



Learning to Become a Volunteer Counselor: Lessons from a Peer-to-Peer Mental Health Community

ZHENG YAO, Carnegie Mellon University, USA

HAIYI ZHU, Carnegie Mellon University, USA

ROBERT E. KRAUT, Carnegie Mellon University, USA

Online peer-to-peer therapy sessions can be effective in improving people's mental well-being. However, online volunteer counselors may lack the expertise and necessary training to provide high-quality sessions, and these low-quality sessions may negatively impact volunteers' motivations as well as clients' well-being. This paper uses interviews with 20 senior online volunteer counselors to examine how they addressed challenges and acquired skills when volunteering in a large, mental-health support community - 7Cups.com. Although volunteers in this community received some training based on principles of active listening and motivational interviewing, results indicate that the training was insufficient and that volunteer counselors had to independently develop strategies to deal with specific challenges that they encountered in their volunteer work. Their strategies, however, might deviate from standard practice since they generally lacked systematic feedback from mentors or clients and, instead, relied on their personal experiences. Additionally, volunteer counselors reported having difficulty maintaining their professional boundaries with the clients. Even though training and support resources were available, they were underutilized. The results of this study have uncovered new design spaces for HCI practitioners and researchers, including social computing and artificial intelligence approaches that may provide better support to volunteer counselors in online mental health communities.

CCS Concepts: • **Human-centered computing** → **Empirical studies in HCI**.

Additional Key Words and Phrases: mental health, peer support, online health community, volunteer

ACM Reference Format:

Zheng Yao, Haiyi Zhu, and Robert E. Kraut. 2022. Learning to Become a Volunteer Counselor: Lessons from a Peer-to-Peer Mental Health Community. *Proc. ACM Hum.-Comput. Interact.* 6, CSCW2, Article 309 (November 2022), 24 pages. <https://doi.org/10.1145/3555200>

1 INTRODUCTION

People with mental health concerns are increasingly turning to their peers for help instead of professional clinicians due to the cost of therapy and their own availability [20]. Prior research has shown positive outcomes in the use of non-professionals to deliver mental health interventions: although not conclusive, a recent review indicates that peer support groups for young people reduce anxiety [1], and users reported that peer support services are as helpful as traditional psychotherapy services [5]. Particularly, online peer counseling services have flourished in recent years[4]. For example, the support service we examine in this work, 7Cups.com, has supported nearly 40 million clients since 2013 and has attracted 320,000 volunteer counselors¹.

¹<https://www.7cups.com/about/research-stats>

Authors' addresses: Zheng Yao, zyao2@cs.cmu.edu, Carnegie Mellon University, USA; Haiyi Zhu, Carnegie Mellon University, USA, haiyiz@cmu.edu; Robert E. Kraut, Carnegie Mellon University, USA, robert.kraut@cmu.edu.



This work is licensed under a Creative Commons Attribution International 4.0 License.

© 2022 Copyright held by the owner/author(s).

2573-0142/2022/11-ART309

<https://doi.org/10.1145/3555200>

Yet, the quality of the help people receive from online peer counseling services varies and depends on the skills of the volunteer counselors who staff them. Unhelpful therapist behaviors, such as a rigidity in therapeutic approach, a lack of knowledge, or advice-giving or decision-making on behalf of clients may make clients feel disempowered, silenced, or devalued [15, 57]. Prior work has extensively studied the development process that leads to the making of successful professional psychotherapists (e.g. [8], [58]). Volunteer counselors, however, typically do not have the rigorous professional training of their offline counterparts [53]. For example, volunteer counselors in successful suicide prevention hotlines may have only two days of training [21], and most participants in online health support groups receive no training at all [35, 61]. Most of the commonly adopted psychotherapy training methods, such as clinical supervision and role play, are not used to train online volunteers [62]. There is limited understanding of how online volunteer counselors acquire skills as they evolve from novice to more experienced counselors. This understanding could inform the techniques and tools designed to help volunteer counselors deliver higher-quality therapy and to cope with the stresses associated with psychological counseling.

Most HCI research on online peer support looked at the strategies associated with better outcomes [2, 12, 47, 53], but very little has examined the development of the skills of individual counselors and how they learn to be effective. To fill this gap, we conducted an interview study to understand the experience of volunteer counselors in the context of 7 Cups of Tea - a peer support community for mental health. We found that, although the mostly-text-based training materials and interactive exercises used by 7 Cups helped volunteer counselors understand relevant therapeutic knowledge and get started in applying skills when talking to clients in need, this material was not sufficient either in preparing volunteers to master technical skills for counseling or in ensuring their own mental well-being. Volunteers reported difficulties in translating declarative knowledge they learned from the training into conversational behaviors during counseling sessions. To overcome these limitations, they often had to develop alternative strategies of their own in their conversations with clients. Their strategies, however, usually come from intuitions based on their own experiences as a counselor or client or on the occasional and ambiguous feedback they received from clients. Without appropriate guidance, volunteer counselors could develop biased or even incorrect helping strategies without being aware of it. Additionally, volunteer counselors reported problems related to their own psychological well-being, including maintaining professional boundaries with clients and having conflicts with other volunteers and the 7 Cups organization. Failure to deal with these challenges could result in negative consequences for the clients and the volunteer counselors themselves.

Our paper advances knowledge regarding the challenges and learning of volunteer contributors in peer based online mental health communities. Our findings also provide new directions for HCI practitioners and researchers working to create a more supportive environment for online volunteer counselors. We propose to design authentic yet low-risk mock practices to help novice counselors practice and develop their conversational skills, to make experience-based knowledge more accessible to volunteers, to systematically improve feedback provision and mentorship, and to recognize the importance of volunteers' mental well-being."

2 RELATED WORK

In this work, we are interested in uncovering not only the challenges that peer counselors encounter but the processes through which they learn to resolve these challenges. In the following section, we examine theoretical literature surrounding the education and training of professional counselors, as well as learning in online communities, to discuss how an improved understanding of peer counselors' challenges and their learning strategies could fill in the gap of existing literature. We

finally examine existing empirical studies on online mental health peer support to contextualize how this work contributes to this problem space.

2.1 Skills and Learning of Mental Health Counselors

Psychological counseling is defined as a process in which trained counselors help clients improve their sense of well-being by providing them with emotional and social tools to alleviate feelings of distress in the context of a series of defined contacts [8]. In this subsection, we focus on two primary objectives of successful mental health counselors. First, counselors should be able to acquire various technical skills and deliver high-quality counseling sessions to their clients. Second, counselors must care for their own psychological well-being by learning to manage their own experiencing of high-stress professional scenarios.

Prior work identifies three important steps for counselors to acquire the technical skills related to the therapeutic process [6, 7]. Although these steps are based on an analysis of how professionals learn therapeutic skills, they are general and are likely to apply to volunteers as well. First, counselors need to understand “what” the corresponding skills are (e.g., understanding the components of motivation interviewing [43]). Second, they need to know when and how to apply this declarative knowledge in real-world situations (e.g., what to do when a client declines to open up in an active listening session). Counselors progressively accumulate larger and more detailed sets of condition-action rules to guide their problem-solving behavior in therapy sessions. As counselors gain more experience and expand their procedural knowledge repertoire, the application of procedural knowledge becomes more automatized. Third, counselors need to reflect upon and internalize their declarative and procedural knowledge so that it can be adapted to new and unfamiliar situations; because the therapeutic context continuously changes simply repeating prior successful strategies, instead of adapting them, might not work [6, 7, 40].

The aforementioned technical skills equip counselors with toolkits to provide valuable services to their clients, but by providing that service, counselors may be compromising their own psychological well-being. Both theory and practical evidence suggest that counselors’ core objective—being involved with mental health problems of others—can evoke within them considerable discomfort and even feelings of helplessness and fear [11, 28, 34]. For instance, clients’ pain and loss or their attitude (e.g., lack of cooperation) can all become potential emotional stressors to counselors, and counselors’ reactions to a client can be influenced by their own personal vulnerabilities and unresolved conflicts[27]. Countertransference can have a detrimental effect on therapy session quality as well as the counselors’ psychological well-being[28]. Counselors’ inability to work through their emotional reactions can eventually escalate and lead to burnout, contributing to difficulties in managing everyday stress in their personal lives. Thus, it is generally accepted that people working in the helping professions are themselves in need of emotional support [60]. Although the challenges we described above were mostly drawn from research on professional psychotherapists, it is foreseeable that volunteer counselors could face even more serious difficulties.

Training for mental health counselors varies widely, and there is no consensus on the best ways to teach counseling skills or which training methods produce the best outcomes [52]. Psychotherapy trainees in graduate schools, who often already have undergraduate degrees in psychology, are required to take semester-long courses designed and instructed by professors or expert therapists to develop helping skills [30, 31, 49]. Volunteer counselors in offline organizations often have the opportunity to undergo week-long training sessions before they begin their volunteer work as well. For example, volunteers for many crisis prevention hotlines may take multi-day training such as the Applied Suicide Intervention Skills Training program (ASIST), an fourteen-hour workshop that teaches participants to connect, understand, and assist persons at risk for suicide [21, 56].

