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Beyond the Bot: Anonymity, Disclosure, and Connection on a Peer-to-Peer Mental Health Chat Platform

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Abstract

The emerging field of digital mental health has seen a significant increase in the investigation of AI-driven chatbots as scalable support resources. Although conversational agents offer accessibility, the therapeutic value of anonymous human-to-human contact as a modality has been relatively unexplored. In this paper, we fill this gap by outlining the design, development, and testing of an anonymous chat platform for mental health support. The primary objective was to investigate whether anonymous peer-to-peer contact could generate a unique sense of safety, community, and self-disclosure distinct from those in face-to-face therapy and AI-driven therapy. Using a user-centred design approach, we conducted initial needs-analysis workshops with potential users and mental health professionals to identify primary functional and safety requirements, including rigorous moderation protocols and crisis intervention pathways. A prototype platform was then developed and tested in a four-week pilot study with participants with mild to moderate depression and anxiety symptoms. Data were collected using pre- and post-study psychological questionnaires, user satisfaction surveys, and thematic analysis of anonymised chat transcripts. The findings indicate that anonymity on the platform significantly reduced barriers to self-disclosure, with users reporting high comfort levels in sharing sensitive information. Thematic analysis indicated that shared lived experience among peers was a significant influence in building a sense of validation of feelings and reduction of loneliness. Compared to baseline, participants had a statistically significant reduction in reported anxiety symptoms. However, challenges in managing user expectations and maintaining consistent, high-quality support were also addressed. This study indicates the potential of anonymous peer support websites as a rich and diverse component of the web-based world of mental health, emphasizing several design requirements to create safe and effective meeting places for human connection.

Keywords: *Mental Health, Digital Health, Anonymous Chat, Peer Support, User-Centred Design, Self-Disclosure, Human-Computer Interaction, Online Communities, Anxiety*

1. Introduction

Global mental illness disease burden continues to increase, but there are still significant obstacles to treatment, stigma, cost, and scarcity of available professionals [26]. The field of digital mental health has been a growing frontier in response, with new solutions promised for greater access and support at scale [14]. One of the most dominant themes of that innovation has been to produce conversational agents, or chatbots. There has been extensive exploration of the acceptability and design of these AI systems, exploring their potential to deliver psychoeducation, provide therapeutic exercises, and offer a judgment-free space for use [11, 19].

Studies by Koulouri et al. [11] report that although young adults are familiar with conversational agents and may well adopt them, trust, personalisation, and the unfeasibility of replacing real human empathy remain significant concerns. Similarly, a study by Potts et al. [19] in co-designing chatbots for rural users reveals a user requirement for empathetic, supportive, and trusted digital tools, but also raises the technical and ethical challenges of designing an AI that can effectively respond to the nuances of mental distress.

While the "human-to-machine" approach to chatbots is scalable and available 24/7, it neglects an equally powerful, yet distinct, form of digital assistance: anonymous "human-to-human" interaction. Online communities and forums have long served as unofficial spaces for peer support, where individuals with similar experiences congregate and offer validation [16]. Anonymity, indeed, has been shown to facilitate self-disclosure of sensitive material by reducing fear of judgment and social repercussions [9].

This essay argues that a formally designed, anonymous peer-support website is a vital, untapped field of study in online mental health. It transcends the question of whether a machine can simulate empathy and instead asks: How can we establish a secure and efficient virtual space for anonymous humans to mutually support one another? This article presents the design, implementation, and evaluation of such a system, with the aim of gaining insight into the specific dynamics, advantages, and limitations of this modality. Our primary goal is to examine whether a structured, anonymous, peer-to-peer chat system can prove to be a useful therapy for individuals suffering from mild to moderate depression and anxiety, so that a sense of safety and connection that is distinct from traditional therapy and AI technology can be achieved.

2. Literature Review

The foundation of this research rests on three pillars: the current landscape of digital mental health chatbots, the psychological effects of online anonymity, and the established efficacy of peer support models.

