

Ethical Considerations

Participation in the study was voluntary. Participants were informed about the purpose of the questionnaire and could decide whether to take part. No personally identifiable information was required for the study. All responses were kept confidential, and the information was used only for this research. The data were handled in a manner that protected the anonymity of participants.

RESULTS AND SYNTHESIZED FINDINGS

A total of 31 participants completed the questionnaire. The sample was mostly female: 24 participants (77.4%) were female, and 7 participants (22.6%) were male. The largest age group was 24–26 years, with 11 participants (35.5%), followed by 21–23 years, with 10 participants (32.3%). In terms of relationship status, 16 participants (51.6%) were single, 8 participants (25.8%) were in a relationship, 6 participants (19.4%) were married, and 1 participant (3.2%) chose not to disclose their status. Regarding AI chatbot usage, ChatGPT was the most popular tool, used by 22 participants (71.0%), followed by Google Gemini, used by 6 participants (19.4%). Most participants used AI chatbots multiple times each day: 18 participants (58.1%) reported using them more than once a day. Five participants (16.1%) used them once a day, five participants (16.1%) used them a few times a week, and three participants (9.7%) used them less than once a week. Daily use was generally moderate. Twelve participants (38.7%) reported using AI chatbots for 15–30 minutes each day, while eight participants (25.8%) reported using them for less than 15 minutes each day. Participants reported using AI chatbots for several reasons, with studying or learning and obtaining general information or solving problems being among the most common purposes. A smaller proportion of participants also used AI chatbots for emotional support or companionship.

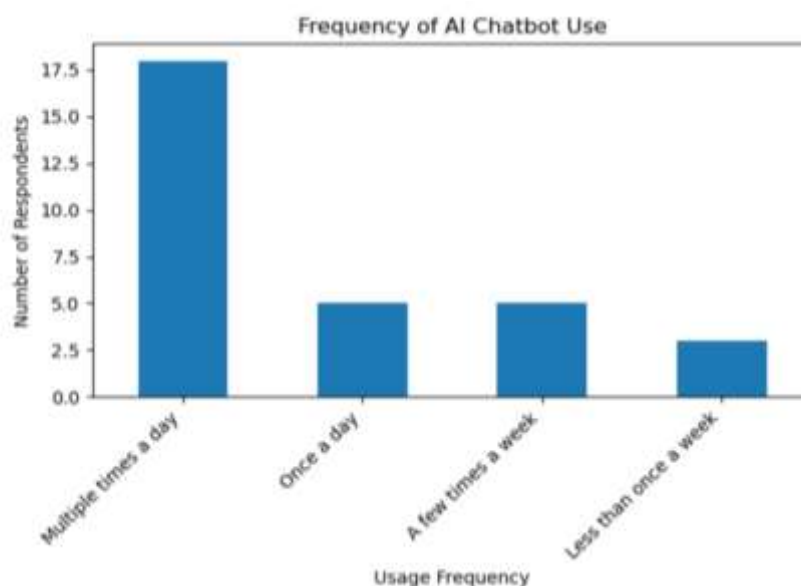


Figure 1. Frequency of AI Chatbot Use Among Participants

Regarding emotional support, 9 participants (29.0%) reported that they were likely to talk to an AI chatbot when they felt stressed, lonely, or upset, while 4 participants (12.9%) reported that they were very likely to do so. Another 9 participants (29.0%) reported that they sometimes turned to an AI chatbot in such situations. Personal disclosure to AI chatbots was also observed. Twelve participants (38.7%) reported that they sometimes shared thoughts or feelings with an AI chatbot that they would not normally share with another person, while 4 participants (12.9%) reported doing this often. However, 10 participants (32.3%) had never shared such thoughts or feelings with an AI chatbot. When participants were asked whom they usually turned to first for emotional support, the most common responses were a partner (8, 25.8%) and a family member (8, 25.8%), followed by friends (7, 22.6%). Only 3 participants (9.7%) selected an AI chatbot as their first source of emotional support.

Regarding social interactions, 10 participants (32.3%) felt that using an AI chatbot had a somewhat positive effect on their real-life social interactions, while 8 participants (25.8%) reported a positive effect. Nine participants (29.0%) reported no noticeable effect. Four participants (12.9%) reported a negative effect when the negative response categories were combined. Emotional well-being showed a similar pattern. Twelve participants (38.7%) reported that using an AI chatbot had somewhat improved their emotional well-being, while 5 participants (16.1%) reported significant improvement. Thirteen participants (41.9%) reported no effect, while 1 participant (3.2%) reported that their emotional well-being had significantly worsened. When asked about using an AI chatbot for emotional support in the future, responses were distributed across the five-point scale, with 14 participants (45.2%) selecting the middle response.