Effective training can also be abbreviated. Many training programs teach health care professionals motivational interviewing, an effective, behavior-based form of talk therapy. At 7 Cups, the volunteers are also trained in motivational interviewing over the course of a one to two hour training period (e.g., [46]). Regardless of the duration of a counselor's training, however, supervision, mentoring, feedback, and coaching are generally widely recognized as important for counselor training [31]. For professional counselors or graduate school trainees, adequate supervision and debriefing sessions may be the most effective ways to either teach them counseling skills [31, 52] or to help them to manage their own emotions [11]. These techniques, however, are used less often in volunteer organizations, especially in online platforms. Since online volunteer counselors typically are generally not as rigorously trained as those who perform similar tasks offline [53], they might not be able to provide the quality counseling sessions that they desire and are likely to be uncertain about their abilities to perform effectively given their relatively brief training. Hence, there exists a gap in understanding the challenges and ways that online volunteers develop their counseling knowledge and skills; such understanding could, in turn, inspire the design of tool kits that support volunteer counselors' learning needs.

2.2 Learning in Online Communities

In this subsection, we discuss how members acquire knowledge in the setting of online communities. In general, learning in an online environment tends to be more informal in comparison to traditional, classroom-based learning activities [59, 64]. One popular method of online learning employs authentic and situated practice scenarios aligned with both the knowledge of a given domain and the real world outside the classroom [9, 22]. For example, student authors were able to efficiently improve their writing skills and domain knowledge by editing articles on Wikipedia and interacting with their audiences to obtain feedback on their work[18]. This kind of experiential learning not only helps students acquire technical skills but replicates the informal and social aspects of creating and sharing knowledge[25].

In studies of online learning, a number of HCI researchers have examined the socialization process—that is, the adjustment process for newcomers learning the information and attitudes essential to participating in an organization—in online communities[13]. These socialization tactics typically include introductions of rules and norms, self-guided tutorials, and realistic practice training in sandboxes [38, 45]. In addition to examinations of passive learning, research has also focused on how novices learned from other members within their online community. Novice members, the research has indicated, benefit from interacting with more experienced members and learning from their work(e.g., [26, 44]), but public reverts of new members' work might draw them away from participation in the community [24]. Cohort socialization— in which a community socializes a group of onboarding peers—has also proven to be useful in contexts such as Wikipedia[38]. While the socialization literature mostly focuses on new members' early adaptation of communal norms, another body of literature evaluates a long-term learning process, called Legitimate peripheral participation (LPP), through which newcomers assimilate into the community [10, 23, 32]. According to LLP, newcomers may begin assimilating themselves into a community through peripheral “lurking” and participation in non-critical tasks while working their way towards more integral community involvement in the course of a more intensive learning process [37]. For example, members of online fandom communities typically start with smaller tasks and then move to code directly critical functions after they gain more experience and pick up more technical skills [17].

Online peer support platforms such as 7 Cups provide researchers two unique opportunities for investigating how community members learn in online communities. First, members of these

communities might have limited access to other members' experiences or contributions. Due to the ethical parameters surrounding confidentiality on the platform, 7 Cups does not allow members to observe other members' sessions with clients. This means that listeners at 7 Cups cannot directly learn from the example of their peers, and more experienced listeners cannot correct or redirect peer listeners who deviate from 7 Cups' recommended scripts. Therefore, it is important to understand how members learn in communities in which their work is not publicly displayed. Second, members of peer support groups might have a limited number of clearly defined roles that newcomers can readily occupy. 7 Cups, for instance, strictly assigns the role of peer listener to new and old members alike, reserving other roles, such as mentors and community facilitators, for more experienced peer listeners. As a result of these restrictions, new members primarily get their hands dirty by starting conversations with clients, but this is, by no means, easy, intuitive, or incidental work. While many of the LLP-oriented communities represented in prior literature allow new members to scaffold learning experiences through the completion of progressively complicated tasks (e.g., crowdsourced tagging [33] and editing[23]), current research does not account for the sink-or-swim experiences of members in communities such as 7 Cups, which essentially teach new members complicated skills (e.g., counseling) by throwing them directly in the deep end of the pool (e.g., live conversations with clients in distress). To sum up, prior literature agrees that members of online communities typically learn by observation and practice. However, there is less understanding of how members learn complicated tasks when direct observation is limited.

2.3 Online Peer Support for Mental Health

Online health support groups are characterized by immediate availability (i.e., 24/7 access without geographic restriction) and the anonymity of members [42] for support provision. A number of online health platforms and communities, such as Talklife², 7 Cups³ and SilverCloud Health⁴, specialize in helping users cope with mental health problems [4]. Clients using these platforms can take advantage of group therapy through forums or chat rooms, blogs that allow them to create personal journals of daily experiences, and one-on-one therapy sessions with volunteer counselors or professional psychotherapists.

Prior work has provided some evidence for the effectiveness of the one-on-one conversations hosted by peers. For example, a survey study with 2700 7 Cups users indicated that users showed high satisfaction with the support provided by volunteers [5]. Moreover, the findings also suggested that receiving support from volunteers rather than professionals made users feel that the support was more genuine. Despite these suggestive findings, there are few rigorous clinical trials showing the effectiveness of these online mental health support services [1]. Since their success is likely dependent upon the skills of their volunteer counselors, concerns remain about how to support volunteers' skill development.

In the context of online peer counseling, prior HCI work has focused more on the specific, in-session strategies volunteer counselors use that are associated with better outcomes after sessions [2, 12, 47, 53]. Prior work found that successful counselors tend to adapt their linguistic style to those of their clients and monitor the progress of the conversation [2]; concrete, positive and supportive messages from volunteers are associated with better outcomes for the clients [12]. HCI researchers have also designed tools to encourage peer counselors to incorporate these successful strategies in their sessions. For instance, O'Leary and colleagues examined the use of tools such as guided prompts in peer support conversations to evaluate the tradeoffs between prompted and

²<https://www.talklife.co/>

³<https://www.7cups.com/>

⁴<https://www.silvercloudhealth.com/>

unprompted conversations. Peng and colleagues investigated the application of in-situ writing assistance in improving the quality of support in mental health communities [51]. While these studies have been helpful in identifying and promoting effective strategies of peer communication and support, more research is needed to understand how competent peer counselors learn and internalize these strategies while overcoming any challenges that disrupt their learning. Similarly, while researchers have stressed the importance of protecting volunteer supporters' psychological well-being [50] and the need for training modules that help to protect peer supporters [47], we still need a deeper understanding of how volunteer counselors learn to cope with the stress associated with psychological counseling. We aim to fill this gap in the literature by examining peer supporters' current practices and tools for learning and by proposing design guidelines that could potentially facilitate their learning. Thus, we ask the following research question:

- **RQ 1:** What challenges do online volunteer counselors encounter as they interact with and provide support to their peers in online mental health communities?
- **RQ 2:** How do online volunteer counselors learn to cope with these challenges?

3 METHOD

To answer these questions, we employed a qualitative approach to explore how volunteer counselors improve their session quality and how they maintain their own commitments to volunteer work. In this section, we first introduce our research platform before describing the data collection procedure and the analysis methodology.

3.1 Research Site

7Cups.com is an online psychological support service where clients (known as members) with a variety of mental health problems participating in text-based chats with volunteer counselors (known as listeners). As of February 2021, 7 Cups had over 200,000 trained listeners from 189 countries providing support in 140 languages to over a million people a month. Demand for the 7Cups service has increased significantly since the COVID-19 outbreak in 2020, increasing from approximately 14,000 conversational sessions between members and volunteer counselors per day before March 2020 to 20,000 per day after March 2020.

All listeners at 7 Cups are required to complete an initial, knowledge-oriented training program before they are allowed to connect with clients in listening sessions. The training program consists of 1) didactic materials teaching active listening and similar skills with an accompanying test in which listeners are asked how to apply active listening skills in response to a scenario; (2) a short practice chat with a client bot who presents a problem. The trainee selects responses from a preformed list and is given feedback and explanations for correct or incorrect answers; and (3) an honorific oath to act in a compassionate and supportive manner. The content of the training course was based on academic guidance [30] and is presented using texts, images, and videos. For example, when listeners were trained about how to conduct reflection, they were taught to "repeat back to the person the facts that they have just shared" with the goal of "drawing out more of the person's story by showing that you are listening". They are taught to ask open-ended questions to "understand the person's experience," "focus the conversation," and "guide the person to greater understanding." Volunteers were also given guidance on how to handle emergency situations, including circumstances such as suicidal ideation that require an escalation to a professional. In addition, 7 Cups training informs listeners about the potential risks associated with offering help on the site (e.g., trolls and sexual harassment). The initial online training is meant to take between 45 minutes to 1 hour to complete all required modules, although listeners can go through it more quickly due to the multiple-choice format of testing. The original training materials remain accessible to volunteer counselors throughout their participation.

In addition to the initial training, 7 Cups provides opportunities for volunteers to continue developing their listening skills and obtain support when necessary. For example, 7 Cups offers an optional, continuing education program featuring specialized mental health topics (e.g., anxiety, depression, and eating disorders), problems of daily living (e.g., loneliness, bullying, and family stress), and advanced counseling skills such as "Active Listening In-Depth." A badge system provides listeners an incentive to take further training. Besides the training programs, 7 Cups has community-based resources through which listeners can obtain support from one another. A real-time, listener-only chat room is available to all volunteers, where listeners can seek and provide peer support to each other when necessary. Listeners are also encouraged to sign up as members and start one-on-one chats with peer listeners when they are emotionally triggered during counseling chats. Also, 7 Cups has forums that allow asynchronous communication as well as subforums dedicated to specific mental health issues, like depression and eating disorders. On these forums, volunteer counselors can learn about specialized listening techniques while socializing with one another. Finally, listeners can be matched to more senior listeners and mentors who have received additional training that allows them to guide others in improving their session-specific skills while helping them address the more general problems of being a volunteer.

