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Analyzing the Effectiveness of Artificial Intelligence as a Counselor to Gen Z's Mental Health in Pakistan

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Heavy reliance of Gen Z on technology, specifically during Covid 19 pandemic, in the escalating mental health issues presented opportunities for innovative solutions. AI based mental health support facilities can be a promising tool in overcoming a lot of these issues in this digital generation. This study seeks to employ AI based solutions in mental health support field and how effective it will prove to be in near future in Pakistan, considering the perceptions of Gen Z regarding these solutions. A phenomenological research design was used for the study, where students from universities of Islamabad, having mental health problems, were included in the sample. The study followed an inductive approach. Experiences of ten students from the sample were collected by conducting semi-structured interviews and deeply studied to draw the results. Positive aspects (accessibility and efficiency), three negative aspects (unawareness, lack of emotional quotient, and ethical concerns) and other suggestions (improvements, academic pressure, societal pressure, and collaboration with professionals) emerged about AI powered mental health support among GenZ. In Pakistan, integrating AI-powered mental health solutions faces hurdles like public skepticism and data privacy concerns. By doing collaborative partnerships and addressing societal taboos, these innovations hold the potential to reshape mental health care accessibility and effectiveness in the nation.

1. Introduction

It is found that in today's fast paced interconnected world, technology has become an integral part of human lives, transforming the way they communicate, learn, and practically do anything (Mursalin, 2023). Sociologists have identified five generations which follow different social patterns and preferences because they grew up in different socioeconomic conditions. Those generations are Traditional, Baby boomers, Generation X, Generation Y, and Generation Z ("Gen Z″) (Szymkowiak et al., 2021). The distinguishing factor between the first four generations and Gen Z is that the prior generations have conventional approaches, but Gen Z follows an innovative approach towards life.

This generation includes individuals born between mid 1990's (the time when world wide web became common to the public) and 2010. Gen Z, also called post-millennials, zoomers or iGen-ers are the first generation with seamless integration of technology in various aspects of life, grown up with endless information and demanding innovative strategies (Amberstudent, 2024). This decade is marked by the generation which has never experienced life before the internet (Al-Azawei & Alowayr, 2020).

The digital ecosystem prevailing today is presenting both opportunities and challenges for individuals, communities, and societies worldwide (Chandra behera et al, 2019). Internet and social media have been integrated in daily lives of gen z as stated by Pallei, generation z has shown the level of comfort and expertise with technology at a very early age unlike any other generation (Wang et al., 2019). The Internet as 'source of expanding horizons' has flooded gen z with information and resources that has changed the way people learn, educate themselves forexample online learning platforms, maintain databases, record, and access information in an efficient way, and save time (Szymkowiak et al., 2021b).

Moreover, technological advancement has become a driving force for running businesses and causing innovation such as e-commerce (Mursalin, 2023). Similarly, digital technology has been applied in medical departments such as during COVID 19 pandemic and response for pandemic planning, surveillance, testing, contact tracing, quarantine, and health care (Whitelaw et al., 2020).

The World Health Organization (WHO) considers mental well being as a fundamental human right thus it is working with states to improve mental health policies and protect rights of people facing mental health issues (Connecting Mental Health and Human Rights, 2024). Mental health is defined as the state of mental strength and stability to deal with stress and anxiety (World Health Organization: WHO, 2019). It is how a person emotionally and psychologically thinks, feels, behaves, and makes decisions. Mental well- being is an important part of our lives because it is directly correlated with an individual's ability to learn, a person's mood and physical wellness (World Health Organization: WHO, 2019). Factors contributing to causes and risk of developing mental health issues include loneliness, stressful life situations, trauma, abuse, and drug or alcohol misuse (Mental Illness - Symptoms and Causes - Mayo Clinic, 2022). Research shows that good

mental health leads to prevention and better chances of survival from cancer and heart diseases (Fusar-Poli et al., 2020)

1.1 (Heart Disease and Mental Health Disorders | CdC.gov, 2022)

Mental illness is one of the serious health-related problems affecting globally. Some major mental health conditions include anxiety, depression, substance use disorder, personality disorder, bipolar and other mood disorders, schizophrenia, eating disorders, obsessive compulsive disorder, and post-traumatic stress disorder (Smith, 2022). According to 2019 stats 13% of the total population has mental health issues. Anxiety has the highest prevalence affecting 284 million people followed by depression affecting 264 million people, alcohol use affecting 107 million people and bipolar disorder with the least prevalence affecting 46 million people (Team et al., 2024).