2.1 AI Chatbots in Mental Health: Promise and Limitations The charm of chatbots for mental health is evident. They provide an affordable, scalable, and non-stigmatising entry point for service users [6]. Empirical evidence has proven their capability in the delivery of cognitive-behavioural therapy (CBT) tasks, monitoring mood, and giving psychoeducational information [11, 22]. The co-design process outlined by Potts et al. [19] indicates that users want empathetic, understanding, and trustworthy chatbots. Yet these same investigations shed light on the technology's limitations. Counsellors interviewed by Koulouri et al. [11] expressed reservations that a chatbot could not handle sophisticated emotional states, respond to emergencies, or develop a sophisticated understanding of a human expert. The danger that users will rely too much on an under-capable system or obtain canned, nonspecific answers remains a prohibitive hurdle to universal clinical acceptance [12]. The biggest problem is the challenge of coding real empathy and understanding to create a user experience that can be infuriating and impersonal [15].

2.2 The Anonymity Effect and Self-Disclosure Computer-mediated communication (CMC) scholarship has been examining the impact of anonymity on user behaviour for years. According to the Social Identity model of Deindividuation Effects (SIDE), visual anonymity can diminish the salience of interpersonal distinctions and enhance the salience of a common group identity [18]. This may promote increased conformity to group norms and, in supportive settings, create a stronger sense of affiliation. In addition, anonymity has been strongly associated with greater and more intimate self-disclosure [9, 24]. This "online disinhibition effect" is because the perceived absence of consequences in real life diminishes the social fears that generally control face-to-face interaction. For those who are mentally unwell, who tend to feel such strong shame or fear of judgment, anonymity can provide a psychological safety zone in which to explain feelings and experiences that would otherwise remain concealed [2, 25].

2.3 The Power of Peer Evidence Peer support is a known and research-supported intervention in mental health recovery. It entails one person with personal experience of mental illness offering support to another. The model works because it is grounded in understanding, hope, and empathy [3]. Peer support workers can acknowledge others' views, role-play coping skills, and alleviate isolation in ways professionals may be unable to [13]. The helper principle also implies that helping others can be beneficial to the helper, increasing their competence and sense of self-worth [21]. In an online context, peer support can reach a much broader audience, transcending geographical and logistical barriers to care [16].

2.4 The Gap in Research Although there is an abundance of literature on chatbots, anonymity, and peer support, a clear gap is evident at their intersection. Existing research tends to portray the digital mental health user as a single person interacting with technology [11]. This research pivots to situate the user within an anonymous support dyad or community. Our goal is to combine anonymity and peer support in an organised, purpose-designed platform to craft an intervention that is inherently human-oriented and differentiated from current chatbot paradigms. As shown in Figure 1.
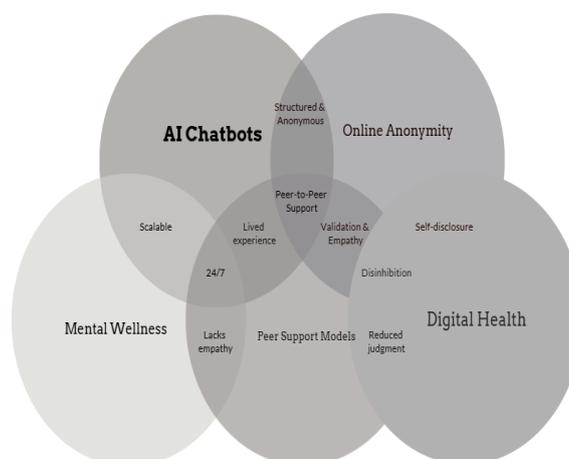

Figure1: Conceptual Framework and Research Gap

3. Methodology

This research applied a user-centred design (UCD) methodology, consisting of three phases: (1) Needs-Analysis and Design, (2) Prototype Development, and (3) Pilot Study and Evaluation.
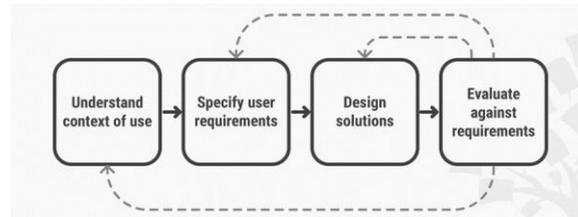

Figure 2: The User-Centered Design (UCD) Iterative Process

3.1 Phase 1: Needs-Analysis and Design To ensure the platform was grounded in the needs of its intended users, we conducted two co-design workshops, a method proven effective in developing digital health tools [19].