3.2 Data collection and analysis

To capture the richness and depth of volunteer counselors' experiences, we employed a qualitative interview method and conducted 20 semi-structured interviews with 7 Cups listeners to understand their learning experience. In addition, the first author went through listener training and participated in multiple sessions with client members. This study has been reviewed and approved by the university's Institutional Review Board. All participants have provided their informed consent to participate in the interviews, to have their voice recorded, and to have the conversation analyzed.

With permission from 7 Cups administrators, we recruited volunteer counselors who were over 18 years old to share their experience as listeners. The recruiting message consisted of a post in a 7 Cups' forum for listeners and a site-wide announcement. Twenty listeners (5 male, 15 female) responded to our recruitment message and signed up for an interview. Among the 20 interviewees, no interviewee was a professional psychotherapist, and only two interviewees were attending academic programs related to psychology or social work. Of the two attending relevant academic programs, neither had begun their degree program before becoming a volunteer counselor at 7 Cups. The other 18 interviewees had no formal training in psychotherapy. Each interviewee had been a 7 Cups listener for at least three months and they were relatively active listeners; they reported that their frequency of 7 Cups participation as listeners was well above average, ranging from once a week to multiple times every day. Additionally, twelve of the 20 interviewees had a "client account" as well as a "listener account," meaning that they had used 7 Cups to seek support for themselves in addition to providing support to other members on the platform.

Interviews, between 60 and 120 minutes, took place remotely via video conferencing calls or audio-only phone calls. Inspired by [31], we interviewed the 20 participants using a combination of critical incident techniques and more open-ended approaches. Using the critical incident approach, we asked participants to think about counseling strategies they learned in their listener experiences and specific incidents that helped them come up with these strategies. Specifically, we asked the participants to explain why and how these incidents facilitated their improvement as listeners. Prior work shows that volunteers mostly develop skills through what has been described as "largely invisible" informal learning[16], and thus they are likely to have difficulties making connections between learning outcomes and the experiences that lead to them. With this in mind, we also asked participants to describe, in an open-ended manner, how they had changed as listeners over their tenure on 7 Cups (e.g., compared with your first couple of sessions you've just described, do you

think you are a better listener now? Why or why not?). Participants also described positive and negative experiences they had (e.g., have you considered quitting 7 Cups? Why or why not?) in an effort to collect a wide range of experiences that may have influenced their counseling skills. We noticed data saturation (i.e., interviewees started to describe similar trends) in later stage of the data collection, but still finished the planned twenty interviews to make sure that no additional major themes emerged.

All interviews were recorded and transcribed. We chose to adopt a thematic analysis [14] to systematically investigate the interview data. Such exploratory methods of study allow us to go beyond mere observation and summary and may help us uncover more tacit themes. Throughout our qualitative investigation, we used our research questions to guide our analysis, as we sought to understand both the challenges that online volunteer counselors encounter as they provide support to their peers, as well as their learning process and coping strategies. The first author started an initial round of thematic analysis and uncovered two major categories in which volunteers improved, as counselors, over time: (1) learning counseling skills to deliver higher quality counseling sessions and (2) learning how to protect their own psychological well-being. The other authors read several transcripts and helped guide the coding process. The first author then re-visited the data and performed another round of open coding, grouping together 19 total subthemes. Example themes included "motivation for learning," "lack of client feedback," "reflection as a learning method," and "evaluations of the learning outcome." In the whole analysis process, the author team shared insights and exchanged ideas in their weekly reviews to ensure that the codes accurately and consistently reflect the data of our data.

4 RESULTS

In this section, we first describe listeners' general counseling experiences and reactions to existing training regimens before discussing the challenges and the negative experiences as volunteer counselors. In most cases, listeners responded positively to the training as they were able to leverage the active listening skills they learned in the initial 7 Cup training program (such as reflection and paraphrasing) to chat with clients seeking support. Interviewees reported that they were able to successfully provide support and encouragement to clients; these successful chatting sessions, in turn, encouraged the listeners to continue providing support to other members. After receiving positive feedback and after working with returning clients, the listeners began to believe their chatting sessions were effective.

However, volunteer counselors also faced challenges and negative experiences when providing support to others. Some challenges resulted from their abbreviated training and minimal experience—such as their lack of listening skills when they first started—were challenges they had anticipated; others, such as emotional turmoils or boundary management issues, were not anticipated. In fact, even the good counseling experience described above took time and effort, on the part of the volunteer counselor, to achieve. Below, we examine how volunteer counselors learn to deal with the aforementioned challenges in order to become more competent over time. Specifically, we examine how they improved their therapeutic skills and developed strategies to cope with the emotional distress associated with their experiences as listeners.

4.1 Skill development as a psychotherapist

4.1.1 *Volunteers counselors reported difficulties in translating the declarative knowledge from the training sessions into the conversational behavior they need to use in counseling sessions.* Interviewees reported that they often encountered communication challenges during chatting sessions due to their inexperience and lack of related skills as a counselor. Specifically, they mentioned feeling confused and dismayed when conversations were not heading

in a direction they desired, especially when the clients did not conform to their expectations of how they should behave in the sessions. For example, a client might not respond to interviewees' prompts, leading to unproductive conversations (e.g., "no matter what I said, the only thing he [the client] would reply, was 'I don't know'"). Clients might even critically challenge or confront the volunteers (e.g., "he [the client] was basically accusing me, like questioning my intention, doubting if I really tried to help").

While an experienced professional therapist might be able to handle challenges like these, either because they have been trained to do so or because they have successfully resolved similar issues before, volunteer counselors mentioned they often needed to improvise solutions to these conversational problems. When their solution didn't work, interviewees reported not knowing how to handle unanticipated situations. For example, P11 described a typical situation where she struggled when facing a client who was very emotional entering the chat:

"I had one member who was really angry at women, I guess... And he just... kept asking me, 'are you a woman? Are you a woman'. Then he said, 'you are a woman. You are a bitch'. It's hard to know what to say to him at that moment, really. It doesn't seem that anything you say will be helpful. "

Although volunteer counselors at 7 Cups were required to take the hour-long training session before they could start taking clients, the theoretical knowledge they gained from this initial training provided only general guidance without preparing them to translate that guidance into the specifics in their conversations with real clients. "After all, no one would prepare a script for me," said P5, "You know, when I was doing the [training] modules, I thought those were just straightforward, easy stuff. Like you need to show your understanding, you need to behave friendly, that kind of thing. But then I find that I have to express that with my words. Finding the exact words is much harder to grind."

Because volunteer counselors must devise counseling strategies on the fly (and also replicate or revise these strategies post-session), their learning is closely related to their reflection on experiences and conversations with clients. Their learning could be about technical knowledge (e.g., mechanism of bipolar disease after conversations with clients suffering from bipolar), perceptual skills (e.g., how to see beneath the surface of thoughts and actions of the client), or interpersonal skills (e.g., how to facilitate a conversation forward when in deadlock). Consistent with informal learning processes, such reflections and strategy development often took place incrementally and often outside of conscious awareness. Although some interviewees reported a specific incident that "clicked" and led them to think deeply, the majority of them could not recall a single significant incident that directly led to a strategy. Instead, they stressed the importance of accumulating experience. For example, P8 described how talking to similar clients many times helped her find an underlying pattern in the sessions:

"I found over the years of doing this that most of the time, the first question people ask is not the question they really want to ask. Or the problem they think they're having turns out to be a completely different thing when they look at it again. For example, like one of these kids, coming to me, be like 'the society is getting me down.' After talking to so many of them, I now know that they would not come here because of society but because of specific things in life. "

In general, the interviewees were in agreement that though the knowledge-oriented training at the start of their counseling journey was helpful in many ways, accumulating listening experience was and continues to be the key to developing counseling skills. The integration of these if-then strategies into a therapist's procedural knowledge is, indeed, often regarded as a key factor in the success of a psychotherapist [6]. Compared with trainees in psychotherapy, volunteer counselors

on 7 Cups relied primarily on informal, experiential learning. Of the twenty interviewees, only one interviewee reported that they had referred to formalized psychological knowledge (for example, training materials on motivational interviewing techniques) to hone their skills as a counselor. Another two interviewees mentioned that they turned to Google to search psychological terms that they did not understand. Only four participants mentioned completing additional training modules on 7 Cups to acquire more information about counseling. P7 compared their experiences learning from training modules with their experiences learning in counseling conversations with clients and spoke to the need for modules that better replicate the authenticity of live counseling experiences:

"I guess, since they [the 7 Cups training modules] are really information-oriented, maybe make them a little more empathy oriented. You could include things like snippets from things that people have to say about their own experiences with listening. But of course, I guess chatting with members is where you get those stories."

4.1.2 Volunteers improved their conversation skills through trial-and-error but struggled to systematically evaluate their strategies without reliable feedback. After devising a counseling strategy, interviewees also mentioned that they had progressively refined and elaborated on their strategies, often using a "trial and error" method to see which techniques worked and which did not. With repeated use, evaluation, and feedback, volunteer counselors were able to refine these strategies until they became relatively automatic and fluent. In addition, reflections also enabled the volunteers to discern in what context, under what conditions, and with what types of people particular strategies were useful. For example, P2 described how she developed her standardized way of closing conversations with clients:

"It was about different things I did, trying to figure out what worked in terms of how to close out a conversation. Whether it was helpful to say right away that 'I only have this amount of time' versus to let things go and then give the heads up that 'I'd only have that amount of time'. What was helpful in terms of reassurances that we could talk again, as well as trial and error to figure out what I was personally comfortable with, in terms of how long a chat I was comfortable taking, and how the person I talked to felt. Over time, I've got a pretty standardized language that I use in most cases, or when I'll flex based on who I'm talking to like in terms of age, in terms of what their style is, what they're struggling with [or] that sort of thing."

