Suicide Prevention Outreach on Social Media Delivered by Trained Volunteers

A Qualitative Study

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Abstract: *Background:* There is a need to develop new ways to reach and engage people at risk for suicidal behavior. Suicide prevention outreach on social media (SPOSM) represents a promising strategy, and trained volunteers could potentially provide the needed human resources. *Aims:* We aimed to investigate users' perception of SPOSM delivered by volunteers of the Israeli Sahar organization and its potential to promote help-seeking behavior. *Methods:* Outreach messages written by Sahar volunteers between July 2015 and June 2020 in response to suicidal posts on a social media site were screened. User responses were analyzed using inductive thematic analysis. *Results:* One hundred sixteen user responses were analyzed. Positive impact themes were identified in 69.8% of responses, while 16.4% of responses mentioned barriers to care and 10.3% were negative. *Limitations:* As the study is based on real-life data, the data are limited to users who chose to respond to outreach. *Conclusion:* The findings suggest that volunteer-based SPOSM is viewed positively by many users and may foster help-seeking behavior. The findings also outline challenges such as emotional barriers to care and privacy concerns.

Keywords: suicide prevention, social media, trained nonprofessionals, trained volunteers, intervention

Awareness of the global burden of suicide and suicidal behavior is on the rise, leading to a change in public discourse and an increasing emphasis on suicide prevention research and practice. However, many people at risk do not receive the help they need, with less than half of the individuals who experience suicidal thoughts and behavior seeking help from mental health services (Hom et al., 2015). This underlines the importance of developing novel ways to reach and engage suicidal individuals.

Social media sites are commonly used as a space for users to discuss suicidal feelings and receive peer support (Ali & Gibson, 2019; Carey et al., 2018; Wiggins et al., 2016), making them a promising platform for suicide prevention. Rice et al. (2016) argue that social media is uniquely suited for interventions that increase social connectedness and diminish feelings of isolation, which are considered to be major risk factors for suicide. Although research on using social media for suicide prevention has been limited, initial findings have been largely positive (Robinson et al., 2016). For example, Bailey et al. (2020) found that in an intervention delivered on a designated social media platform, which combined moderated peer communication and therapeutic content, 41% of participants demonstrated improvement in suicidal ideation (Cohen's $d = -0.57$) and 41% demonstrated improvement in depressive symptoms (Cohen's $d = -0.94$).

Several authors (e.g., Carey et al., 2018; Notredame et al., 2018) have suggested that social media could be utilized to proactively identify and reach out to users at high risk for suicidality. Over the past few years, research on the automatic identification of high-risk suicidal content on social media has yielded impressive results. For example, Desmet and Hoste (2018) used text classification to detect suicidal forum posts. When compared to human annotators, their method reached *F*-scores of 93% for identification of suicide-related posts and 70% for identification of severe high-risk posts.

However, research on strategies for reaching out to suicidal individuals once they have been identified online is sparse. To the best of our knowledge, the only study that has involved suicide prevention outreach on social media (SPOSM) is Liu et al.'s (2019) research on Chinese microblog users. Liu et al. used machine learning to identify users who posted suicidal texts and then sent them a direct supportive message that included an invitation to online counseling services. Of the 12,486 users messaged, 18.6%

responded and received further services from counselors and 34.6% completed a questionnaire in which most of them rated the intervention as acceptable. The results of this novel study provided the first evidence that SPOSM has a high level of acceptability and that a simple intervention may bring a high percentage of users to engage with mental healthcare.

Another promising approach in public mental health is to train and empower nonprofessionals, such as volunteers, to deliver mental health first aid to increase the human resources available for support (WHO, 2018). A growing body of evidence points to the scalability and cost-effectiveness of mental health interventions delivered by trained nonprofessionals (e.g., Baumel, 2015; Vanobberghen et al., 2020). Volunteer-based suicide prevention programs already exist around the world (Bowersox et al., 2021; Robinson et al., 2016), but research on this topic has been limited. Studies on suicide prevention helplines have often indicated a reduction of distress and suicidality in users, but these results are not conclusive (Bowersox et al., 2021). More research is needed to understand the effects of the use of trained volunteers in suicide prevention.

