

Determining the Effectiveness of ChatGPT as a Tool for Therapy Based on Students' Perspectives

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Introduction

Globally, nearly 1 in 10 people have a mental health disorder and, in the United States, that ratio is 1 in 5 adults (World Health Organization, 2015; Peters et al., 2023). Moreover, more than 4 in 10 American high school students feel "persistently sad or hopeless" (Centers for Disease Control and Prevention, 2021). Unfortunately, these numbers cannot be improved with the amount of mental health care workers being 1 for every 100,000 people (World Health Organization, 2015). Additionally, several factors deter people from seeking professional help like public stigma, self stigma, and fear of exposure to therapists (Baptista et al., 2017). The need for more psychiatric professionals, along with the number of issues associated with this field, demands the search for an alternative to the current system. It is imperative to identify different methods to tackle this issue immediately for the well-being of future generations to reduce the number of struggling youth and the possible negative implications that poor mental health can have on the development of adolescents. In hopes of counteracting the problem, this research aims to do precisely that: find an alternate resource for people to turn to for mental health counseling.

One tool that has become increasingly popular recently which can be tested for this research is ChatGPT; it stands for Chat Generative Pre-training Transformer and it is a software that uses artificial intelligence (AI) technology to produce human-like text (Kalla & Smith, 2023). ChatGPT's ability to hold conversations with human beings, along with the convenience of this software and its seemingly infinite knowledge, makes it an appropriate tool for this study to



address the problem statement. Although the use of this software could alleviate a huge portion of the concerns associated with traditional counseling, there is an insufficient amount of scholarly studies that thoroughly test the efficiency of this technology for this specific application. The objective to test ChatGPT's ability to satisfy this need led to the formation of the research question: To what extent are a New Jersey High School's students (ages 13-18) willing to consider ChatGPT-4 as a source of counseling in comparison to human counselors based on participants' comfort level with AI therapy, and based on their ratings of ChatGPT's and the counselor's responses to student based counseling questions? For this study, a Licensed Clinical Social Worker (LCSW) — a qualified professional who can provide clinical services to clients without supervision— can be used ("LMSW vs. LCSW: What's the difference?", 2023). By attempting to identify a trend within the adolescent's perception of ChatGPT-driven counseling, one can determine how successful this application can be and improve it accordingly. This evaluation will have several implications for various stakeholders including students, people who work with AI, and companies like OpenAI— the organization that created ChatGPT— by providing them with data to improve the current approach to these emerging technologies. This study can have this positive implication as it obtains some of the perspectives of those who are most affected by the aforementioned problem (Sedlakova & Trachsel, 2022). Gathering the views of students can help situate the potential of ChatGPT to assume the role of a counselor for this focus group specifically. Evaluating their comfort level and preferences can inform the improvements and changes made to this technology and the applications of AI for future advancements.

Literature Review

Evolution of Therapy: From Scrutiny to Necessity



Since the formation of an occupation called therapist, the profession has been scrutinized by many (Metaxas, 1995). Over time, people began to acknowledge the various benefits of therapy and counseling sessions including its ability to reduce psychological distress and engage all parts of the body in the process of achieving good mental health (Baptista et al., 2017; Metaxas, 1995). The need for such treatment has increased recently due to the Coronavirus pandemic — a global outbreak of a contagious upper respiratory disease— which negatively impacted people's mental health (Cardona, 2023). Students especially were affected by this outbreak; several schools were shut down, and many children lost their parents or guardians to this disease (Pokhrel et al., 2021; Xiong et al., 2020). The negative implication of such an unprecedented event has led researchers to classify mental health as an "international public health priority" (Xiong et al., 2020). More importantly, the lasting impression that the COVID-19 pandemic has on rural Americans' mental health is significant (Mueller et al., 2020). This pandemic has also emphasized the limitations of in-person therapeutic interventions, so it is important to seek alternative resources to satisfy this need (Xiong et al., 2020).

Previously Attempted Solutions

One of the recommended approaches to maintain a healthy mental balance and to work past traumatic experiences is to attend counseling sessions (Xiong et al., 2020). Unfortunately, even in a developed nation like America, there are several challenges associated with this approach, especially for students. Counseling services cannot be easily accessed by those who seek them due to economic, social, and environmental factors (Baptista et al., 2017). The current problems surrounding students' access to mental health services range from their perceived stigma to their economic resources and the lack of professionals in this field (Cardona, 2023; Baptista et al., 2017). Dr. Cardona— the U.S. Department of Education's



Secretary of Education—recommended enhancing mental health literacy, reducing the stigma associated with therapy, and expanding the number of people within this field to tackle the issues with the solution itself (Cardona, 2023). Although such changes have the potential to reduce the number of students suffering from mental health problems, they are not easy or quick solutions that can immediately confront the issue. Due to these limitations, the search for another resource that can aid struggling students is warranted.