It is highlighted by the American Psychological Association that Gen z reports the most mental health problems amongst all the other generations. This is mostly due to the traumatic series of events faced by this generation, COVID-19 being the most evident example (Agnihotri, 2023b). The people infected by COVID were far less than those affected by it. COVID was followed by lockdown and social distancing, this led to increased isolation and loneliness. Everyone's lives went online. Hence there was more dependence of Gen Z on internet and digital devices for education and killing time (Panday & Pal, 2020). The excessive use of the internet has caused mental health issues giving rise to anxiety and tension. Individuals were experiencing psycho-social illness on a larger proportion compared to symptoms of physical illness. Moreover, the uncertainty of getting space in hospitals, fear of getting infected and infecting others and possible death was contributing to the problem as well (Grover et al., 2020).

Health organizations, researchers, and professionals have recognised the potential of technology to support and enhance mental health care (Foley & Woollard, 2018). 70% Z individuals believe their mental health requires significant attention, treatment, and improvement (Agnihotri, 2023b). Additionally, mental health treatment is expensive, requiring regular investigations like ECG and blood tests done repeatedly and medication having various side effects (Foley & Woollard, 2018). Thus, AI can be used as a counselor to provide mental wellbeing (Alanezi, 2024). AI is a lifeless machine which tries to replicate intelligent human behavior (Aghion et al., 2019). AI has emerged as a promising tool in providing mental health support because of its integration in various platforms, giving mental health resources to GenZ. These resources are in the form of conversational agents such as, Apple's Siri, Amazon's Alexa, snapchat chatbot, Facebook's M, Google Assistant, Chatgpt etc. Overall, studies reported a moderate amount of evidence supporting the effectiveness, usability, and positive user perceptions of the agents, (Milne-Ives et al., 2020) For example,frequent users of the Wysa chatbot also reported lower levels of depression (Inkster et al., 2018).

A contextual gap exists within this field, where no study assessing mental health effectiveness has been conducted in Pakistan. This is significant in regards to the fact that Pakistan comes under countries with highest rates of mental illness and there is also a huge lack of skilled

psychologists to treat these illnesses. This highlights the importance of 24 million people in dire need of mental health assessment in Pakistan, and the number has only been increasing post Covid, (Malik, 2023), especially due to the unavailability of resources. According to WHO, Pakistan has only 0.19 psychiatrists for every 100,000 patients.

There is also a deep rooted stigma that prevails in Pakistani society where people, more specifically, baby Boomers are hesitant to seek help from mental health professionals due to the lack of awareness on the topic of mental health. Limited educational resources along with limited access to mental health professionals supports the superstitious perspectives of Pakistani people (Philipp, 2022b) Due to this stigma and derogatory image of mental health illness, there is not much attention paid by the government of Pakistan to fund projects to deeply analyze and lessen the burden of mental health issues, like it's done with physical health issues. Resources in Low Middle Income Countries (LMIC) like Pakistan are not assigned as generously to deal with the consequences of mental health problems.

For instance, A 0.4% portion of the health budget goes on mental health in Pakistan (World Health Organisation) Moreover, according to statistics, more than 15 million individuals in Pakistan are afflicted with mental health disorders. However, there are just 400 qualified psychiatrists for 220 million people, with few state-run psychiatric facilities and a limited number of psychiatric units at teaching and general hospitals. (Javed et al., 2020). Considering all these contextual and cultural gaps, it's vital to conduct a study assessing mental health issues of students in Pakistan and how they are solved by an AI-application like ChatGPT.

The aim of the study is to investigate Generation Z's attitudes about AI-based mental health therapies, focusing on their comfort level, openness to technology, and preferences for obtaining mental health care. The research will also review current studies and study outputs to assess the impact of AI, especially chatbots and virtual assistants, in treating mental health concerns among Generation Z, with the goal of understanding their usefulness in lowering stress, anxiety, and depression along with determining and analyzing the elements that influence the acceptability of AI-powered mental health virtual assistants, such as technological familiarity, mental health attitudes, privacy concerns, and preferences for human engagement. Use data to develop strategies for breaking down obstacles and promoting AI as a helpful tool in mental health treatment for Generation Z.