The current study aims to explore social media users' perceptions of volunteer-based SPOSM and its potential to promote help-seeking behavior. To learn about users' perceptions of this kind of outreach, we collected and analyzed end user reactions to outreach messages posted by volunteers of the Israeli nonprofit organization Sahar. Sahar is designed to create an anonymous and supportive online environment for people in severe emotional distress or contemplating suicide (https://sahar.org.il/). Sahar's activity is volunteer-based and includes a website providing mental health information, an online chat, online support forums, and social media outreach (for a detailed review, see Barak, 2007). Training for volunteers who do outreach work includes a 38-hour long course and about 15 hours of hands-on training with an experienced volunteer. Every shift is supervised by a volunteer who is a mental health professional (e.g., clinical psychologist) who received special training. Sahar's interactions are anonymous; however, in cases where a user may be in immediate life-threatening risk, the shift supervisor alerts the police who take action to locate the user.

To the best of our knowledge, this is the first study to explore SPOSM based on personalized messages written by trained volunteers. As is often the case in qualitative research (Hammarberg et al., 2016), this study aimed to describe the range of reactions to the intervention rather than to determine the exact proportion of people who react in certain ways. Considering the limited research in this area, the current study was exploratory in nature, aiming to provide first insights into user responses to a novel intervention.

Methods

Data Collection

The data for this study were collected from Stips, a popular Israeli Hebrew language website and the platform on which Sahar volunteers are most active (https://stips.co.il/). Stips is a social Q&A site (Oh, 2018) that allows users to post questions and respond to questions posted by other users. Approximately 5,000 questions are posted on Stips every day. All posts on the website are public, making Stips a convenient platform both for outreach and for research. The site's admins work in cooperation with Sahar, notifying the volunteers of questions that are indicative of suicidal ideation or severe emotional distress. The volunteers then log into the site and reply to the questions with supportive messages which are formulated according to the principles of empathy and reflective listening (Iberg, 2010): The volunteer attempts to understand the feelings and experiences of the person who wrote the post and then reflect this understanding when responding to the initial message. Every message includes an invitation to Sahar's support chat.

The current study focused on analyzing suicidal users' responses to the volunteers' outreach messages. All volunteer messages posted on Stips between July 2015 and June 2020 were included in the screening procedure. Messages that received no response from the user, or a nonverbal response (i.e., a *like*), were excluded. The protocol for inclusion and exclusion of responses from the analysis is presented in detail in Figure 1. Inclusion criteria for verbal user responses consisted of the following: (a) the original post was available online at the time of data collection, (b) the original question posted by the user indicated suicidality/death ideation, and (c) the response yielded information on the user's reaction to the outreach message. Responses were excluded from the data if: (a) the user reported having engaged with Sahar's chat before, or (b) the user claimed within the text correspondence that the posted suicidal content was not genuine.

In cases where it was unclear whether the original post was suicidal (e.g., ambiguous language), we checked the context of the text correspondence between the user and the volunteer, as explained in Figure 1. To examine the accuracy of coding posts as either suicidal or nonsuicidal, we randomly picked 25 posts coded by a first coder as suicidal and 25 posts marked as nonsuicidal. Another coder who had not originally coded the posts, but was trained in the coding scheme, also coded the randomly selected subsample. The Kappa inter-rater reliability between the two coders was .80, which is considered strong (McHugh, 2012).