Application of AI in the Field of Counseling

An emerging technology that could be an appropriate resource to experiment with to find an alternative counseling service for students is artificial intelligence (AI)— a software that uses natural language processing to simulate human intelligence (Ray, 2023). One form of Al that has become increasingly popular and has advanced rapidly in the past year is ChatGPT (Ray, 2023). Unlike traditional therapists, this resource is abundantly available, cheap—or free depending on the version you use—and easily accessible in the United States. Furthermore, this technology has been applied to various fields, ranging from customer service to content creation, in which it has been shown to be effective (Kalla & Smith, 2023). Recent studies suggest the use of AI as a tool to enhance the sessions between a therapist and a patient by recognizing facial emotions, identifying trends, and guiding the practice (Ewbank et al., 2020; Nixon et al., 2022; Sedlakova & Trachsel, 2022). However, D'Alfonso suggests that the direct application of AI, instead of using it as a tool, might be a better use of this technology (D'Alfonso, 2020). The author does concede that there are various ethical considerations to be taken into account, as do numerous other researchers in the field (D'Alfonso, 2020; Oviedo-Trespalacios et al., 2023; Ray, 2023). Privacy of the patient, the software's ability to provide accurate information, and Al's possible biases are a few current issues that deter



researchers from applying this technology to the real world. Due to these limitations, there is a lack of scholarly research that explores AI as a therapeutic support tool.

One of the few studies that did venture to test out AI studied ChatGPT's ability to provide appropriate advice for various safety-related questions; the researchers concluded that using ChatGPT-3— one of the earlier versions of this software— is a risky endeavor due to the fallacies in its responses (Oviedo-Trespalacios et al., 2023). Although this study suggests the use of ChatGPT is not suitable for advice, ChatGPT-4— an improved version of ChatGPT— may prove to be more capable of dealing with such a task. This assumption inspired my choice to use ChatGPT-4 to support my hypothesis that AI technology has the potential to improve the mental health care field. The lack of scholarly research on this specific technology and application inspired this study. Additionally, this gap in the body of knowledge encouraged my research question to determine the extent to which high school students are willing to utilize ChatGPT as a resource for counseling.

Method

Introduction

To answer the research question, which aims to evaluate the extent to which students are willing to consider ChatGPT-4 as a source of counseling in comparison to human therapists, an exploratory sequential design was implemented. According to Leedy and Ormrod, an exploratory sequential design typically has two phases: a qualitative phase that serves as a basis for the second phase which is a quantitative study (Leedy & Ormrod, 2023). Similar studies like that of Winchester, and Golos & Tekuzener, evaluate research questions in the same discipline through mixed-method approaches. Winchester's paper examined how men reconstruct their masculinity after separation through interviews followed by surveys



(Winchester, 1999). Using a mixed-method design for his study helped Winchester create a more informed survey using the data collected from the interviews. This study has a similar project goal to mine as both aim to evaluate different coping methods—ChatGPT counseling in my case — for people in stressful situations. The study conducted by Golos and Tekuzener also has a similar project goal which is to evaluate the perspectives of occupational therapy students on role-emerging practice placements (Golos & Tekuzener, 2021). Like mine, this study uses a student's perspective to evaluate a new method. Using both focus group interviews and pre-post questionnaires, the researchers were able to answer their research question effectively.

Since the previously mentioned studies achieved similar project goals through a mixed-method design, I was encouraged to do the same. In the first phase of my study, I collected qualitative data from interviews with ChatGPT-4, a generative AI tool, and Tara Maher, a Licensed Clinical Social Worker (LCSW). As her job description required her to be proficient in providing counseling services, she suited the purposes of this study. As ChatGPT-4 has an advanced understanding of the theory of mind, this version was used for this project (Bubeck et al., 2023). After collecting the qualitative data from this phase, the second phase was composed of an online survey which was used to gather quantitative data. This study design can lead to a more complete and comprehensive answer to the research question, as opposed to solely a qualitative or quantitative study (Leedy & Ormrod, 2023). Furthermore, the decision to make the focus group students, ages 13-18 years old, is based on a study conducted by Cohen and Janicki-Deverts, where the authors concluded that there are greater stress-related health risks among younger adults around this age group (Cohen & Janicki-Deverts, 2012). Although the participants of this study are minors, the questions within the survey asked for no incriminating data, private information, or questions that posed a security risk for the students. Furthermore,



the anonymous and confidential nature of this survey protects the participants from any ethical violations.