Conducting study on the interaction of technology and mental health, particularly among Pakistan's Generation Z, has important implications for the development of AI-powered mental health treatments. Pakistan, with its distinct cultural setting, provides a dynamic environment in which the influence of AI on mental health may be investigated and utilized. In terms of the student population, data suggests that the stresses students face in the actual world enhance their risk of developing mental problems (Inkster et al., 2018).

Understanding how AI-based mental health treatments match with Pakistani cultural norms and values is critical. Tailoring these ideas to the cultural environment increases acceptability and efficacy among the target audience. Moreover, according to research it would also prove to be

beneficial to add AI integrations into healthcare in the medical education system in pakistan, (Habib et al., 2024) AI systems in healthcare can help to optimize healthcare resources, provide a better patient experience, enhance population health, lower per capita expenses, and increase health professional satisfaction (Dicuonzo et al, 2023).

Moreover, Artificial intelligence (AI) has the potential to transform mental health perceptions in Pakistan. According to recent data from an 81% response rate poll, 79.3% of students place a high value on religion. Interestingly, 63.4% trust physicians for mental health therapy, but 32.1% associate mental disease with black magic. Only 41% have read articles about mental health. Research on AI interventions might promote anonymity to combat cultural stigmas. The study identified significant correlations between attitudes and characteristics including study discipline, exposure, perceived reasons, and superstitions ($p < .05$) (Waqas et al, 2014).

2. Literature Review

Practical results have depicted that answers to mental health problems are successfully being produced with the help of advancements of technology in the field of AI across the world (Balcombe & De Leo, 2021) . Studies have evidently shown integration of resolving issues of mental health with AI, and all the interventions done to make Chatbots more effective to react to language processing, symbolism and make them more empathic (Boucher et al., 2021). The objective is to provide cognitive therapy to Gen Z as they navigate through life, providing practical and competent remedies while they deal with mental health issues such as depression, anxiety, and other disorders (Kavitha et al., 2024).

Even with the advancements being done, it is essential to note all the obstacles that still stand in the way of acquiring effective resources to provide support to the mental health care facilities in Pakistan. According to WHO, the lack of mental health professionals in Pakistan, the limited resources to spread awareness (Philipp, 2022), along with the fact that World Bank reported almost 40% people of Pakistan as being below the poverty line which means that access to awareness and the use of AI to provide mental health support would become a hindrance to making AI single most used tool to rely on for mental health help.

Moreover, cultural, and religious beliefs have played a significant role in shaping perceptions and approaches to healthcare, becoming a barrier in the involvement of AI in the healthcare sector as traditional ways such as consulting faith healers, are highly valued in a Pakistani society (Shafiq, 2020). Stigma associated with this, and drug addiction has increased and is viewed as a coping mechanism for stress or depression particularly among adolescents, age 25 or younger, which complicates mental healthcare in Pakistan and results in a treatment gap. Most of the population doesn't rely on mental health support which makes it difficult to make use of AI common among individuals (Javed et al., 2020).

In recent years, efforts have been made to create awareness for mental healthcare such as The Pakistan Association of Clinical Psychologists (PACP), a registered professional association, plays a vital role in improving the quality of mental health services and The National Center of

Artificial Intelligence (NCAI) in Pakistan is crucial in incorporating AI solutions in healthcare through research, innovation, training, and collaboration with healthcare institutions (Pak Armed Forces Med J 2023; 73(4): 961).

Despite these efforts, AI faces a major challenge which is the multifaceted and nuanced nature of psychiatric conditions which require customized and context-specific solutions (Dergaa et al., 2024). AI language models such as chatgpt, can produce coherent responses but they remain relatively novel and unexplored in the domain of healthcare (Dergaa et al., 2024).