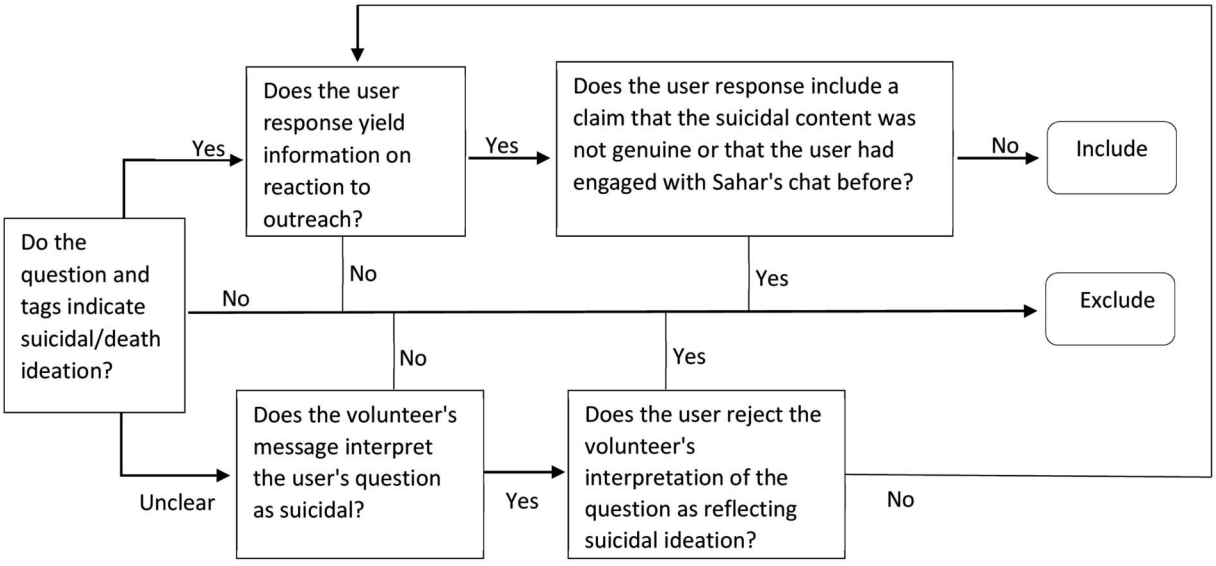

Figure 1. Protocol for inclusion of responses.

Data Analysis

Thematic analysis was conducted according to the six-phase method suggested by Braun and Clarke (2006). The analysis was conducted inductively focusing on users' perceptions of volunteer outreach. In the first stage of analysis, the first author (VK) read through the entire data set to achieve familiarity with the data. Subsequently, the first author coded the data and then sorted the coded data into initial themes. The process of reviewing, refining, and finally naming the themes was conducted in consultation with a second researcher experienced in qualitative research (AB). Differences of opinion were discussed until consensus was reached. The analysis was conducted in Hebrew. Themes and text quotes as examples were later translated into English.

In reporting the results of the analysis, we provide numerical information on the frequency of the main theme categories within the data. However, following Braun and Clarke's recommendations (2019), we do not include numerical information on each individual theme. As Braun and Clarke argue, the exact frequency of a theme does not necessarily reflect its importance, especially in studies that do not include structured surveys.

Results

Of a total of 6,388 volunteer messages identified, 5,944 (93%) were available for viewing while 444 (6.9%) were unavailable after being deleted by a Stips admin. Of the available messages, 448 messages (7.5%) received a verbal user response. The final analytical sample included 116 user responses that fulfilled the inclusion criteria. The data flow in the screening stage is presented in Figure 2.

The results of the thematic analysis are organized around the final four main categories: (a) positive impact, (b) barriers to engaging with volunteer-based support, (c) negative response, and (d) declaring no danger of suicide attempt. The themes within each category are presented in Figure 3.

Positive Impact

This was the dominant category, with themes from this category identified in 69.8% of responses.

Advancing Toward Engagement With Volunteer-Based Support

Engaging or Intending to Engage With Volunteer-Based Support

Responses in this theme ranged from users' assurance that they would engage with the chat ("Thank you very very much, I'll come to the chat between 9 and 12 p.m.!") to users writing that they would consider the option ("Thank you I'll think about it…"). Others inquired about the possibility of speaking with a volunteer over the phone or via private messages on the Stips platform.

Asking for Related Information

Users responded to the outreach message with follow-up questions about the organization and the chat, such as "What is Sahar?", "Is there an age limit for coming to the chat?", or "I don't exactly know how to use [it]. Can I get an explanation?"