The choice to study specifically these high schoolers stemmed from the fact that every student in this high school is issued an iPad (*iPad Fee Information*, 2023). This information helps me potentially gather more responses since my focus group has a medium through which they can fill out the electronic survey. My choice to conduct an online survey was based on factors like its convenience for participants, reduction in possible errors in data entry, and ability to maintain the participants' anonymity (Wiersma, 2011). Another reason why this specific school was chosen for this study was that almost half—more specifically 46%—of the students take Advanced Placement (AP) courses; there is also an equal number of female and male students in this New Jersey High School, making it a more generalizable population (*Monroe Township High School in Monroe Township, NJ - US news best*, 2022). The relatively high percentage of AP students suggests higher stress levels, making these students appropriate participants for this study (Conger et al., 2019).

Phase One: Interview

In the first phase of this study, I interviewed both ChatGPT-4 and Ms. Maher using 5 hypothetical situation-based questions. These questions were created based on the common stressors of students which include future goals, school-related items, and family issues (Anda & Baroni, 2023). The questions I prompted to the interviewees are shown in Figure 1.

- 1. For the past few days I have been so stressed. I failed my Math test and my English test and I don't know how to bring my grade up. On top of that, I have to go to practice everyday for soccer and I don't feel like I have any time left to put my life together. I don't know what to do, can you help me?
- 2. All my friends have been getting into relationships and have been going on dates but no one has even asked me out. I feel unlovable. Why don't people like me?
- 3. My parents have been fighting nonstop for the past few days. I can't concentrate on anything, and to make matters worse, my mom gets more frustrated with me because of their relationship. I feel like I am partially responsible because I am not able to reduce the tension. What should I do?
- 4. Everyone in my grade already knows what they want to become when they grow up or when they graduate and I still have no idea. I feel like I'm falling behind. What should I do?
- 5. My friends keep singling me out because of my clothes. Just because I don't dress and act like them, they keep picking on me. What should I do?

Figure 1. The questions above were prompted to both ChatGPT-4 and the LCSW.

These questions were individually prompted to ChatGPT-4 through the online website titled "chat.openai.com" in the "Message ChatGPT..." bar located at the bottom of the page. The same questions were prompted to Ms. Maher over email to standardize the format through which the responses are obtained, as ChatGPT responds through text.

Phase Two: Survey



In the second phase of this study, the responses from interviews with ChatGPT and Maher were integrated into a two-sectioned survey. For the convenience of the participants, the survey was online and created through Google Forms. An online form enables the circulation of the survey to a larger group of people. The form was circulated among those who fit the target population through various methods. One way I got participants was by first randomly choosing 15 different teachers from the New Jersey High School through a random name generator and asking them if I could come into their classrooms to request their students to fill out my voluntary survey. To increase the convenience and speed of this process, I created a QR code that was linked to the survey for students to scan with their cameras. I also stayed back when I circulated my survey through this method to address any questions that participants had. In addition, I also visited the school's Technology Department and requested them to send an email to all the students of the New Jersey High School. Some tools that were employed for this study were iPads and Google Forms.

Some ethical considerations that were present in this survey are explicitly stated voluntary participation and anonymity. Additionally, participants will be informed of what the survey entails through the informed consent form that is attached to the Google Form (See Fig. 2).



The Effectiveness of ChatGPT Therapy - Informed Consent Form

Hello! My name is _____ and I am an AP Research student at High School. I have recently taken an interest in studying the effectiveness of ChatGPT in offering mental health guidance to students. The number of therapists is inadequate for the amount of people who seek help. Additionally, therapy continues to be an expensive investment, and the stigma surrounding therapy remains prominent. These factors have deterred people from prioritizing their mental health and seeking out help from therapists. To address this issue, I would like to explore an alternative source of therapy using AI technologies like ChatGPT.

I have created a study titled *Determining the Effectiveness of ChatGPT as a Tool for Therapy Based on Students' Perspectives*, and I am asking for your participation. If you choose to participate, you will be given a survey that describes a few hypothetical situations that a student may experience with responses that were given by ChatGPT and a human therapist without labeling each option. You will be then prompted to rate each response based on the situation described on a scale of 1-5. The survey will also ask for your comfort level to consider ChatGPT as a tool for therapy. Providing this information is optional and you will have the option to not answer a question if you feel uncomfortable to do so. In total, the survey should take between 5-10 minutes. Based on the responses I receive, I hope to make conclusions about the effectiveness of ChatGPT as a resource for counseling.

Participation in this study is completely voluntary, and choosing not to participate will not have any negative consequences. Your responses will remain confidential, and your name will not be shared in the study. I understand that some of the subject matter in this study can be very personal, and if you decide to participate, you may stop if you ever feel uncomfortable or not answer a question that may cause any discomfort. I thank you very much for your interest and willingness to participate in my study!

If you have any questions or concerns about this research please feel free to contact me:

Teacher:

Student:

Figure 2. The image above is the informed consent form that was included in the online Google form survey.