In view of these issues, it is critical to investigate strategies for overcoming challenges in the widespread adoption of AI-powered mental health therapies in Pakistan. Efforts to destigmatize mental health, raise awareness, and extend access to care are critical (HODGE, J. Destigmatizing mental health.). Furthermore, activities targeted at improving the mental health workforce and utilizing technology to overcome gaps in service delivery are crucial (De Melo et al., 2024). Addressing these obstacles and capitalizing on the revolutionary potential of AI in mental health care, stakeholders may enhance efforts to promote well-being and resilience among individuals in Pakistan and abroad (De Melo et al., 2024).Furthermore, a new study demonstrates the importance of culturally appropriate approaches to AI based mental health therapies in Pakistan.

Cultural ideas and practices significantly influence attitudes towards mental health and help-seeking behaviors (Spallek et al., 2023). Considering all of these factors, along with the fact that academic institutions are not normally abundant in the mental health problem solving facilities for its students, it is important to resort to the cognitive therapy option, such as that of AI agents to cater to the needs of students who are struggling, either due to under performance or inability to adjust (Dekker et al., 2020b). Tailoring treatments to line with these changes as well as such cultural norms, and values can boost acceptance and efficacy across varied groups (Spallek et al., 2023).

In conclusion, there are numerous obstacles existing in the path including a lack of mental health specialists, cultural stigmas and the complexities of psychiatric disorders, to incorporating AI into mental health treatments in Pakistan. Nonetheless, the future of these treatments in Pakistan requires overcoming of these challenges, promoting awareness and designing AI design solutions that match the existing cultural sensitivities (Dergaa et al., 2024). With these deliberate efforts, we can make a positive impact on prevailing mental health issues in Pakistan as well as significant transformations.

3. Methods

The study follows an inductive approach and is based on phenomenological research design, where experiences of each participant were closely studied without imposing preconceived ideas on them, in order to draw the results.

3.1 Selection and Sampling

As the study required a sample of people who have or are currently facing mental health problems, purposive sampling was used for selection of participants. This sampling technique helped approach those people who have experience, awareness, valuable perspectives, and relevant knowledge about mental health problems and its therapeutics. Purposive sampling is generally the most used in qualitative analysis because as the name suggests it is purpose driven. Sample selected based on the requirements of study makes the data collection and analysis easy.

3.2 Questionnaire Design

Semi-Structured interviews were conducted for the study. This type of interview is the one where all the predetermined questions do not have a fixed order instead, as the research commences, based on responses of participants additional questions can be included, expanded, or excluded accordingly. So, the questionnaire was designed in such a way that there were four demographic questions regarding age, gender, education, and employment status followed by Main questions about awareness and impact of AI powered therapies.

3.3 Data Collection

Semi-Structured interviews were conducted from nine students at universities in Islamabad who have faced or are currently facing mental health problems. Four Interviews were conducted face to face in university meanwhile, rest of the five interviews were conducted online via google meet. The average duration of each interview was between 17-25 minutes with all interviews being recorded with informed consent of participants.

3.4 Ethical Factors

The study took all the ethical factors into consideration and complies with the Declaration of Helsinki. Participants were fully informed about the nature and objectives of research, allowing them to make an informed decision about voluntarily participating in the research. Moreover, the volunteer's rights to privacy were respected but guaranteed confidentiality and anonymity of records. Informed consent was taken from all the participants about recording the audio of interviews and publishing the responses anonymously. For this purpose, each interview was assigned a number rather than using the names of interviewees. Interview questions were designed as such to avoid any harm to the participants, may it be stress or emotional distress.

3.5 Data Analysis

Every recorded interview was transcribed manually to analyze the data using thematic analysis. Sixteen different codes were identified from the interview transcripts. Based on

similarities, these codes were classified into eight themes. These themes reflected positive aspects (accessibility and efficiency), three negative aspects (unawareness, lack of emotional quotient, and ethical concerns) and other suggestions (improvements, academic pressure, societal pressure, and collaboration with professionals) about AI powered mental health support, which later helped in analyzing the results.

4. Results

4.1 Main Challenges

History is proof that even the greatest of inventions face challenges, these challenges provide a greater room for advancements, from the research that was conducted and analysis that was done, the future of AI-powered mental health facilities in Pakistan depends upon overcoming these challenges.