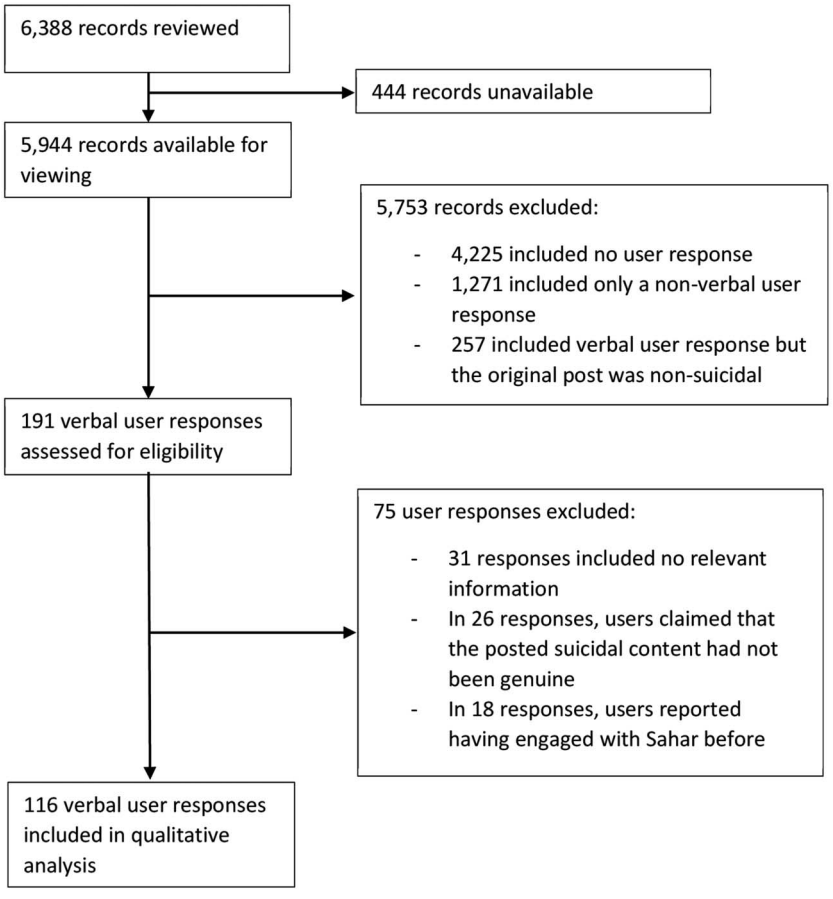

Figure 2. Data flow diagram in the screening stage.

Indicating Direct Emotional Impact

Feeling Supported

Users described feeling helped and supported as a result of reading the volunteer's message. One user wrote, "Sahar Support, this is the strongest support I could get, I'm grateful and happy because I know I have hope of being happy and peaceful again."

Feeling Understood

Users referred to the *reflective listening* element of the outreach messages, noting that the volunteer had managed to understand their experience and put it into words: "It's really special, what you wrote is exactly what I'm going through."

Further Self-Disclosure (Opening Up)

Users disclosed new information about themselves and their distress. Users frequently provided more details about the feelings behind their suicidal ideation: "Do you think one day I'll be happy? Have friends? A relationship maybe? A career? For me it's hard to believe, that's the reason I've lost hope in everything."

Barriers to Engaging With Volunteer-Based Support

In 16.4% of responses, users mentioned barriers to engaging with the support offered them through Sahar's chat.

Emotional Barriers

Users indicated that they were hindered from engaging with the chat because of emotional barriers, such as fear of self-disclosure or hopelessness. One user wrote, "I'm afraid. I'm afraid to talk with people about my problems because I'm afraid I'll hurt and disappoint them. Also in the end everyone I talked with and who helped me abandoned me and I was left alone."

Another user poignantly conveyed her feelings of hopelessness by writing "Thank you for trying to help you're the best. But there is nothing that can help."