Before the participants are directed to the questions, the participants are asked to electronically sign to signify that they are aware of the contents of this study and that they give their consent to participate. Parent consent forms were not required for this study as no



personal information was asked. The participants were merely asked for their opinion on different responses which did not necessitate parental consent forms. Furthermore, before the questions appeared in the Google form, a trigger warning was displayed with the message, "The following questions describe HYPOTHETICAL situations that deal with themes like stress, anxiety, familial issues, social issues and relationship problems. If these topics trigger you, you may choose not to continue". Using features offered by Google Forms, sections were created to separate the ethical statements and questions. The final two sections contain questions that can be categorized into preference questions and comfort-level questions.

The preference questions section contains all of the questions and responses given by ChatGPT and Maher. The participants were asked to rate the responses from both interviewees for each question. These responses appeared in the format depicted in Figure 3.

Preference Questions

For the two options that accompany each hypothetical situation, rate each on a scale from 1 to 5 based on how beneficial they would be for the person in the situation described.



For the past few days I have been so stressed. I failed my Math test and my English test and I don't know how to bring my grade up. On top of that, I have to go to practice everyday for soccer and I don't feel like I have any time left to put my life together. I don't know what to do, can you help me?									
Rate the 2 responses be					v effectiv	e they would be to			
It sounds like you're overwhelmed is okay a Consider talking to you extra help. It's importar structured schedule, all rest. Remember, it's cru you continue to feel ow counselor for additional.	nd it's a r teache nt to mar locating ucial to b erwhelm	natural re rs about nage you specific ralance a red, it mig	esponse your tes r time ef time for ctivities ght be he	to your t results fectively studying with rela	current of and ask Try cre g, soccer exation a	hallenges. for guidance or ating a practice, and nd self-care. If			
Not beneficial at all	1	2	3	4	5	Very beneficial			
It sounds like you are you have going on. Let	's work t					-			
tackle the most pressir in those classes to see can schedule a time to on the test (maybe duri consider taking a ment you could use some tin	if there meet wi ing a lun al health	is an opp th each t ch period day off	oortunity eacher t d or stud from sch	for extra o go ove y period nool and	a credit, er what y). Next, soccer?	o your teachers and perhaps you ou struggled with would you It sounds like			
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Figure 3. The screenshot above depicts the format of the questionnaire with one question that was present in the Google Form along with interviewees' responses and rating systems.

To prevent any biases, the responses were not labeled with who responded to each. The quantitative data gathered from this was used to calculate how well the participants rated ChatGPT's response in comparison to that of the LCSW's to evaluate this AI tool's potential in this field.

This section of the survey was followed by the comfort level question that prompted the participants to estimate their comfort level with ChatGPT as a resource for counseling on a scale from 1-5, 5 being very comfortable and 1 being not comfortable at all (See Figure 4).



Comfort Level Question *Note: by saying that you are comfortable with AI driven therapy, you are by no means signing up for this form of therapy or agreeing to try out this treatment. This is merely a hypothetical question with no consequences.										
On a scale from 1-5, how comfortable would you be to consider ChatGPT as a resource for counseling?										
	1	2	3	4	5					
Not comfortable at all	0	0	0	0	0	Very comfortable				

Figure 4. The image above is a template of the second section of the survey that prompts users to quantify their level of comfort with ChatGPT provided counseling.

The participants were assured that their response to this hypothetical question did not mean they were signing up for this form of therapy or stating that they needed therapy. These responses were also considered to analyze the success ChatGPT can have in providing counseling services to students which is the primary prompt posed by the research question.

Delimitations

One of the delimitations of this research method is that I obtained the responses from Miss Maher through text to keep it consistent with the mode through which ChatGPT's responses were acquired. This approach eliminates the potential advantage that could stem from humans' ability to express empathy through vocal variety: a capability that ChatGPT lacks. Another delimitation of this method is that the responses from each interviewee were limited to less than 200 words to make it more convenient for the participants of my survey. In addition to this, the responses from ChatGPT were refined to remove any phrases that indicate that it is not human-like, "please contact a therapist". This prevents the participants from recognizing which



response is from whom and, in turn, prevents potential biases in the second phase of the study.

Results

Rate the Responses Questions

After implementing the previously described method—collecting the responses from ChatGPT and Miss Maher and inputting said responses in a Google Form survey—in the New Jersey High School, I was able to get 180 responses to my questionnaire. I distributed this survey to a balanced representation of the 180 high school students. The survey was voluntary, anonymous, and confidential, and this information was stated at the beginning of the survey. With the tools available through Google Forms, I converted the data from all of the responses into a table on Google Sheets. To better analyze the data, I calculated the average rating given to each response for each question and graphed the information. The chart below depicts the average rating that the participating students gave to the Licensed Clinical Social Worker's (LCSW) response in purple and ChatGPT's response in green (See Fig. 5 below).