The trial and error learning model described by P2 is typical among the interviewees. While clients' feedback can be a good standard through which volunteer counselors validate or refute the strategies they use, such feedback does not seem to be common. Although 7 Cups members were asked to rate their volunteer counselors on a five-point scale, volunteer counselors had no access to this feedback. Unlike psychotherapy trainees, who often have mentors and supervisors providing feedback, volunteer counselors typically did not have these advising resources either. While a few interviewees mentioned direct, verbal feedback (e.g., "Wow, that really makes a difference," "Thank you. That is something I would have never thought about"), many others noted that they needed to interpret indirect signals or rely on their intuition to decide whether a chatting session was successful or not. P6 mentioned that she considered recurring sessions as a positive signal: "I have tons of repeat people who are like, hey, I need to talk about something else with you." Nevertheless, he also noted that these signals were sometimes ambiguous. "For someone who does not come back, it's hard to tell. Personally, I don't take that as a negative, really, but I won't know exactly how they feel."

Notably, that these strategies are heavily based on volunteer counselors' own experience and thus could be highly subjective and idiosyncratic. Volunteer counselors, especially experienced

ones, seem to be confident in their rationale for their strategies. Their insights usually came from their subjective feelings (e.g., "do I feel comfortable with this?") based on their experience as a counselor, the occasional and ambiguous feedback they received from clients, their own experience as a client speaking with listeners, their imagining of themselves as a client, or even their subjective judgements without a source of evidence.

Since listeners evaluate and develop listening strategies informed by their personal experiences, they will inevitably provide similarly personal responses to common situations. For example, interviewees reported a variety of unique strategies for dealing with clients who were unwilling to open up. While these diverse, personalized counseling strategies were helpful in many scenarios, failure to follow existing protocols sometimes led to severe consequences. Consider the case of clients mentioning the possibility of suicide. 7 Cups has clear policies when dealing with suicidal clients. The 7 Cups platform includes filters that automatically inform users using suicide-related language that 7 Cups volunteers are not trained to handle crisis situations and instead point them toward telephone suicide hot-lines staffed by people with extensive training. If a client expresses suicidal ideation in a conversation with a volunteer, 7 Cups policy insists that the volunteer immediately direct the client to a suicide prevention hot-line or www.suicide.org and disconnect from the chat using the script below.

"I can tell you are going through a very hard time right now. I encourage you to reach out to the resources I have provided for extra support. As a listener, I am able to show you empathy and compassion, but 7 Cups of Tea is not a crisis referral center, and I am not trained to help you through this difficult situation. In a few moments, I am going to leave the chat to provide you the space to reach out to the crisis centers. I am still more than willing to support you as your listener and will check in with you shortly."

Despite the clear prescriptions about how they *should* behave during these counseling sessions, interviewees reported substantial variation on how they *actually* behaved. Of the eleven interviewees who reported that they had dealt with suicidal cases, five reported that they followed the rules strictly, four mentioned they tweaked the rules based on their own understanding, and two expressed strong objection to the rule. For example, P15 indicated that she found the suicide rule legitimate because she thought she was not qualified to intervene in suicidal situations. She explained:

"I don't think there's anything wrong with the rule. Even I myself I don't think I could be in a situation like that and I know I'm not very helpful with those kinds of things, so I didn't have any problems. "

Others tried to follow the 7 Cup's guidelines in spirit while making modifications that allowed them to be more empathetic. For example, P7 followed 7 Cups' disengagement and referral guidelines but did not use the exact wording when disengaging because she tried to place herself in the client's situation and felt the default script was not sufficient. P7 explained her rationale:

"There was the protocol for that [suicidal] situation where you give them the number for suicide helpline in the chat. I would find if I were at their place, and I was saying all these things, and then a person just set messaging me a phone number and then ended the chat. That would be so damaging. And there has to be a better protocol, whether it's, you know, notifying the website of this person's ID or something, I don't know, but it just seems woefully inadequate. It would just be more alienating for the person than he probably was. So I didn't use these sentences word by word. I said things like, "I'm very sorry. You're going through this. I just said that you call this number. But there was nothing I could do because honestly, I think in that situation, that's like a liability."

Similarly, P6 also redirected suicidal clients to other resources, but she did not choose to immediately disconnect; instead, P6 chose to accompany the client when redirecting him. P6 discussed her approach below:

"I usually try to get them to go to the [suicidal hotline] website. But I don't want to just end the chat with somebody who's feeling like that... So I make sure that they go, like ask them questions about the site and stuff and they're gonna call somebody before I leave them. Yeah, I did redirect them, but I don't; I can't just like, leave somebody like that. You know, and I know I'm supposed to, I probably should, but it's been successful because people do get back to me and told me that they called on the site or whatever."

Although most participants described small modifications to 7 Cups' rules, two expressed strong objections to the rules. For example, P13 indicated that he did not feel comfortable following 7 Cups rules.

"I don't think that [the suicidal] rule was making too much sense. I mean, at least I felt like if I were the person, I'd feel totally abandoned. Like, having that kind of thought made me even ineligible for a chat. I think it's not about theories, guidelines, or whatsoever. It's more about my feelings as a person... I got it [a suicidal case] only once. The lady I talked to... I guess she did not come in and say she had those thoughts upfront, but she mentioned it when we were chatting. I think it was slightly different too. I just talked her through it, like I explained things like we all had that kind of moment, it's all gonna be fine. "

Another interviewee was even more explicit in objecting to the 7 Cups rules.

"Okay, well, I can either talk to this person, like I would to any other human being who's having a problem. Or I can ... hang up on them, right. I can say, 'No, I'm sorry. I can't talk to you. Go talk to this [hotline]. Bye.'... I can't do that. I mean, it breaks my heart when somebody blocks me from a suicidal person."

To sum up, the lack of feedback and mentorship means that peer counselors have to rely on their personal judgment and feelings to evaluate the outcome of their counseling strategies. Since such evaluation may be highly subjective, peer counselors might not be aware when they are applying ineffective strategies. Failure to comply with standardized practice could lead to fatal consequences when dealing with severe issues such as a client's suicidal ideation.

4.1.3 Peer support from other volunteer counselors is available, but not always. To deal with challenges they encountered, volunteer counselors sometimes also turned to peer listeners or even mentors for support, often when they were unable to improvise a solution themselves. The interviewees described such external support as most valuable when it was very specific and directly connected to the problem that they were facing. Sometimes they even received precise instructions about what to do. i.e., the exact words they should say to the client. For example, P15 described how she received real-time support from peer counselors when she encountered a deadlock in a counseling session:

"When she [the client] stopped messaging me back, I was in the listener chatroom. Like, I think something was wrong. What do I do? I was freaking out. The people [other listeners] were like, if she wants you to be back, she'll message you back. They told me to say, you know, 'I'm sorry if what I said offended you. If you ever want to talk, I'm free. 'And then I sent that message to her. This was probably why she messaged me back."

Prior literature has highlighted the importance of mentors and supervisors providing timely feedback and modeling. Similar to psychotherapy trainees, volunteer could, occasionally, get

support from fellow volunteers and they express appreciation for any support that they were given. However, this kind of support was not always available to volunteer counselors on 7 Cups. Although 7 Cups had a variety of volunteer and paid roles to support listeners, such as mentors, ambassadors, and community managers, the mentorship support at 7 Cups is almost entirely comprised of other volunteers and is loosely organized (e.g., "I talked to my mentor only once after I was assigned. Just greetings. I don't know where I could start with her...and she did not reach out to me either.") Interviewees reported that there were no guaranteed real-time solutions from the peer group chat rooms or from mentors because volunteers in these settings were not obligated to show up and provide support. In fact, interviewees indicated that it took them a substantial amount of time and counseling sessions before they figured out the potential resources that they could draw upon for support. P10 talked about his situation when he was new to 7 Cups.

"In the beginning, it was all chats [with the clients]. I did one after another without knowing I could get connected with other listeners. I tried to explore some options available. I saw the forums. But it was after, I think, a couple of weeks after that till I found the group chat rooms. Later I found that really helpful."

4.2 Learning to protect volunteers' psychological well-being

4.2.1 Volunteer counselors reported challenges of maintaining professional boundaries with clients. Interviewees reported having issues with maintaining their professional boundaries with the clients. While prior literature has highlighted how boundary violations could potentially harm the clients [3, 54], our participants felt that preserving appropriate professional boundaries is difficult and emphasized how boundary violations posed risks to volunteers themselves.

One typical example of boundary violation occurs when clients request volunteer counselors' personal information (e.g., age, gender, marital status, and contact information outside 7 Cups). Although 7 Cups has implemented a number of filters to prevent such requests from going into the chat, interviewees still reported encountering these requests. This posed a conflict for volunteer counselors who wanted to express friendliness and warmth to support the client while simultaneously maintaining their own privacy and adhering to 7 Cup's policies to abstain from off-platform contact with clients. P4 described this conflict when a long-term client asked to connect on Facebook.

"I was helping that guy who had an issue with his teachers in high school. At the point when he asked [for my information], we had chatted...I think at least five times, all on 7 Cups. I thought it was natural for him to ask because we were just talking about things like Facebook. Then he asked me if he could add me [as a Facebook friend]. I don't think he meant anything else, but I was aware of 7 Cup's rule [of no offsite contact]. I think it's quite possible that he may not know it, but I did not know an appropriate way to bring the rule up. So I thought like I was helping him anyway. I don't use Facebook a lot anyway, so it's probably gonna be OK."