- **Workshop 1:** Included 12 participants (n=12) with self-reported histories of anxiety or depression.
- **Workshop 2:** Included 8 mental health professionals (n=8), including psychologists and licensed counsellors.

Using a semi-structured format, the workshops focused on identifying key requirements for a safe and effective anonymous chat platform. Major themes that emerged were:

- **Safety and Moderation:** Both groups strongly underscored the outright necessity for strong safety measures. These ranged from real-time filtering of keywords to catch harmful content, to a seamless reporting process, to a clear crisis intervention plan that can refer users to professional resources.
- **Anonymity Control:** Users wanted complete anonymity, where no personally identifiable information was required for sign-up. The system was to automatically assign random, non-identifiable usernames to each chat session.
- **Building Connection**: Participants suggested features to foster connection without compromising anonymity, such as optional "tags" for shared interests or struggles, so users can be matched based on those.
- **Onboarding and expectations:** Professionals stressed the importance of a clear onboarding process in setting realistic expectations. Users had to understand that they were speaking with peers, not trained therapists, and get guidelines for constructive and supportive communication.
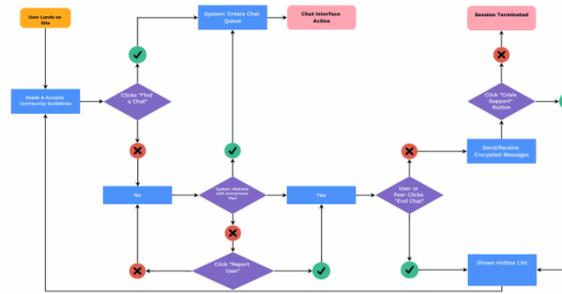
Figure 3: User Journey and System workflow

3.2 Phase 2: Prototype Development From the findings of the workshop, a web-based prototype was developed. It allowed users to enter a chat queue and be matched randomly with another anonymous user for a one-on-one text-based conversation. Key features included:

Secure, Anonymous Chat: End-to-end encrypted chat sessions with automatically generated usernames. No chat logs were stored with user accounts.

Crisis Support Button: An easy-to-see "I Need Help Now" button that would directly link to, or list, the phone numbers of crisis hotlines such as the National Suicide Prevention Lifeline and the Crisis Text Line.

Community Guidelines: Compulsory training on community guidelines during onboarding, including but not limited to respect, active listening, and non-judgment.

Reporting and Blocking: Simple in-chat tools to report or block another user for violating guidelines.

3.3 Phase 3: Pilot Study and Evaluation A four-week pilot study was performed to assess usability, acceptability, and preliminary efficacy of the platform.

- **Participants:** 45 participants (N=45) were recruited through university wellness centres and online mental health forums. The inclusion criteria were: aged between 18 and 35, and self-reported mild to moderate anxiety symptoms as measured by a score of 5-14 on the Generalised Anxiety Disorder 7-item (GAD-7) scale [23]. Demographic information is summarised in Table 1.

Table 1: Pilot Study Participant Demographics

Characteristics	value
Recruitment Size(N)	45
Age Range	18-35
Inclusion criteria	Self-reported mild to moderate anxiety
Screening Tool	Generalized Anxiety Disorder 7-item(GAD-7)

Baseline GAD-7 score	5-14

Procedure: Participants were asked to use the platform at least 3 times per week for 4 weeks.