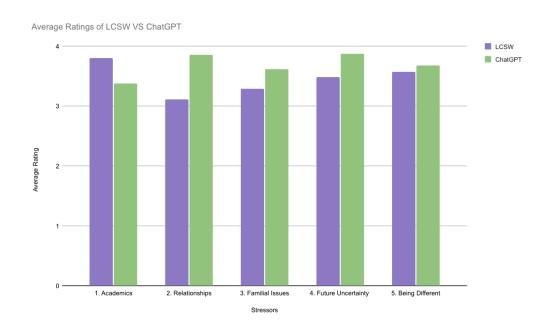




Figure 5. Bar Chart developed using Google Sheets which depicts average ratings given by participants of the survey

This graph only features the responses to section one of the Google Form. This section prompted the participants to rate both ChatGPT and an LCSW's responses to hypothetical situations. In the graph, each question was labeled based on the stressor that the hypothetical situation was pertaining to. For instance, the ratings for question 2, which reads, "All my friends have been getting into relationships and have been going on dates but no one has even asked me out. I feel unlovable. Why don't people like me?" is labeled "2. Relationships" since the stressor featured in that hypothetical situation is relationship issues. Using this method of condensing the data, I was able to create a chart to visually interpret the responses.

Since my research question seeks to understand the ability of ChatGPT-4 to serve as a resource for counseling, I collected data to compare the responses of an LCSW and ChatGPT. The comparison was based on quantitative data derived from responses to the survey through which participants rated each response. If the average of the ratings for the LCSW's and ChatGPT's responses were in a similar range, then one can begin to infer that ChatGPT can provide counseling that is well-received by students. The rationale behind this idea is that people seeking counseling would go to a human professional in that field so if ChatGPT can appear to advise on the same level as a professional, it is capable of being a counseling tool for students at MTHS. The results indicate that for every question, ChatGPT and the LCSW's responses were rated similarly as they shared a difference of less than 1 in terms of their average ratings (Fig. 6).

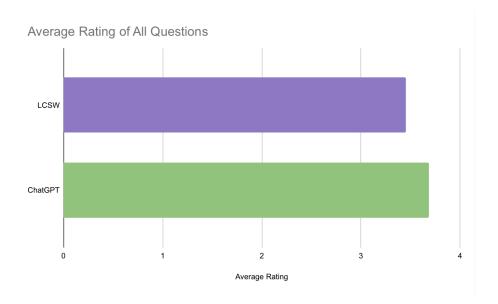


Figure 6. Chart made with Google Sheets that shows the difference between the overall average rating of ChatGPT's responses .vs. the LCSW's.

Based on the data presented by the chart above, it can be concluded that the null hypothesis, ChatGPT being viewed by students as a completely ineffective source for counseling, can be rendered inaccurate. This interpretation is based on the fact that the students' ratings of ChatGPT's responses are not far off from the LCSW's responses. The difference between the average rating of each interviewee's response was around .23, which is a relatively small gap. In fact, the data suggests that more students rated the responses generated by ChatGPT a little higher than the LCSW's response in most of the cases, specifically questions 2, 3, 4, and 5 (Fig. 5).

Comfort Level Question

Along with the ratings of the responses, participants were asked to rate their level of comfort with regard to considering ChatGPT as a resource for counseling. This question adds another dimension that is important to consider to answer the research question as the students' comfort with ChatGPT is a big factor in whether it is ready to be used as a counseling tool. The



responses to this question were also converted into a bar chart using Google Forms as shown below. Based on the chart, 32.4% of participants rated their comfort level to be a 3 on a scale from 1-5, 1 being not comfortable at all and 5 being very comfortable (See Fig. 7 below). A close second is choice 2 which suggests that a number of the participants are on the less comfortable side of receiving counseling from ChatGPT (See Fig. 7 below). That being said, those who chose 3, 4, and 5 make up 58.6% of the participants which can support the conclusion that the majority of the participants either harbor indifferent feelings towards this use of ChatGPT or are comfortable with it (See Fig. 7 below). Another noteworthy finding that this data reveals is that only 10.1% or only 18 out of the 179 respondents to this question said they are not comfortable at all considering ChatGPT as a resource for counseling (See Fig. 7 below). This data point suggests that the majority of the participants are open, to some extent, to use ChatGPT as a counseling tool.

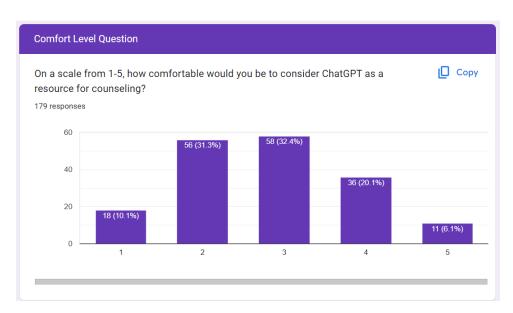


Figure 7. Graph created with Google Forms that displays the percentages of participants that chose a certain rating for the comfort question.