Lack of Just-in-Time Availability

Users indicated that the offered support had not been available to them at the moment they needed it, as

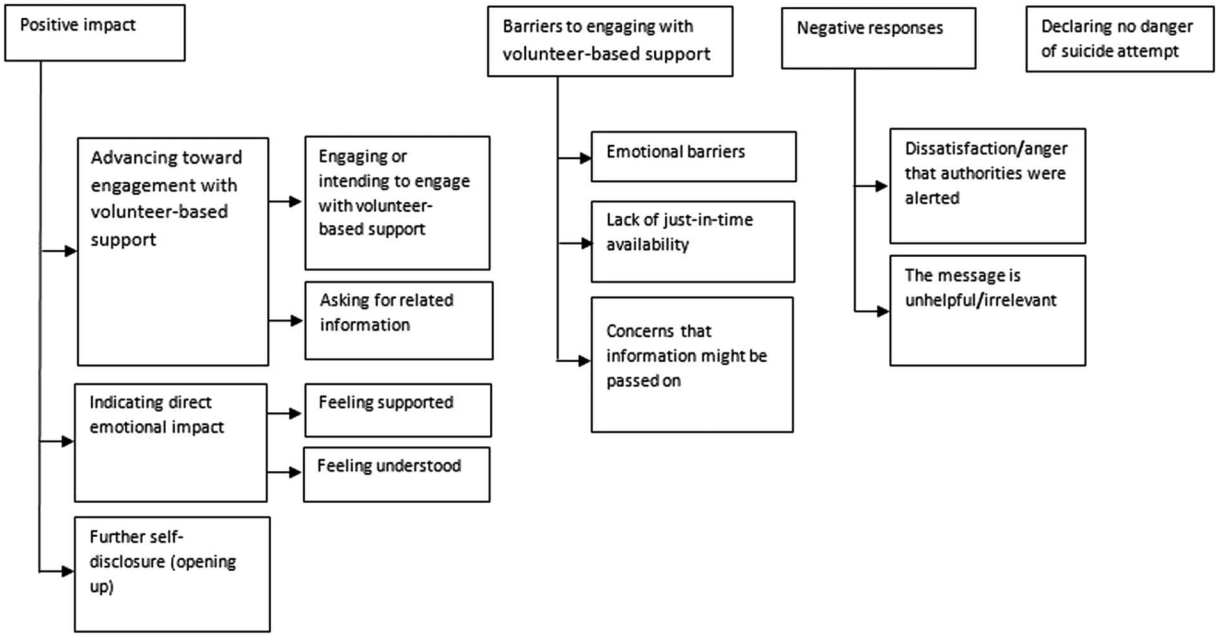

Figure 3. Theme summary.

evidenced by the following quotation: "And what will I do with this feeling now that the chat is closed. . .?"

One response illustrated that lack of availability could result in missing the window of opportunity for engagement: "It says that a representative will be with me in a moment and nothing comes. Drop it, I'm in despair."

Concerns That Information Might Be Passed On

Users expressed concern that Sahar might pass on information about them to a third party. Some users asked about the anonymity of the offered support: "But is Sahar anonymous?" One user elaborated further indicating that he was worried about information from support chat conversations reaching authorities: "Totally anonymous? If for instance I say I want to die will they hospitalize [me] and send the police? Just out of curiosity."

Other users expressed concern that volunteers might report their post to authorities, as in the following response: "Please just don't report the question because I won't do it."

Negative Responses

Negative reactions to outreach were identified in 10.3% of responses.

Dissatisfaction/Anger That Authorities Were Alerted

These users presumably responded to the outreach message in the aftermath of being contacted by the authorities. Such users often assumed that the authorities had been alerted to their post by Sahar (although this was not the case in these instances). In their responses, they expressed dissatisfaction or anger: "Someone here probably you reported [me] and ruined my life thank you very much [followed by curses]."

The Message Is Unhelpful/Irrelevant

Users indicated that they found the volunteer's message to be unhelpful or not relevant to their needs. One user wrote, "You are so sweet. . . Sometimes what a person needs is not to be pitied, once you pity him you weaken him and justify his unhappiness." Another wrote simply, "Not helping. . . Next!!!"