A related boundary management problem involved volunteers devoting more time to a client than they wanted to. This is not a common type of boundary violation for a professional counselor, mostly because their counseling service is remunerated with an hourly fee, whereas volunteer counselors provide a free service. Nine of the 20 interviewees mentioned that they had struggled handling chat sessions that went too long, especially when they were new to 7 Cups. Five of them admitted that they had considered leaving the site because of the problem. P2 described the problem this way:

"When I first started 7 cups, I was literally letting someone talk with me for like four hours at one time. You know, we would resolve the issues they originally came for, and

they would just go on and on and on. And I didn't know how to set my own boundaries to say, hey, I need to pull away and do my own life, you know what I mean? And I need to eat or use the restroom."

In both cases above, participants described difficulties turning down clients' requests and thus failed to protect their own boundaries, even when these requests went against their own wishes. Interviewees felt they were not taught appropriate ways to deliver this message and thus often feel uncomfortable when rejecting the client. They expressed a lack of confidence in their communication skills, fearing that inappropriate expressions of rejection could end up hurting the client, which was inconsistent with their altruistic goals.

"When I first started, I was in high school. I was on 7 Cups all the time during class. Oh. And there were chats I would have liked going all day. I later realized that you know, probably shouldn't have even had. But at the time, I was...maybe very engaged in the conversation. There might be a part of me who wanted to call it a day, but I really did not know how to deal with it, like how to properly say it out without causing harm. "

The boundary management challenge is especially difficult when it emerges from a counselor's experience with a long-term client with whom they have had repeated sessions. Because of the nature of therapists' involvement as support providers, clients often become very attached to and sometimes develop close relationships with their therapist [19]. At 7 Cups, clients and counselors could reach out to each other directly after they chatted at least once. Thus, in addition to requesting extensions for existing chat sessions, long-term clients could "keep nagging" the volunteer counselors whenever the platform indicated that they were online at 7 Cups until the counselors got back to them. Participants also reported difficulties turning down a client they considered a friend; they experienced role conflict when trying to be a friendly peer to their clients and a counselor. Twelve of our twenty participants indicated that they felt they were friends with the clients to some extent, four of whom believed that the friend relationship was stronger than the counselor one. Participants described a sense of awkwardness and embarrassment as if they were turning down a friend: "You know, it's [refusing to disclose Facebook information] almost like say 'No' to your buddy. I just felt really bad." (P7)

Maintaining professional boundaries is not an easy task, even for professional counselors. 7 Cups' earliest training models provided volunteers guidance about internet safety and self-protection. They informed volunteers about 7 Cups rules that would help them protect their boundaries (e.g., no-offsite communication), and they identified support channels available in the event that they needed to report clients actively violating community rules. In subsequent training modules, 7 Cups also provided a specialized module called "Boundary," which covered the theoretical definition of boundary and potential risks when boundaries were violated. Several tips for how volunteer counselors could manage their boundaries with clients were also presented but were rather vague. A sample strategy in the training module is presented below:

"Identify the Symptom. Look at your own life situation and see where boundary problems exist in your relationships. Ask yourself, 'Where have I lost control of my property?' Identify those areas and see their connection with the family you grew up in."

Among the 20 interviewees, only one (P8) mentioned that she referred to this training module, and she noted that such written materials were insufficient for complicated issues like this, and mentorship was preferred.

"If you don't put these boundaries, you will continue having this go on, and then we have these amazing ambassadors who actually took time and taught you. They didn't

throw a link out and be like, 'you read this.' They actually taught you and had practice tests and stuff like that. So that was very helpful. The downside is, you know, we don't have a lot of folks around to take the time to teach."

Other participants did not recall getting help with boundary management and insisted that they had to figure out corresponding strategies themselves. They indicated that they were in sink-or-swim mode before they figured out how to manage boundaries for themselves. For example, P3 reflected: "If I did not learn them [the coping strategies] myself, I probably was gonna get burnt out. People would keep taking advantage of me all the time. So luckily, I was able to handle that eventually."

Participants described their learning experience as mostly informal, for they felt the knowledge "was there" after they had accumulated sufficient counseling experience. This view is consistent with informal learning processes, which are largely implicit; unless they are explicitly probed, learners who engaged in informal learning tend not to make connections between their learning outcomes and the learning they acquire through experience [41].

"So, sometimes it was like, okay, I would start typing to say, hey, listen, I gotta go. And then they would start typing a whole another paragraph. And I'd have to read that and respond. You know what I mean? So it was like a never-ending cycle. So finally, I just realized I've got just to say no, when I need to do something and just go. " (P18)

4.2.2 *Hearing about clients' problems reminded volunteer counselors of their own.* Consistent with prior research, our interviewees reported that they are able to be more empathetic when they and their clients shared similar experiences [5]. While empathy is a strength for peer counseling, interviewees also mentioned that they experienced distress when hearing about client problems that reminded them of their own; they call such problems "personal triggers". Such triggers were often related to volunteer counselors' past personal histories and included discussions of sexual assault, alcoholism, and eating disordered behavior. While sharing similar experiences with their clients could facilitate empathy for many volunteers, it could also generate negative emotional experiences for the counselors. Volunteer counselors could be particularly vulnerable to this, as many of them rely on their personal experiences and a strong shared identification with their clients in order to provide emotional support. P20 recalled her experience chatting with a client about sexual assault while contending with her own history of sexual victimization.

"I was sexually assaulted in the past. So when the member came to me to chat about that, my own feelings came up too strongly. I was hoping that I could help her, but I realized that I simply could not. Even thinking about it made me...you know, go back to that scene. Later I figured that this topic might be one of my triggers, and I have avoided it ever since."

Long-term participation at 7 Cups could even lead listeners to experience a sense of chronic, accumulating stress. This chronic is similar to secondary traumatization—or compassion fatigue—a stress-based disorder in which therapists and social workers become traumatized themselves in the course of working with traumatized clients [29]. P19, for example, indicated that the first suicidal case she faced three years ago at 7 Cups still haunted her.

"The first [suicidal] one I did not take well because I had messaged her and we kept talking for a little while. She told me that she really wanted to kill herself and I told her to come and chat with me again at her leisure when she wanted to. And she has never answered me to this day and I... Yeah, it really freaks me out. "

In addition to hearing the traumatic histories of multiple clients, listeners who interact with uncooperative clients can also experience negative emotions. Participants expressed frustration

with these guarded clients whom they perceived as reluctant to engage in conversation. These conversations could lead to frustration and loss of self-efficacy for counselors. On the one hand, volunteers blamed the clients for "refusing to collaborate." On the other hand, they tended to question their own therapeutic skills when they encountered reluctant clients, making them feel incompetent. P3 described an experience in which she was providing support to a woman who was filing for divorce:

"It seemed that everything that I either said, she either didn't want to do or was very hopeless and within a very negative state of mind. Like I was trying to provide her support, or refer her to resources... She wouldn't listen. So I was questioning, like it was me or it was her. I could totally be inexperienced but I just felt frustrated when she did not seem to engage. "

7 Cups has a section in their initial training that teaches volunteers how to cope with potential triggers. The training says that such triggers are normal, and it introduces ways to cope with, by seeking support, for example, from another peer listener. However, many participants were not aware of their own triggers until they occurred in the course of a conversation after the damage had already taken place (see the P20 quote above).

4.2.3 *Volunteer counselors also experienced conflicts with other stakeholders on 7 Cups.*

In addition to the stresses that emerge from counselor-client interactions, volunteers also occasionally had problems when interacting with other peer listeners or with 7 Cups as an organization. Social relationships on the platform are not limited to dyadic ones with clients, and interactions with peer listeners and paid 7 Cups staff were inevitable and important for governance and training. Interpersonal conflicts with peer volunteers and volunteer organizations also occur in many off-line volunteer organizations [48, 63]. Participants in 7 Cups reported disappointment when they had direct conflicts with peers or when peers were not acting as expected. These types of negative interactions could reduce volunteers' commitment to the community. For example, P20, who feared that a client would discover her real, off-line identity, was disappointed when peer listeners dismissed her desire to change her username:

"I told them [the other listeners] about the issue. And I think I got a reaction that I found to be dismissive, especially when I shared the experience and I asked them for suggestions on whether I should have changed my nickname. And they were saying that as long as they [the clients] didn't try to approach me or text me, it was OK. But still, they said that if I wanted to change anything, I could, but I should have mentioned something like more serious, more solid, not that just some kind of, you know, a paranoia that someone might follow you. They didn't say paranoia, but it's almost like, 'hey, you're paranoid; no one is going to follow you like the way they were talking to me. "

Similarly, P16, a male listener, reported disappointment when seeking support from a fellow listener after being trolled by a client using sexual language:

"I needed to talk about it. And I started to tell her [the peer listener], you know, I'm struggling with this because it just kind of really bothered me. And her response was nothing, nothing else. She said, 'but I'm a woman, and we get ten times that.' That was it. "

Some interviewees also reported negative experiences when interacting with peer moderators. Moderators at 7 Cups are listeners promoted to more advanced roles in the community, where they have the right to apply community rules and potentially ban others. To obtain the moderator role, one needs to file an application and get approved by the official 7 Cups community. P13 expressed

disappointment with a peer moderator who blocked him without listening to his case and showed a lack of empathy:

"I personally was reported by a mod here. I won't name that specific mod, but the thing is that I tried to explain to him what happened. But he took sides fairly quickly. He did not even bother to scroll the chat upwards or to see what was going on in that either. They just saw that last snippet of the chat and be like, 'Okay, this person [the participant] was wrong'. He [the moderator] would not listen and be able to empathize in the manner in which they should be empathizing. They were just enforcing... I feel they're just imposing, like 'you did this, okay, you are blocked, you're muted or whatever you do.'"