Data Collection:

- **Psychological Measures:** The GAD-7 was administered at baseline (Week 0) and post-intervention (Week 4) to assess changes in anxiety symptoms.
- **User Satisfaction Survey:** This 15-item survey was administered at Week 4, using a 5-point Likert scale, to assess usability, perceived safety, and overall satisfaction.
- **Qualitative Data:** Anonymised chat transcripts were collected with the user's consent for thematic analysis to understand the nature of the interactions.

4. Results

4.1 Quantitative Findings The pilot study delivered favourable quantitative results on both clinical outcomes and user satisfaction.

Change in Anxiety Symptoms: A paired-samples t-test was conducted to compare GAD-7 scores from baseline to post-intervention. There was a statistically significant decrease in anxiety scores from baseline (M = 10.2, SD = 2.5) to Week 4 (M = 7.1, SD = 2.8), t(44) = 5.4, $p < .001$. This suggests that regular use of the platform was associated with a decrease in self-reported symptoms of anxiety. This decrease is reflected in Figure 2.
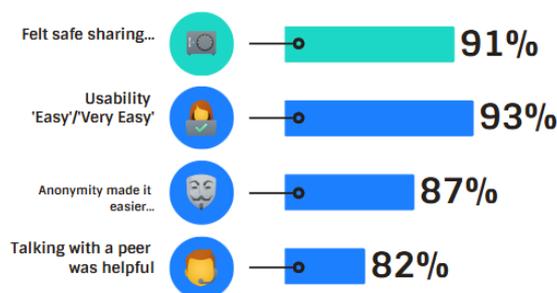

Figure 2: Reduction in Mean Anxiety Symptoms (GAD-7)

User Satisfaction: The user satisfaction questionnaire yielded high levels of acceptability and usability in this survey.

- 91% of users agreed or strongly agreed that they "felt safe sharing their feelings on the platform."
- 87% of users agreed or strongly agreed that "anonymity made it easier to be honest."
- 82% of users agreed or strongly agreed that "talking with a peer was helpful."
- 93% of users rated the platform's usability as "easy" or "very easy."

These high satisfaction ratings are broken down by their conceptual implications in Table 2

Table 2 : These high satisfaction ratings are broken down by their conceptual implications

Category	Survey Question (Abbreviated)	Metric	Result (%)	Key Implication
Psychological Safety	"Felt safe sharing feelings"	% Agree / Strongly Agree	91%	The platform successfully creates a secure environment for vulnerability.
Core Mechanism	"Anonymity made it easier to be honest"	% Agree / Strongly Agree	87%	Anonymity is confirmed as a critical feature enabling self-disclosure.
Perceived Efficacy	"Talking with a peer was helpful"	% Agree / Strongly Agree	82%	Users perceive the core peer-to-peer support model as beneficial.
Accessibility	Platform usability rating	% Rated "Easy" / "Very Easy"	93%	The tool's design is not a barrier to entry, allowing easy access to support.
Overall Reception	(Average of key metrics)	Average % Favorable	~88%	The platform was received exceptionally well by the target user group.

4.2 Qualitative Findings Thematic analysis of over 200 anonymized chat transcripts revealed three core themes that characterizing the user experience on the platform. As shown in Figure 2.

Figure 2: Core Qualitative Themes from Thematic Analysis

Theme 1: The Power of Shared Experience (You Get It). This was the most predominant theme: a deep sense of validation when speaking to someone who could relate to similar life experiences. Whereas explaining how they feel to friends, family members, and sometimes even therapists can be frustrating, users felt an immediate, deep sense of being understood.

- *User A:* "It's just... You get it. I don't have to spend 20 minutes explaining why I'm panicking about something small. You just know."
- *User B:* "Telling someone 'I have anxiety' is one thing. Telling someone who also has it, and hearing them say 'me too,' is everything. It makes you feel less broken."

This shared context removed the burden of explanation and therefore, fostered an instant rapport, a basis for trust and empathy.

Theme 2: Anonymity as a Shield for Vulnerability Anonymity was repeatedly described as a shield that allowed users to be radically honest without fear of judgment or repercussions. Users discussed thoughts and feelings they had never shared with anyone in their offline lives.