Situating the Findings



All in all, based on both the "rate the responses" questions and the "comfort level" question, the participants' responses do suggest the possibility of ChatGPT serving as a counseling tool for Monroe Township High School students. The fact that the average rating given to ChatGPT by the participants was higher than the LCSW for 4 out of 5 questions insinuates that the participants view ChatGPT as a capable counseling tool (Fig. 5). Additionally, to add another parameter to support my hypothesis, the last question measured the comfort level of the participants with ChatGPT counseling. Since 58.6% of the respondents chose 3, 4, or 5, one can argue that the majority of the participants are comfortable to some extent with the concept of ChatGPT as a counseling tool (Fig. 7). Given the two datasets and the interpretations that can be derived from them, the results imply that the New Jersey High School's students would be open to ChatGPT counseling. That being said, due to the low number of responses I got, these conclusions cannot be generalized.

Furthermore, some studies indicate that ChatGPT is not ready for real-world application when it comes to giving advice, being unbiased, and being ethically sound (Chen et al., 2022; Oviedo-Trespalacios et al., 2023; Sedlakova & Trachsel, 2022). For instance, a study conducted by Oviedo-Trespalacios et al. explores ChatGPT's ability to give safety-related advice; they concluded that ChatGPT gives unreliable safety-related information and should be used with caution (Oviedo-Trespalacios et al., 2023). Although this study highlights valid concerns with ChatGPT being used for advice, my study suggests that it is harmless when asked mental health counseling-related questions similar to the nature of the questions used in this research. While these results and interpretations of the data might suggest that ChatGPT is suitable for this use, there are still various limitations to consider.

Limitations



One of the biggest limitations of this study is that ChatGPT is a relatively new and popular technology so improvements are constantly being made to it. This can be considered a limitation of this research because while I was conducting the study, the problems that are identified in this paper in relation to ChatGPT's bias or ethical issues could have been addressed. Additionally, improvements to ChatGPT could have resulted in better responses which in turn could have led to a higher average rating for the AI tool. This could have reinforced a new understanding with stronger evidence.

Another limitation is that the results derived from the focus group of the chosen New Jersey High School students might not be generalizable to other populations due to the unique demographics that this school has. This aspect of the high school could also create an unintentional sampling bias from the relatively high population of minority groups (*Monroe Township High School in Monroe Township, NJ - US news best*, 2022).

Conclusion

Findings & Discussion

Analysis of the data obtained from the survey serves as the basis for the following inferences. The ratings given by the participating students in the New Jersey High School to both ChatGPT's and the LCSW's response suggest that ChatGPT has the potential to provide counseling. Along with this information, the high comfort level (Rating of 3+) with ChatGPT-driven counseling displayed by the participants of this study indicates that there is a significant population of students at the New Jersey High School who are open to receiving guidance from ChatGPT. The research conducted and the data collected support the new understanding of ChatGPT's capabilities with regard to counseling. This finding supports the a priori hypothesis that high school students will be accepting of counseling from ChatGPT.



Previous researchers concluded that ChatGPT was not ready for direct application or was not capable of performing at the same level as humans (D'Alfonso, 2020; Oviedo-Trespalacios et al., 2023). For instance, the study conducted by Oviedo-Trespalacios and other researchers identified various flaws in the responses given by ChatGPT to several safety-related prompts. Another study conducted by D'Alfonso suggested that ChatGPT lacks the emotional intelligence and creativity to imitate human beings. The contrasting conclusions of these studies to mine can be attributed to the fact that they were utilizing an older version of the software (ChatGPT-3.5) or the rapid adjustments made to ChatGPT since the release of these studies (D'Alfonso, 2020).

While the determinations made by these studies might have lost their merit with the advancement of this AI technology, their concerns for the ethical safety of the users of ChatGPT still hold. Researchers of recent studies, with access to the newest version of ChatGPT, echo the same concerns as older studies. For example, a study conducted in 2024 by Stahl and Eke reinforced ethical concerns, such as bias, privacy, and copyrights, demonstrated by other studies (Stahl & Eke, 2024).

Limitations

In this research, multiple limitations have restricted the applicability of the results derived from the study. One of the most significant limitations is the use of one LCSW. Despite efforts to find more than one professional in the counseling field willing to participate in this study, I was unable to get another interviewee. With the responses of more certified professionals, the trend identified in this study could be more generalized than it can be with one LCSW's responses.

Implications



Despite the aforementioned limitations, this research holds significant value. The implications of this study include the fact that it addresses a gap in scholarly research on ChatGPT counseling. Although the findings of this study are only representative of a small group of students, the implications of this study would be enormous if it could be applied to a bigger population. For instance, if one were to assume that the feelings towards ChatGPT being used as a counseling tool of this small sample of students can apply around the United States, then this use of Al could help a large portion of adolescents cope with stress. This technology could be advertised and improved to serve as a free counseling service for students in need. This research provides critical data that addresses the problem statement which is that the number of available counselors is not proportionate to the number of teens in need of counseling. The information derived from this study suggests the possibility of ChatGPT being a helpful tool for students struggling with various stress-inducing situations. The convenience, accessibility, and affordability of this resource emphasize the significant implication this study can have on struggling youth.