4.2 Unawareness of AI-Powered Mental Health Facilities

According to the interviews conducted, there is an enormous amount of lack of comprehension and understanding of advanced and developing technology in Pakistan, which inevitably has led to unawareness when it comes to the uses of AI as well. As illustrated through the interviews, most of the participants were unaware of AI-powered mental health facilities, some were familiar with the concept but did not know of anybody who would have employed such therapies or had seen any practical experiences around them.

This creates a huge barrier when considering AI's future in Pakistan as a mental health consultant, there should be more awareness created by improving the technology education given to students as well as using other resources to advocate for AI therapies, but these initiatives are already on the move as evidence by a statement from the interview of a computer science student, "I think, for the older generation (baby boomers) it'll be harder to accept that an AI application is providing mental health support, it'll be difficult to fathom for them but for the students like me, as I am a computer science student, I genuinely believe that AI will be bringing revolutionary changes and mental health therapy is one of the things that It can address. It is quite easy for people of my generation to access AI applications."

4.3 Lack of Emotional Intelligence

Empathy remains the most fundamental and important pillar of therapy. It is very important to be able to create an understanding and a relationship of trust with the individual for therapy to be effective. No matter how developed AI is now, it still stays true to its robotic tendencies, and mental health therapies do not work well that way which is why there are a lot of concerns about AI agents and bots not being able to replicate human emotions or being empathic enough to soothe the distressed or mentally ill. This could backfire very easily as people who are mentally distressed are very emotionally fragile and even one wrong word is enough to trigger them.

From the collected data, supporting evidence can be seen through following statements:

"...chat bots do replicate human answers very professionally, but they cannot replicate human emotions."

"It's worth a try but my expectations from AI are very low because as I said again, it's still a machine. It's still learning. It does not have a grip upon emotions as of yet."

A public administration student who was interviewed stated reluctance to use these facilities due to this concern when she said, *"...but I do feel that AI lacks the emotional intelligence to understand such issues. So, I don't see myself taking help from it in the longer run."*

This is another challenge that needs to be overcome to pave the path for AI-powered mental health agents in Pakistan to become the norm.

4.4 Ethical Concerns

Two of the participants pointed out that AI works on data, which creates a feeling of uneasiness for potential patients who might employ AI agents as their mental health guides. Data is a valuable tool of identity, in today's digital world, anything can be used against you, which raised huge ethical concerns by the participants as evident by their words;

"It is believed that AI in the future and even now is not 100% confidential or keeps your stuff private. I think that's the first thing that needs to be addressed."

A constantly mentioned point by almost all the interviewees was that this is bound to make individuals uncomfortable, and they will be reluctant to share anything. It needs to be worked on and these agents should be made safer. There should be transparency, consent and privacy structured within the system of AI to create a relationship of trust between individuals and virtual agents for these therapies to be effective. Participants also felt that once AI is improved upon in regard to these ethical concerns, there is no doubt that it could be leading within the field of mental health therapies in Pakistan. As expressed during one of the interviews; *"So, I feel using AI for mental health support must require ensuring privacy, obtaining informed consent, providing accurate information, being culturally sensitive, avoiding harm, ensuring transparency, and continually evaluating the system's performance. These steps would help deliver effective and responsible support to users in need."*

4.5 Opportunities

From the results that were received, and the data analyzed, it seems that the youth or Gen Z in Pakistan are strong advocates of receiving help for any mentally illness or even if just stressed out, which is definitely a good sign, this strong belief in getting help presents an opportunity for AI-powered mental health facilities to expand into Pakistan. Following are other very prominent opportunities highlighted by the benefits presented by these facilities.

4.6 Accessibility and Efficiency

As mentioned by an interviewee;

"...AI will make the accessibility better and for the health care systems it could only provide efficiency in terms of data storage"

It was mentioned that there is time as well as financial constraints that make in person, professional help very inconvenient and inaccessible to most people within Pakistan. Time and finances are a huge factor, in fact, for some people they are the final deciding factor. Appointments for consultations and the fact that they are extremely expensive, makes AI therapies a lot more attractive, as confirmed by responses collected in the interviews. According to the data collected, this enhanced and more convenient accessibility as well as efficiency of these therapies has Gen Z leaning more towards virtual agents and chatbots, as all except one participant of the interviews that were conducted, seemed to find it more helpful, considering the students here in Pakistan have budget and time constraints.