Five participants mentioned the conflicts with peer listeners or moderators led them to reduce their participation in 7 Cups. Of the five, three mentioned that they were prioritizing the counseling tasks over other non-counseling ones. Specifically, they tried to support clients while minimizing the interactions with other stakeholders in the community. P11 described her rationale for continuing to volunteer with 7 Cups despite her disappointment with some peers:

"Briefly [considered leaving 7 Cups], yes, but never seriously because I can't leave my members. I have left all roles besides listener, but I wouldn't abandon my members. There's some of them that I think that would be more destructive to, and my intent the entire time and big aside is to serve members. "

While quitting is one way for volunteers to cope with the stresses associated with volunteer work [63], the volunteer organization ultimately loses a valuable resource when it loses volunteers. In the case of 7 Cups, clients who seek support might not receive it. In addition, interviewees also reported that witnessing other listeners leaving made them feel sad and lose confidence in 7 Cups. 7 Cups did have one module (out of 65 available) in their added training program named "Listener Community Guide," which presented guidelines for interacting with fellow listeners. However, only four participants mentioned that they completed any of these advanced modules, and none of them mentioned the guide for interacting with listeners or how it had been helpful to them.

5 DISCUSSION AND DESIGN IMPLICATIONS

In this section, we first describe the challenges that volunteer counselors encountered in relation to both their effectiveness as listeners and their own mental well-being. We then examine how the existing tools impacted their learning experiences on the platform, and we, lastly, propose a number of design guidelines for addressing these challenges more holistically. The results and design implications are summarized in Figure 1.

In general, we found that 7 Cups' current knowledge-oriented training materials helped volunteers learn pertinent therapy skills for potential conversations with clients, but these materials were not always helpful in addressing immediate concerns that emerged in the course of live conversations. While the training materials provided high-level guidelines for listener support, volunteer counselors often reported encountering ambivalent clients with complicated needs. Training materials also provided no context for how listeners could apply training knowledge into their conversations, which may explain why many volunteers have difficulty translating declarative knowledge into real conversational behaviors bad sentence. Listeners also indicated that training was insufficient for helping them through unexpected conversational scenarios, which meant that many volunteer listeners were forced to draw on their own experience in helping clients with little to no feedback from their peers or from other clients. Although real-time suggestions and mentorship from peers were occasionally available, there was no guarantee of such support as needed. Our results also showed that volunteers struggled with challenges related to their mental well-being,

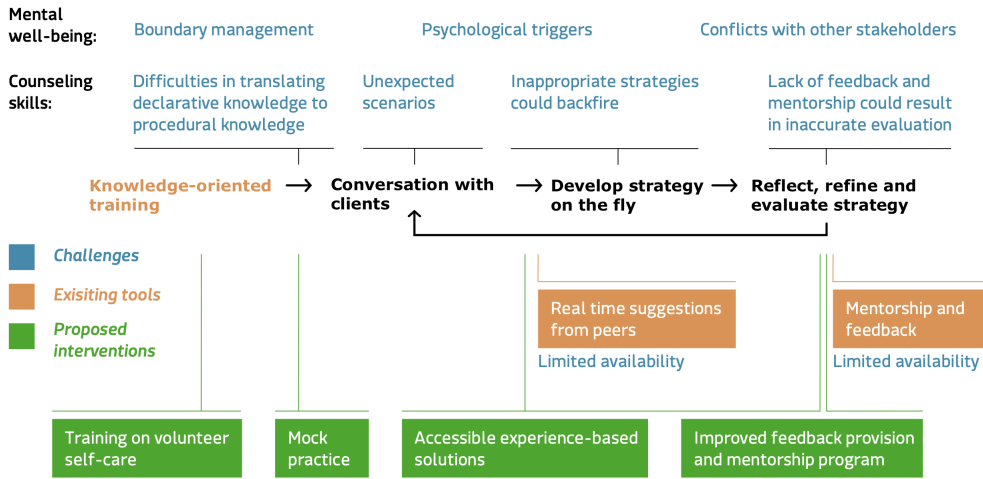


Fig. 1. We map out listeners' challenges, including those related to the counseling skills and well-being, as based on stages of participation. We also present 7 Cups' existing tools alongside our own proposed interventions for helping volunteers cope with these challenges.

such as boundary management, psychological triggers, and conflicts with other stakeholders. Existing training materials and prior work, however, largely focus on the acquisition of knowledge and skills that may help volunteers improve the quality of counseling sessions; these materials provided little help, on the other hand, for volunteers learning to cope with non-session-related challenges.

Here, we propose design implications in response to the challenges we have identified above, using the following structure. We will first present a design guideline based on our findings and then present several examples of potential design solutions based on the guidelines; our goal, in this section, is not to provide a comprehensive list of solutions but to inspire future design directions. As mental health platforms increase their use of AI technology (e.g., [39, 51]), and as the undersupply of volunteer counselors continues to impact the current provision of peer support, we specifically include examples of how AI can be employed to address these pain points.

5.1 Designing authentic yet low-risk mock practices to help novice counselors develop their conversational skills

According to our findings in section 4.1.1, 7 Cup's existing training materials are not sufficient in helping the volunteers translate their declarative training-based knowledge of active listening into the conversational behavior required to use in counseling sessions. Novice listeners reported feeling underprepared when talking with real clients in conversation. They reported developing most of their concrete counseling strategies in real conversations with clients but also expressed concerns over potential therapeutic missteps that they feared could have caused harm to the clients. Therefore, we propose to design interventions that could provide an authentic yet low-risk practice environment in which novice volunteer counselors develop their conversational skills before entering into counseling conversations with real clients.

One such solution entails developing a training sandbox where novice listeners can practice their skills with realistic but artificial clients to earn feedback about what they did well or poorly. This sandbox training has been used more frequently in contexts such as Wikipedia, where it has consistently been proven effective[36]. In the case of online mental health communities, platforms

could survey listeners in order to set up a number of typical (but more complex) conversational scenarios in which experienced listeners role-played as "clients" with novice listeners. Both the novice and the experienced listener could then participate in reflection sessions to jointly identify areas of improvement. This solution, however, might not be easily scalable due to the undersupply of experienced members. Alternatively, platforms might consider cohort socialization processes in which experienced members onboarded pairs or groups of new members simultaneously in role-play-based practice sessions that enhanced their skills collectively [38]. Simulated "client" AI agents might be a more affordable method for helping volunteer counselors to practice their skills. In fact, virtual standardized patients (VSPs), or computer-based programs that present virtual humans in the form of patients have been widely adopted in the training of medical professionals and have proven to be effective in supporting trainees' experiential learning at reduced costs[55]. Additionally, past conversational data between clients and listeners could be leveraged to feed the training of these bots, while domain experts and 7 Cups listeners could all be involved in the co-design process of these simulated agents.

5.2 Making experience-based solutions more accessible to volunteers

Our results in section 4.1.2 suggested that participants often encountered challenging, unexpected sessions that required them to develop conversational strategies on the fly. Moreover, many volunteers struggled to determine the best way to address these unexpected challenges in the limited time available in a given session. Volunteers did find the experience-based solutions that they sometimes obtained from listener support chatrooms valuable, as other listeners often provided less theoretical and more pragmatic solutions to their challenges than the 7 Cups guidelines. However, this type of resource was loosely organized, and peer listeners were not always available on an as-needed basis. Therefore, we propose to make these experience-based, community-sourced solutions more accessible to volunteers during and after their counseling sessions.

To begin making community-sourced knowledge accessible, we suggest developing a collective knowledge base that documents these verified practical solutions for different counseling scenarios. For example, one could imagine a question and answer site similar to StackOverflow, which would allow volunteer counselors to get answers to very detailed and practical questions (e.g., How do I get a client to open up when she keeps saying, "I don't know" to my open-ended questions?). Volunteer counselors could search this database when they are not sure about how to proceed within a session and are not able to rely on the availability of other peers to obtain support. In a more automated version of community-sourced knowledge, AI-powered bots could recommend experienced-based solutions in-situ. Just as Peng and colleagues [51] demonstrated the effectiveness of bots in improving the quality of support in online mental health communities, we further propose that incorporating community-sourced solutions into the training of these bots would allow volunteers to conveniently obtain the help that they need in supporting their clients. Such interventions essentially extend and automate volunteer counselors' current successful practices for obtaining practical solutions, as they allow volunteers to acquire this knowledge with more ease.

5.3 Improving feedback provision and mentorship through systematic program design and novel AI technologies

According to findings in section 4.1.2 and 4.1.3, volunteer counselors receive little feedback and mentorship regarding their strategies in counseling conversations, and they often have to interpret the outcome of their sessions based on their subjective feelings and experience; inaccurate interpretations of these subjective feelings may lead them to continue using ineffective strategies

that may result in severe consequences. While prior literature highlighted the importance of mentorship in online learning [44] and while interviewees have confirmed its significance, limited accessibility to mentorship has proven to be a major obstacle in the learning process of volunteer listeners. Although 7 Cups has developed a variety of specialized roles—including the peer mentor role—to support listeners, volunteers have reported difficulty in developing meaningful relationships with mentors. Therefore, we propose to improve feedback provision and mentorship through systematic program design and novel AI technologies; these programs might be particularly helpful for volunteers working to continually evaluate and refine their strategies.