Unfortunately, the issues of privacy and copyrights concerning ChatGPT identified by Stahl and Eke bring up a few of the negative consequences that may arise from implementing ChatGPT in the realm of mental health (Stahl & Eke, 2024). The current state of ChatGPT doesn't guarantee the complete protection of a user's privacy which can pose problems for people who may entrust personal information in a ChatGPT counseling session (Stahl & Eke, 2024). This, along with the fact that the findings of this study might not apply to such a large population due to the lack of sufficient data, raises the need for future research and development in this field.

Directions for Further Research



This paper provides a structured description of a replicable method that can be used by other researchers interested in contributing to this field of study. In order to form better conclusions, future researchers should strive to get more responses. The methodology of this study can also be applied to different topics beyond student mental health like marriage counseling, education, and more. In addition, I suggest that this study should be reconducted with a larger focus group, with adolescents and adults of all ages. Conducting this research on a larger scale can uncover the potential benefits this research can have on several stakeholders including OpenAI— the developers of ChatGPT— and individuals with mental health needs. Furthermore, if ChatGPT were to be implemented as a counseling tool, I suggest that future developers increase the security of the information given by users.

Several previous studies have highlighted the limitations of ChatGPT, especially ethical considerations that this technology fails to address (D'Alfonso, 2020; Oviedo-Trespalacios et al., 2023; Ray, 2023). Nevertheless, many of these researchers also support the use of ChatGPT in the future, given that alterations are made to the current system. I also echo their call for improvements to ChatGPT.

As previously mentioned, the Coronavirus pandemic has had a significant negative impact on the mental health of people all over the world (Pokhrel et al., 2021; Xiong et al., 2020). However, this pandemic has also revealed people's affinity to adapt and adopt new technological strategies to tackle such challenges. Before the pandemic, it was inconceivable to attend school through one's screen, but the challenges of this period revealed this possibility. Similarly, although the concept of ChatGPT counseling may seem implausible at this moment, the post-pandemic era might unveil yet another seemingly unorthodox technological method to address the obstacles facing the youth today.



References

- Anda, D., & Baroni, S. (2023). Stressors, Stress Response and Coping Among Rural School Teachers with and without Hypertension. *International Journal of Current Science Research and Review*, *06*(01). https://doi.org/10.47191/ijcsrr/v6-i1-15
- Baptista, M. N., & Zanon, C. (2017). Why not seek therapy? the role of stigma and psychological symptoms in college students. *Paidéia (Ribeirão Preto)*, 27(67), 76–83. https://doi.org/10.1590/1982-43272767201709
- Bubeck, S., Chandrasekaran, V., Eldan, R., Gehrke, J., Horvitz, E., Kamar, E., ... & Zhang, Y. (2023). *Sparks of artificial general intelligence: Early experiments with GPT-4*. arXiv preprint arXiv:2303.12712.
- Cardona, M. A. (2021). Supporting Child and Student Social, Emotional, Behavioral, and Mental Health Needs. U.S. Department of Education.

 https://www2.ed.gov/documents/students/supporting-child-student-social-emotional-behavioral-mental-health.pdf
- Centers for Disease Control and Prevention. (2023, April 27). YRBSS Data Summary & Trends.

 Centers for Disease Control and Prevention.

 https://www.cdc.gov/healthyyouth/data/yrbs/yrbs_data_summary_and_trends.html
- Chen, K., Shao, A., Burapacheep, J., & Li, Y. (2022). A critical appraisal of equity in conversational AI: Evidence from auditing GPT-3's dialogues with different publics on climate change and Black Lives Matter. arXiv preprint arXiv:2209.13627.



- Cohen, S., & Janicki-Deverts, D. (2012). Who's stressed? Distributions of psychological stress in the United States in probability samples from 1983, 2006, and 2009. *Journal of Applied Social Psychology*, 42(6), 1320–1334. https://doi.org/10.1111/j.1559-1816.2012.00900.x
- Conger, Dylan, et al. "The Effect of Advanced Placement Science on Students' Skills,