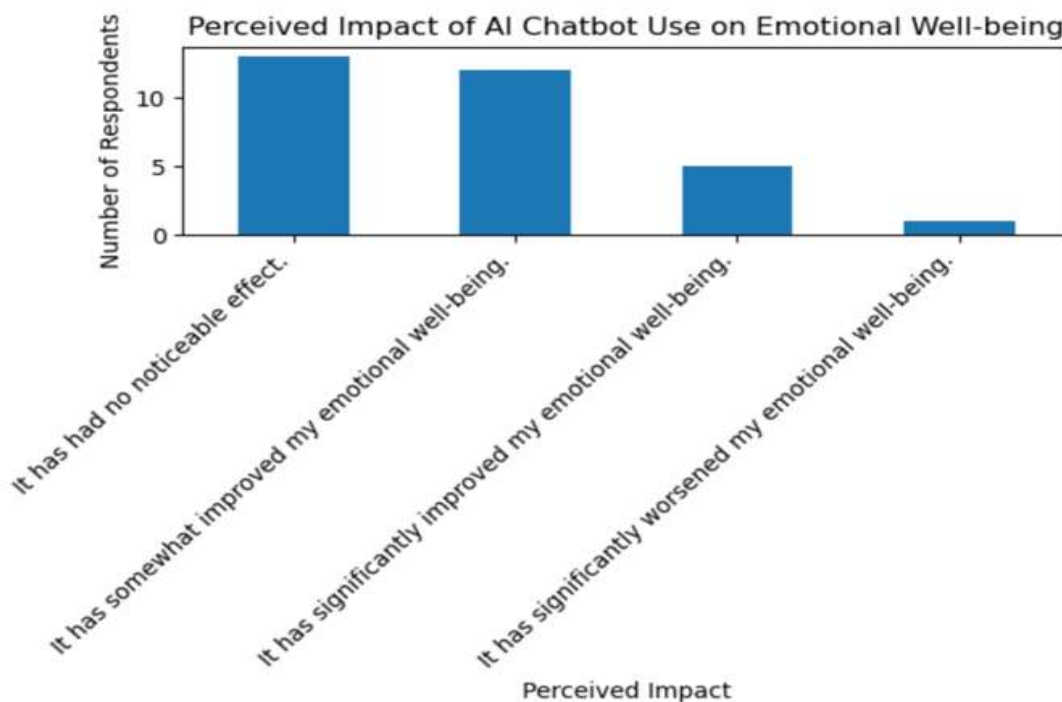


Figure 2. Perceived Impact of AI Chatbot Use on Emotional Well-being

Overall, the results show that AI chatbots were mainly used as general-purpose tools rather than direct replacements for human emotional support. However, a meaningful proportion of participants reported turning to AI chatbots during emotional distress, sharing personal thoughts with them, and experiencing improvements in emotional well-being. The findings therefore suggest that AI chatbots may serve as a supplementary source of emotional support, while human relationships remained the primary source of emotional support for most participants.

DISCUSSION

The findings show that AI chatbots were used primarily as tools. Participants used AI chatbots for studying, learning, obtaining information, and solving problems. ChatGPT was the most commonly used AI tool among the participants. More than half of the participants reported using AI chatbots multiple times each day. Although

emotional support was not the primary reason participants used AI chatbots, the findings also show that AI chatbots are beginning to play a role in users' emotional experiences. A key finding was that some participants used AI chatbots when they felt stressed, lonely, or had problems. Some participants also reported sharing thoughts or feelings with AI chatbots that they would not normally share with others. This suggests that AI chatbots can provide a space for emotional expression, particularly when immediate human support is not available. Nevertheless, most participants indicated that human relationships were more important. Partners, family members, and friends were selected more often than AI chatbots as the first source of emotional support. The study found that the perceived impact of AI chatbots on social interactions was mostly positive or neutral. Some participants reported feeling better in real-life interactions. However, many participants reported no change. Most participants reported either no change or some improvement in well-being, and only a very small number reported a negative effect. These results suggest that AI chatbots primarily serve as a supplement to relationships rather than a replacement. Overall, the study shows that the relationship between AI chatbot use and emotional well-being is complex. The easy access, conversational style, and perception of being less judged by AI chatbots may encourage some people to share emotions and seek help. At the same time, people still prefer human sources of emotional support, suggesting that AI companionship does not fully replace face-to-face relationships. More research with more diverse groups of people is needed to determine whether frequent emotional use of AI chatbots could lead to long-term emotional dependence or changes in how people interact with each other.

Limitations

This study has several limitations. First, the sample included 31 participants, which limits the extent to which the results can be applied to the broader Sri Lankan population. Second, the study used an online survey, which might have introduced sampling bias. Third, the cross-sectional design records participants' experiences at a single point in time, so it cannot establish links between AI chatbot use, social interactions, and emotional well-being. Finally, the study relied on participants' self-reported answers, which could be influenced by individual views and reporting habits. Because of these limitations, the findings should be considered exploratory rather than definitive or causal.

CONCLUSION

This study examined how people use AI chatbots for support and how this use is connected to their social interactions and feelings of well-being. Among the 31 participants in the study, AI chatbots were used for activities such as learning, finding information, and solving problems. Some participants also reported using AI chatbots when they were feeling down or when they wanted to discuss their thoughts and feelings. The results show that AI chatbots can provide a source of emotional support. However, most participants still relied on human relationships for the main support they needed. Most participants reported that using AI chatbots had either a positive effect on their social lives or their feelings. Because the sample was small, it is difficult to determine whether these results apply to a broader population. More research with more diverse groups is needed. Further research examining AI chatbot use over time could also help to understand the potential benefits and drawbacks of depending on AI for emotional support.

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