For platform designers, one direct design implication is to implement a more systematic mentoring program than the ad hoc type that 7 Cups currently offers. In addition to matching mentors with mentees, the organization needs to provide detailed guidelines to ensure that mentorship programs are as effective as possible. For instance, mentors and mentees could hold regular debriefing sessions to discuss counseling techniques, and mentors could also make themselves available to answer their mentees' specific questions. Regular mock chats could also be arranged to help mentees practice and obtain valuable feedback from experienced mentors. Alternatively, AI-based tools could also be incorporated to play the role of a mentor when human mentors are not available. Since all text-based interactions at 7 Cups are recorded, this rich data could easily support the development of a "mentorbot" that automatically analyzes and evaluates volunteer counselors' performance in counseling sessions, detects problems in real-time or after a session is completed and provides them with feedback to help them interact with clients. In this way, volunteer counselors could learn what they did well or poorly and how they can improve in the next session.

5.4 Recognizing the importance of protecting volunteer counselors' psychological well-being

Our results in section 4.2 suggest that volunteer counselors also encounter problems in relation to their own mental well-being, that include maintaining professional boundaries with clients, becoming triggered when hearing clients' traumatic stories, and encountering disagreements with other volunteers and the 7 Cups organization. This is a relatively under-researched area for online mental health communities (see [50] for exception). Our research also shows that existing training might not adequately educate counselors about the risks associated with peer counseling and that further intervention may be needed to help volunteers protect their psychological well-being. Therefore, we urge researchers and practitioners to account for the fundamental importance of volunteer counselors' psychological well-being to the online mental health platform as a whole.

One direct implication is to design better training materials to prepare volunteer counselors for the challenges that can emerge outside of the counseling sessions and the need for self-care in the wake of those challenges. For example, when initially signing up to be a volunteer counselor, many volunteers were not aware that their personal boundaries might be compromised and that they might struggle to reject boundary-violating requests from clients that they intended to help. Such mismatches between expectation and reality, when not handled properly, can lead to stress and other negative consequences. Training for volunteer counselors needs to teach them how to care for the clients with whom they converse without becoming overly emotionally involved with the clients themselves. In addition to training, platforms could begin to implement mechanisms like care days or support workshops, with the goal of easing the psychological burden and reducing burnout of volunteer counselors. Platforms can also develop methods (e.g., surveys or automatic detection methods based on the conversational data) to assess the stress levels of volunteer counselors and to provide them recommendations and suggestions for care.

6 LIMITATIONS AND FUTURE WORK

This study has several limitations. First, we only interviewed volunteers who were actively participating at 7 Cups at the time of the interview, which leads to a selection bias. The participants we recruited were more committed than average volunteers at 7 Cups and probably overcame challenges that caused other volunteers to drop out. As a consequence, this study probably underrepresents these challenges and the learning processes through which volunteers learn to handle them. Second, this research examined only a single mental health support community with what may be a unique approach to training. 7 Cups listeners receive more training than members receive in most online peer-to-peer support groups, where members generally receive no training, although substantially less than training than volunteers working in a suicide hotline might receive. While this paper pinpointed the lack of appropriate guidance as one of the main issues faced by peer counselors, the specific coping strategies discussed might not be generalizable to other contexts.

Third, our work is exclusively qualitative, reflecting volunteers' testimonials about challenges they faced and how they overcame them to become competent counselors. However volunteers may be inaccurate in evaluating their competence, identifying challenges, and how they learned to deal with them. For example, when an interviewee claims that obtaining active listening skills from training modules helped her facilitate counseling sessions, we have no evidence other than her self-report, and we cannot correlate her exposure to training to either her subsequent active listening behavior or the success of her counseling sessions. Quantitative, observational research along with random-assignment experiments should supplement interviews to help us better identify the types of experiences volunteers are exposed to and to identify the experiences that predict their success, including their willingness to continue participating as a volunteer, the satisfaction that their clients express with their counseling session, and improvements in clients' mental well-being.

This research has identified several promising ways to improve learning outcomes, and future studies should empirically test their value. For instance, future researchers could employ quantitative approaches such as simple A/B tests or more complex experiments to validate whether or not providing more support for non-session-related challenges could lead to volunteer counselors participating longer. Another direction for future research would be to experiment with the methods of presenting training materials. For example, if an online counseling platform were to teach volunteer counselors strategies about time management, what would be the best way and timing to deliver this? Would such lessons be best delivered via textual documents, peer suggestions, or even a scheduling tool that helps volunteers manage their time?

7 CONCLUSION

In this paper, we leveraged a qualitative interview approach to examine how volunteer counselors developed their skills at 7 Cups, an online peer support platform for mental health problems. We found the textual-based training materials that 7 Cups used were helpful but not sufficient in helping the volunteer counselors translate the declarative knowledge into conversational behavior or protecting volunteers' psychological well-being. Volunteer counselors often had to develop their own strategies based on their personal experience in counseling sessions. These strategies were highly subjective and may be incorrect. Additionally, volunteer counselors reported having problems with non-counseling-related challenges, including difficulties maintaining their professional boundaries with the clients, handling emotional triggers, and encountering conflicts with other volunteer counselors. We discuss design recommendations on how online peer support communities can provide better support for volunteer counselors.

ACKNOWLEDGMENTS

We would like to thank all the anonymous reviewers for their feedback and 7 Cups for their support. This work was supported by the National Science Foundation (NSF) under Award No. 1939606, 2001851, 2000782 and 1952085.

REFERENCES

- [1] Kathina Ali, Louise Farrer, Amelia Gulliver, and Kathleen M Griffiths. 2015. Online peer-to-peer support for young people with mental health problems: a systematic review. *JMIR mental health* 2, 2 (2015), e4418.
- [2] Tim Althoff, Kevin Clark, and Jure Leskovec. 2016. Large-scale analysis of counseling conversations: An application of natural language processing to mental health. *Transactions of the Association for Computational Linguistics* 4 (2016), 463–476.
- [3] Samuel B Bacharach, Peter Bamberger, and Valerie McKinney. 2000. Boundary management tactics and logics of action: The case of peer-support providers. *Administrative Science Quarterly* 45, 4 (2000), 704–736.
- [4] Azy Barak and Nili Bloch. 2006. Factors related to perceived helpfulness in supporting highly distressed individuals through an online support chat. *CyberPsychology & Behavior* 9, 1 (2006), 60–68.
- [5] Amit Baumeister. 2015. Online emotional support delivered by trained volunteers: users' satisfaction and their perception of the service compared to psychotherapy. *Journal of Mental Health* 24, 5 (2015), 313–320.
- [6] James Bennett-Levy. 2006. Therapist skills: A cognitive model of their acquisition and refinement. *Behavioural and Cognitive Psychotherapy* 34, 1 (2006), 57–78.
- [7] Jeffrey L Binder. 1999. Issues in teaching and learning time-limited psychodynamic psychotherapy. *Clinical Psychology Review* 19, 6 (1999), 705–719.
- [8] David A Brent and David J Kolko. 1998. Psychotherapy: Definitions, mechanisms of action, and relationship to etiological models. *Journal of Abnormal Child Psychology* 26, 1 (1998), 17–25.
- [9] Amy Bruckman. 2006. *Learning in online communities*. na.
- [10] Tara Capel, Bernd Ploderer, Margot Brereton, and Meg O'Connor Solly. 2021. The Making of Women: Creating Trajectories for Women's Participation in Makerspaces. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW1 (2021), 1–38.
- [11] Maxine Capner and Marie Louise Caltabiano. 1993. Factors affecting the progression towards burnout: A comparison of professional and volunteer counsellors. *Psychological Reports* 73, 2 (1993), 555–561.
- [12] Prerna Chikersal, Danielle Belgrave, Gavin Doherty, Angel Enrique, Jorge E Palacios, Derek Richards, and Anja Thieme. 2020. Understanding client support strategies to improve clinical outcomes in an online mental health intervention. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–16.
- [13] Boreum Choi, Kira Alexander, Robert E Kraut, and John M Levine. 2010. Socialization tactics in wikipedia and their effects. In *Proceedings of the 2010 ACM conference on Computer supported cooperative work*. 107–116.
- [14] Victoria Clarke, Virginia Braun, and Nikki Hayfield. 2015. Thematic analysis. *Qualitative psychology: A practical guide to research methods* (2015), 222–248.
- [15] Joe Curran, Glenys Dean Parry, Gillian Hardy, Jennifer Darling, Ann-Marie Mason, and Eleni Chambers. 2019. How does therapy harm? A model of adverse process using task analysis in the synthesis of service users' experience. *Frontiers in Psychology* 10 (2019), 347.
- [16] Michael Eraut*. 2004. Informal learning in the workplace. *Studies in continuing education* 26, 2 (2004), 247–273.
- [17] Casey Fiesler, Shannon Morrison, R Benjamin Shapiro, and Amy S Bruckman. 2017. Growing their own: Legitimate peripheral participation for computational learning in an online fandom community. In *Proceedings of the 2017 ACM conference on computer supported cooperative work and social computing*. 1375–1386.
- [18] Andrea Forte and Amy Bruckman. 2006. From Wikipedia to the classroom: Exploring online publication and learning. (2006).
- [19] Neil Foster. 2007. "Why Can't We Be Friends?" An Exploration of the Concept of 'Friendship' within Client–Music Therapist Relationships. *British Journal of Music Therapy* 21, 1 (2007), 12–22.
- [20] Ruben Fukkink. 2011. Peer counseling in an online chat service: A content analysis of social support. *Cyberpsychology, behavior, and social networking* 14, 4 (2011), 247–251.
- [21] Madelyn S Gould, Wendi Cross, Anthony R Pisani, Jimmie Lou Munfakh, and Marjorie Kleinman. 2013. Impact of applied suicide intervention skills training on the national suicide prevention lifeline. *Suicide and Life-Threatening Behavior* 43, 6 (2013), 676–691.
- [22] Betty Gray. 2005. Informal learning in an online community of practice. *International Journal of E-Learning & Distance Education/Revue internationale du e-learning et la formation à distance* 19, 1 (2005).
- [23] Aaron Halfaker, Os Keyes, and Dario Taraborelli. 2013. Making peripheral participation legitimate: reader engagement experiments in wikipedia. In *Proceedings of the 2013 conference on Computer supported cooperative work*. 849–860.