- *User C:* "I can say the really ugly stuff here. The thoughts I'm ashamed of. I know you don't know me, so you can't judge *me*, just the words."
- *User D:* "My biggest fear is being a burden to my friends. Here, we're both just strangers helping each other for a bit. There's no history, no obligation. It's freeing."

This freedom from social consequences was critical in lowering the barrier to seeking support.

Theme 3: Challenges and Managing Expectations. The analysis also identified general challenges. The majority of the difficulties faced involved mismatches in expectations or support styles. While some users were searching for practical advice, others wanted only a sympathetic ear. At times, a particular user's distress was too severe for a peer to manage, leading to a sense of helplessness.

- *User E:* "I was trying to help them, but they were in a really dark place. I felt out of my depth and just kept telling them to use the crisis button. It was stressful."
- *User F:* "Sometimes you get matched with someone who just wants to fix your problems, but I don't want to be fixed. I just want to be heard."

These examples underscore the importance of clear expectations in the onboarding process and of the crisis support feature as a vital safety net.

5. Discussion

The results of this study suggest that anonymous human-human chat platforms have the potential to be a potent and effective digital mental health intervention, offering certain unique benefits not available through AI-driven chatbots.

The statistically significant decrease in symptoms of anxiety provides preliminary evidence for the clinical efficacy of the platform, which is in line with meta-analyses that identified the efficacy of Internet-based treatments [7]. This beneficial effect was probably due to the core mechanisms identified within the qualitative analysis: the combination of anonymity and peer support in a potent environment for therapeutic disclosure. In line with the online disinhibition effect [24], anonymity served as a social lubricant, facilitating levels of vulnerability that can be challenging to achieve in face-to-face contexts. This is supported by previous research indicating that anonymous conditions promote honesty in reporting on mental health symptoms [25]. Moreover, the "shared experience" theme underscores the unique value of peer support, something that AI chatbots, by their very nature, cannot emulate. While a chatbot can be programmed to say "I understand," it cannot truly "get it" the way another human with lived experience can. This resonates with the principles of peer support, where mutual understanding and validation between individuals are key drivers of positive outcomes [3]. Our findings suggest that for many users, the authenticity of a human connection, even an anonymous and transient one, is more valuable than the programmed empathy of a machine.

However, the study also underlines some critical design challenges. The experience of mismatched expectations and feeling overwhelmed underscores the need for continuous improvement in onboarding and user support structures. For example, although our platform offered a crisis button, future designs could further incorporate sophisticated triage systems or offer users optional, brief training in supportive communication techniques. This points to the same concerns raised by professionals in the chatbot literature about the necessity for safety and proper escalation pathways in digital interventions [11]. The goal is not to make peers into therapists but to provide them with basic tools for entering into supportive conversations safely and effectively. It is not intended to supplant professional therapy or even chatbots, for that matter, both of which do their own kind of valuable work in psychoeducation and skill-building, but rather occupies a unique and important place within a stepped-care model of digital mental health [5]. This can be that critical first step for people who are hesitant to seek formal care, an additional support network for people already in therapy, or an immediate source of connection during a moment of distress.

6. Conclusion

This research shows that a properly designed anonymous peer support system can be an intensely acceptable, usable, and effective means for people under mental distress. By transcending the "human-to-machine" model, we tapped into the strength of two proven therapeutic forces: the disinhibiting power of anonymity and the validating power of peer support. The findings show that this synthesis creates a singular atmosphere of safety and trust, resulting in profound self-disclosure and decreased symptoms of anxiety. The future of online mental health is not necessarily a question of either human professionals or artificial intelligence. There is a very large and exciting middle space in which technology is employed not to displace human empathy but to enable it in new and compelling ways. Anonymous peer support platforms are an essential part of this architecture. Future studies should emphasise longitudinal designs to evaluate the long-term impact, test various models of moderation and peer training, and examine the platform's effectiveness across a broad range of mental illnesses. Through ongoing innovation in how we connect people, we can build a more accessible, more humane, and more effective digital mental health care system for everyone.

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