Most interviewees also thought that it would help to make therapy very accessible for people across the country and by reaching a wider audience, and that it could help make a very powerful impact within the field of mental health. Data collected showed people from interviews were very enthusiastic about making therapy a more accessible resource and reaching a wider range of audience as evidenced by a statement from one of the interviews: *"One big problem it could help with is making therapy available in places where there aren't many resources. It could also make therapy more affordable for people who can't afford regular therapy."*

4.7 Improvements

Even though 8 out of the 9 people during the interviews were in favor of AI powered mental health facilities, almost all had suggestions for improvements, some participants suggested data testing, a biotechnology student said,

"AI help should be offered after making sure it is effective and safe. A series of tests should be conducted to make sure it is safe to use before giving access to everyone."

To make it more efficient before advocating it as an option so that it does not do any damage or harm to the people that view it as a potential choice of help, along with removing the repetitive factors that normally occur in AI, another wanted the kind of improvements that would make this experience of therapy with virtual agents and chatbots better and a lot more personalized, there was not one specific suggestion on how to go about achieving it. Another improvement suggested was;

"The interaction of AI with people should be monitored because even a minor mistake or thing said could affect the person greatly."

Rest of the suggestions were revolving around the ethical concerns, it was suggested to improve privacy and transparency within AI, which has to be achieved for the future of AI powered mental health facilities in Pakistan to not turn out to be bleak.

4.8 Academic Pressure

All nine of the participants that were interviewed agreed that the education system in Pakistan resembles more with dictatorship and provides limited opportunities of growth. There is brutal, cutthroat competition, along with unrealistic expectations set by the education system. This causes them to be extremely stressed out, all the participants have felt the distress due to academic pressure, and 8/9 of the people that were interviewed consider it to be the main reason behind such a huge prevalence of mental illnesses among Pakistani youth. As summarized by a mechanical engineering student that was interviewed,

"…it has indeed played a significant role in exacerbating stress-related challenges. The system often demands students dedicate most of their time to studies, which can negatively impact the normal functioning of the human brain and body, leading to severe fatigue and stress. It presents another opportunity for AI to expand within society and spread awareness of its use."

4.9 Societal Perceptions

As conveyed by one of the interviews conducted; *"I believe that the challenge Pakistani society faces regarding mental health issues doesn't solely revolve around the accessibility of therapy or the availability of therapists. The core issue lies within societal attitudes towards mental health problems. Even with the presence of an AI chatbot making therapy more accessible, people might still struggle due to cultural beliefs around masculinity and religion influencing perceptions of mental health."* There is a stigma around the perceptions Pakistan society holds regarding mental health, some people, more than others, are very skeptical about it, which inevitably leads to seeking help for it, to be a taboo within the society. Gen Z are very reluctant about getting professional help and resorting to therapies or even talking to their parents about it because of these societal perceptions. These unfortunate societal conditions present an opportunity for AI. According to the responses collected through the interviews, this option becomes much more appealing when these factors of shame and reluctance come into play. A participant suggested some ways to help bring changes in societal perceptions through advertising and marketing campaigns which would be a great initiative not just in the mental health field but evolutionary in giving new perspectives. Her exact ideas were supported by this statement during the interview; *"To address these concerns, an advertisement campaign showcasing the real-life applications and benefits of AI tools is necessary. The campaign should highlight how AI can provide accessible and confidential support for mental health challenges. It should emphasize the ethical principles guiding the use of AI, reassuring users about privacy and confidentiality. Additionally, the advertisement should address religious concerns by emphasizing that seeking help for mental health is not against religious beliefs but rather a means of improving well-being. Moreover, showcasing real-life success stories of individuals who have benefited from AI-driven mental health support can help alleviate cultural stigma and misconceptions. By demonstrating the practical advantages and positive outcomes of using AI tools, the advertisement campaign can promote acceptance and adoption of these technologies in mental health care."*

4.10 Collaboration and Integration with Medical Professionals

One important theme that was noted within those interviews is that two out of the nine participants that were interviewed suggested a collaboration of AI facilities with medical professionals. One student evidently supported collaboration through; *"...if AI can provide the option for the actual psychologists and psychiatrists to be connected to the prospectus of patients that's the only way I see humans collaborating with AI."*