- [24] Aaron Halfaker, Aniket Kittur, and John Riedl. 2011. Don't bite the newbies: how reverts affect the quantity and quality of Wikipedia work. In *Proceedings of the 7th international symposium on wikis and open collaboration*. 163–172.
- [25] Karen Handley, Andrew Sturdy, Robin Fincham, and Timothy Clark. 2006. Within and beyond communities of practice: Making sense of learning through participation, identity and practice. *Journal of management studies* 43, 3 (2006), 641–653.
- [26] Christoph Hannebauer and Volker Gruhn. 2016. Motivation of newcomers to FLOSS projects. In *Proceedings of the 12th International Symposium on Open Collaboration*. 1–10.
- [27] Jeffrey A Hayes, Charles J Gelso, and Ann M Hummel. 2011. Managing countertransference. *Psychotherapy* 48, 1 (2011), 88.
- [28] Jeffrey A Hayes, Janet E McCracken, Mary K McClanahan, Clara E Hill, Jennifer S Harp, and Paul Carozzoni. 1998. Therapist perspectives on countertransference: Qualitative data in search of a theory. *Journal of Counseling Psychology* 45, 4 (1998), 468.
- [29] Amy R Hesse. 2002. Secondary trauma: How working with trauma survivors affects therapists. *Clinical social work journal* 30, 3 (2002), 293–309.
- [30] Clara E Hill. 2009. *Helping skills: Facilitating, exploration, insight, and action*. American Psychological Association.
- [31] Clara E Hill, Catherine Sullivan, Sarah Knox, and Lewis Z Schlosser. 2007. Becoming psychotherapists: Experiences of novice trainees in a beginning graduate class. *Psychotherapy: Theory, Research, Practice, Training* 44, 4 (2007), 434.
- [32] Azra Ismail and Neha Kumar. 2019. Empowerment on the margins: The online experiences of community health workers. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. 1–15.
- [33] Corey Jackson, Carsten Østerlund, Veronica Maidel, Kevin Crowston, and Gabriel Mugar. 2016. Which way did they go? Newcomer movement through the Zooniverse. In *Proceedings of the 19th ACM conference on computer-supported cooperative work & social computing*. 624–635.
- [34] Thomas M Kirchberg and Robert A Neimeyer. 1991. Reactions of beginning counselors to situations involving death and dying. *Death Studies* 15, 6 (1991), 603–610.
- [35] Paula Klemm, Dyane Bunnell, Maureen Cullen, Rachna Soneji, Patricia Gibbons, and Andrea Holecek. 2003. Online cancer support groups: a review of the research literature. *CIN: Computers, Informatics, Nursing* 21, 3 (2003), 136–142.
- [36] Robert Kraut, Moira Burke, John Riedl, and Paul Resnick. 2010. Dealing with newcomers. *Evidencebased Social Design Mining the Social Sciences to Build Online Communities* 1 (2010), 42.
- [37] Jean Lave and Etienne Wenger. 1991. *Situated learning: Legitimate peripheral participation*. Cambridge university press.
- [38] Ang Li, Zheng Yao, Diyi Yang, Chinmay Kulkarni, Rosta Farzan, and Robert E Kraut. 2020. Successful Online Socialization: Lessons from the Wikipedia Education Program. *Proceedings of the ACM on Human-Computer Interaction* 4, CSCW1 (2020), 1–24.
- [39] Haiwei Ma, Sunny Parawala, and Svetlana Yarosh. 2021. Detecting Expressive Writing in Online Health Communities by Modeling Aggregated Empirical Data. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW1 (2021), 1–32.
- [40] Brent Mallinckrodt. 2010. The psychotherapy relationship as attachment: Evidence and implications. *Journal of Social and Personal Relationships* 27, 2 (2010), 262–270.
- [41] Victoria J Marsick and Karen E Watkins. 2001. Informal and incidental learning. *New directions for adult and continuing education* 2001, 89 (2001), 25–34.
- [42] Michael Massimi, Jackie L Bender, Holly O Witteman, and Osman H Ahmed. 2014. Life transitions and online health communities: reflecting on adoption, use, and disengagement. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing*. ACM, 1491–1501.
- [43] William R Miller and Gary S Rose. 2009. Toward a theory of motivational interviewing. *American psychologist* 64, 6 (2009), 527.
- [44] Jonathan T Morgan, Siko Bouterse, Heather Walls, and Sarah Stierch. 2013. Tea and sympathy: crafting positive new user experiences on wikipedia. In *Proceedings of the 2013 conference on Computer supported cooperative work*. 839–848.
- [45] Sneha Narayan, Jake Orlowitz, Jonathan T Morgan, and Aaron Shaw. 2015. Effects of a Wikipedia Orientation Game on New User Edits. In *Proceedings of the 18th ACM Conference Companion on Computer Supported Cooperative Work & Social Computing*. 263–266.
- [46] Judith K Ockene. 1987. Physician-delivered interventions for smoking cessation: strategies for increasing effectiveness. *Preventive medicine* 16, 5 (1987), 723–737.
- [47] Kathleen O'Leary, Arpita Bhattacharya, Sean A Munson, Jacob O Wobbrock, and Wanda Pratt. 2017. Design opportunities for mental health peer support technologies. In *Proceedings of the 2017 ACM conference on computer supported cooperative work and social computing*. 1470–1484.
- [48] Allen M Omoto and Mark Snyder. 1995. Sustained helping without obligation: motivation, longevity of service, and perceived attitude change among AIDS volunteers. *Journal of personality and social psychology* 68, 4 (1995), 671.

- [49] Antonio Pascual-Leone, Beatriz Rodriguez-Rubio, and Samantha Metler. 2013. What else are psychotherapy trainees learning? A qualitative model of students' personal experiences based on two populations. *Psychotherapy Research* 23, 5 (2013), 578–591.
- [50] Sachin R Pendse, Faisal M Lalani, Munmun De Choudhury, Amit Sharma, and Neha Kumar. 2020. "Like Shock Absorbers": Understanding the Human Infrastructures of Technology-Mediated Mental Health Support. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–14.
- [51] Zhenhui Peng, Qingyu Guo, Ka Wing Tsang, and Xiaojuan Ma. 2020. Exploring the Effects of Technological Writing Assistance for Support Providers in Online Mental Health Community. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–15.
- [52] William E Piper. 2004. Implications of psychotherapy research for psychotherapy training. *The Canadian Journal of Psychiatry* 49, 4 (2004), 221–229.
- [53] Yada Pruksachatkun, Sachin R Pendse, and Amit Sharma. 2019. Moments of Change: Analyzing Peer-Based Cognitive Support in Online Mental Health Forums. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. 1–13.
- [54] Frederic G Reamer. 2003. Boundary issues in social work: Managing dual relationships. *Social work* 48, 1 (2003), 121–133.
- [55] Greg M Reger, Aaron M Norr, Michael A Gramlich, and Jennifer M Buchman. 2021. Virtual Standardized Patients for Mental Health Education. *Current Psychiatry Reports* 23, 9 (2021), 1–7.
- [56] Philip L Rodgers. 2010. *Review of the applied suicide intervention skills training program (ASIST): rationale, evaluation results, and directions for future research*. LivingWorks Education Incorporated Calgary, Alberta, Canada.
- [57] Alexander Rozental. 2016. *Negative effects of Internet-based cognitive behavior therapy: Monitoring and reporting deterioration and adverse and unwanted events*. Ph.D. Dissertation. Department of Psychology, Stockholm University.
- [58] Hans H Strupp. 1995. The psychotherapist's skills revisited. *Clinical Psychology: Science and Practice* 2, 1 (1995), 70–74.
- [59] Michael B Twidale. 2005. Over the shoulder learning: supporting brief informal learning. *Computer supported cooperative work (CSCW)* 14, 6 (2005), 505–547.
- [60] Louise Van Aswegen. 2009. *The effect the experiences of volunteer HIV counsellors have on their own well-being: a case study*. Ph.D. Dissertation. North-West University.
- [61] Yi-Chia Wang, Robert E. Kraut, and John. M. Levine. 2015. Eliciting and Receiving Online Support: Using Computer-Aided Content Analysis to Examine the Dynamics of Online Social Support. *Journal of Medical Internet Research* 17, 4 (2015), e99.
- [62] C Edward Watkins Jr and Douglas J Scaturro. 2013. Toward an integrative, learning-based model of psychotherapy supervision: Supervisory alliance, educational interventions, and supervisee learning/relearning. *Journal of Psychotherapy Integration* 23, 1 (2013), 75.
- [63] Galit Ventura Yanay and Niza Yanay. 2008. The decline of motivation?: From commitment to dropping out of volunteering. *Nonprofit management and Leadership* 19, 1 (2008), 65–78.
- [64] Mary F Ziegler, Trena Paulus, and Marianne Woodside. 2014. Understanding informal group learning in online communities through discourse analysis. *Adult Education Quarterly* 64, 1 (2014), 60–78.

Received April 2021; revised November 2021; accepted March 2022