 Confidence, and Stress." *Journal of Human Resources*, vol. 55, no. 1, 7 June 2019, pp. 93–124, doi:10.3368/jhr.56.1.0118-9298r3.
- D'Alfonso, S. (2020). *Ai in Mental Health*. Current Opinion in Psychology, 36, 112–117. https://doi.org/10.1016/j.copsyc.2020.04.005
- Ewbank, M. P., Cummins, R., Tablan, V., Bateup, S., Catarino, A., Martin, A. J., & Blackwell, A.
 D. (2020). Quantifying the association between psychotherapy content and clinical outcomes using Deep Learning. *JAMA Psychiatry*, 77(1), 35.
 https://doi.org/10.1001/jamapsychiatry.2019.2664
- Golos, A., & Tekuzener, E. (2021). Student and supervisor perspectives on the effectiveness of community-based placements for occupational therapy students. *BMC Medical Education*, *21*(1). https://doi.org/10.1186/s12909-021-02492-3
- iPad Fee Information. Monroe Township High School.(2023, March 3). Monroe Township.
- Kalla, D., & Smith, N. (2023). Study and Analysis of Chat GPT and its Impact on Different Fields of Study. SSRN, 8(3). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4402499
- Leedy, P. D., & Ormrod, J. E. (2023). *Practical research: Planning and design*. Pearson Education Limited.



- LMSW vs. LCSW: What's the difference? Social Work License Map. (2023, November 5). https://socialworklicensemap.com/become-a-social-worker/lmsw-vs-lcsw/
- Metaxas, Q. V. A. (1995). Occupational therapy: The first 30 years 1900 to 1930. *The American Occupational Therapy Association*.
- Monroe Township High School in Monroe Township, NJ US news best ... USA News. (2022). https://www.usnews.com/education/best-high-schools/new-jersey/districts/monroe-township-high-school-12651
- Mueller, J. T., McConnell, K., Burow, P. B., Pofahl, K., Merdjanoff, A. A., & Farrell, J. (2020).

 Impacts of the covid-19 pandemic on Rural America. *Proceedings of the National Academy of Sciences*, 118(1). https://doi.org/10.1073/pnas.2019378118
- Nixon, D., Mallappa, V. V., Petli, V., HosgurMath, S., & Kiran K, S. (2022). A novel Al therapy for depression counseling using face emotion techniques. Global Transitions Proceedings, 3(1), 190–194. https://doi.org/10.1016/j.gltp.2022.03.008
- OpenAI. (2023). *Screenshot of ChatGPT Home Page*. ChatGPT. Retrieved March 18, 2024, from chat.openai.com.
- Oviedo-Trespalacios, O., Peden, A. E., Cole-Hunter, T., Costantini, A., Haghani, M., Rod, J. E., Kelly, S., Torkamaan, H., Tariq, A., David Albert Newton, J., Gallagher, T., Steinert, S., Filtness, A. J., & Reniers, G. (2023). The risks of using CHATGPT to obtain common safety-related information and advice. Safety Science, 167.

 https://doi.org/10.1016/j.ssci.2023.106244



- Peters J., Z., Santo, L., Davis, D., & DeFrances J., C. (2023). NHSR 181: Emergency

 Department Visits Related to Mental Health Disorders among Adults, by Race and

 Hispanic Ethnicity: United States, 2018-2020. https://doi.org/10.15620/cdc:123507
- Pokhrel, S., & Chhetri, R. (2021). A literature review on impact of COVID-19 pandemic on teaching and learning. Higher Education for the Future, 8(1), 133–141. https://doi.org/10.1177/2347631120983481
- Ray, P. P. (2023). ChatGPT: A comprehensive review on background, applications, key challenges, bias, ethics, limitations and future scope. Internet of Things and Cyber-Physical Systems, 3, 121–154. https://doi.org/10.1016/j.iotcps.2023.04.003
- Sedlakova, J., & Trachsel, M. (2022). Conversational Artificial Intelligence in psychotherapy: A new therapeutic tool or agent? The American Journal of Bioethics, 23(5), 4–13. https://doi.org/10.1080/15265161.2022.2048739
- Stahl, B. C., & Eke, D. (2024). The ethics of CHATGPT exploring the ethical issues of an emerging technology. International Journal of Information Management, 74. https://doi.org/10.1016/j.ijinfomgt.2023.102700
- Wiersma, W. (2011). The Validity of Surveys: Online and Offline Wybo Wiersma The Validity of Surveys: Online and Offline.
- Winchester, H.P. (1999). Lone Fathers and the Scales of Justice: Renegotiating Masculinity

 After Divorce. *Journal of Interdisciplinary Gender Studies*: JIGS, 4, 81.



World Health Organization. (2015, July 14). Global Health Workforce, finances remain low for Mental Health. World Health Organization.

https://www.who.int/news/item/14-07-2015-global-health-workforce-finances-remain-low-f

or-mental-health

Xiong, J., Lipsitz, O., Nasri, F., Lui, L. M. W., Gill, H., Phan, L., Chen-Li, D., Iacobucci, M., Ho, R., Majeed, A., & McIntyre, R. S. (2020). Impact of COVID-19 pandemic on Mental Health in the general population: A systematic review. Journal of Affective Disorders, 277, 55–64. https://doi.org/10.1016/j.jad.2020.08.001



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