Six participants spoke about how, in their opinion, AI therapies expansion would not pose a threat to the job of already existing professionals, one agreed that it might be a threat, but this idea of integration of two of the participants was impressive. It is interesting to note that one of those two participants is a medical student who said, *"AI algorithms can also analyze large amounts of data to identify patterns and trends, leading to more personalized and targeted treatment plans. Additionally, AI can assist healthcare professionals in making more accurate diagnoses and treatment recommendations".* Their suggestion was that since, currently, there is an inability of AI to replicate human emotions, it could be more effectively used in diagnosis and for the best possible remedies suggestions by mental health professionals while they help their patients achieve the best results and move into a healthy and stable life. This collaboration could be groundbreaking.

4.11 Limitations of Research

There are several limitations of the research. One of the limitations is that the study is focusing on one group of youth, that is Gen Z studying in universities. The study can involve Gen Z studying in colleges and schools, or working, to gather data from different mindsets.

Secondly, the study is very specifically attentive towards students of Islamabad. Further research can involve participants from other cities and regions of Pakistan with different cultures as there is a considerable difference in cultural values and living standards among different regions which limits the scope of our study. Not only this but similar studies can be conducted in other eastern and western countries for better comparative analysis in future.

Another limitation of this research is that it is cross-sectional research where all the data is collected together at one point of time. Conducting longitudinal studies to look for new emerging themes and evolution of perspective of the participants would have also expanded the scope of the study, along with the fact that due to time constraints, there was also a limited sample size with a lack of broad diversity of participants. Any future studies that will be conducted can consider this limitation and expand accordingly.

Since this study is qualitative, no experiments were done but this topic can be studied from a quantitative perspective as well which would allow experimentation on participants (making them use AI powered mental health therapies) without conflicting any kind of harm to them. Such experiments will allow having a better and deeper insight into the changing opinions of participants about the topic by giving them real life experience and awareness about such applications.

5. Conclusion

The purpose of the study is to emphasize that even in less developed countries like Pakistan, Gen Z strongly support getting help and are more accepting towards the idea of seeking help from AI powered facilities. Although they are wary of the possible problems of it, they also hold a united opinion that with some improvements, and with the right use of these facilities, like that of collaboration with medical professionals, it would prove to be very effective in becoming the norm and would also have a very bright future within Pakistan. Along with the solutions that the students that were interviewed employed, it is important to also think of initiatives that could make a permanent change in societal perceptions as well as make a significantly positive impact. Some solutions to bring those changes would involve making educational reforms to be more informative about advanced technology, especially in terms of bringing more awareness of new innovations, like those in the field of AI.

A significant implication would be increased accessibility to underserved populations, people having limited access to mental health services. There should be marketing campaigns to not make it a taboo to talk about mental health or seek help for it. Considering all the suggestions, there should be cost-effective solutions offering affordable options which would help reduce economic barriers. It is essential to have more security settings which aid in privacy, consent, transparency, avoidance of repetitive responses, data handling with confidentiality and employing all those improvement suggestions to make these therapies a more personalized experience to make the transitions of professional help procedures a lot smoother.

Moreover, enhanced quality of care with 24/7 availability can be achieved through AI powered mental health services. Stigma reduction through anonymity encourages those reluctant to seek help without any societal judgment. Personalization through tailored interventions allows AI to analyze data which helps address specific needs effectively by focusing on individualized care. Real-time feedback also helps adjust strategies based on user responses resulting in more dynamic and responsive care. In order to improve mental health services, relevant trends can be identified and outcomes can be predicted through large scale data analysis. It also helps in early detection of symptoms for warnings and early intervention.

AI should augment not replace human mental health professionals creating an efficient mental health care system. It is essential to note that in case of an emergence of a new mental health illness, the treatment does not solely rely on just one source, AI developers would stay updated with it as a result of their collaboration with medical professionals. Understanding the extent to which patients trust AI mental health services is important for its adoption globally. The professionals training and supervising these systems will need to develop and implement standards related to the use of these services as well as maintain ethical standards for improving quality of care.

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