Declaring No Danger of Suicide Attempt

This theme category includes one theme only, which was identified in 14.6% of responses. These responses included a *calming message*, clarifying that the user was not in actual danger of attempting suicide. Some users wrote that their distress had abated, as in the following example: "Sahar thank you very much! But it's been taken care of :) Everything's been taken care of, I moved to another class. . . The kids apologized, I forgave some [of them]. . ." Other users stated that their suicidal ideation was not serious or that they did not intend to act on it: "Thank you very much and it's important to me to also say that I don't mean to do anything it's just thoughts."

Discussion

While this study identified a wide range of responses, the overall results suggest that SPOSM delivered by trained volunteers evokes mainly positive reactions (69.8% of responses) and may promote engagement with care. The results also indicate that the outreach message itself may have a beneficial impact. This is in line with initial evidence that nonprofessional support in suicide prevention forums has beneficial effects for suicidal users (Robinson et al., 2016; Wiggins et al., 2016).

As presented in the results, some users responded to the outreach message by providing more information about themselves and their distress. In a recent study, interviewees emphasized the role of interpersonal trust in facilitating online self-disclosure on sensitive subjects (Gibson & Trnka, 2020). Accordingly, users' self-disclosure in response to outreach may signal that the outreach message succeeded in creating feelings of trust and connectedness in the user.

Some users described emotional barriers to engaging with a one-on-one chat. While empathetic outreach may help to overcome emotional barriers in some users, as a standalone strategy, it probably would not be sufficient to move all at-risk users to access help. We suggest that SPOSM should be part of an omnibus of interventions to promote help-seeking. In particular, wide-scale psychoeducational campaigns may raise awareness to support options (for example, see van der Burgt et al., 2021) so that users may become more open to outreach at times of crisis.

User concerns about anonymity also seem to act as a barrier to care, as some users voiced fears that information shared on Sahar's chat might not remain confidential and some were worried that the volunteers would report their original post to authorities. Other users who believed that Sahar had reported them expressed anger. Moreover, in 14.6% of responses, users emphasized that they were not in actual danger of attempting suicide, a response which may have stemmed from their wish to avoid being reported. We suggest that Sahar's outreach messages should include a more detailed explanation of Sahar's policy regarding privacy and reporting.

Another barrier was insufficient availability of Sahar's support just when users were ready to engage. Because suicide risk may change rapidly over short periods of time (Kleiman et al., 2017), just-in-time availability of suicide prevention services can be crucial. Since Sahar's activity is based on nonprofessional volunteers, it can be scaled up relatively easily and with small costs. Given more resources, Sahar could train and supervise more volunteers and provide 24/7 support services.

Notably, there were users who conveyed that they felt the outreach message to be irrelevant or unhelpful. Interestingly, only one user response indicated that the act of outreach itself was unacceptable ("Enough already with this psychobabble to try and drag me to this website"). Other negative responses focused on the content of the outreach message, suggesting that, while users are open to receiving volunteer outreach, the current outreach method may not suit all users. Further research should focus on gaining a better understanding of negative attitudes and the effects of outreach on users who express them, as well as improvement of outreach methods to increase engagement.

Overall, the results indicate that Sahar's model for SPOSM may be helpful and merits further research. The study findings also present evidence for the potential of trained and supervised volunteers to support people at risk and that people from the community can be empowered to help others move forward in their pathway to care.

Limitations

The results of the current study should be considered in light of several limitations. First, the data set is based only on users who chose to verbally respond to outreach. The percentage of responses may partly be explained by the fact that users had already been offered Sahar's chat as a channel for continued interaction and may already have moved to it. Nonetheless, there is no reason to believe that these real-world data are any less representative than what would have been collected, for example, from people consenting to participate in an experiment.

Another limitation is that, due to the nature of thematic analysis as a qualitative research method, individual themes represent the range of user perceptions of outreach rather than their frequency. Future research using quantitative research methods is warranted.

User responses were written spontaneously and not as part of an interview or questionnaire. While this may reduce social desirability bias, user responses are often short and lacking in detail and therefore yield limited information. Future research should aim to obtain more in-depth user feedback.

Altogether, these limitations do not diminish the importance of qualitatively examining user experiences based on real-time data available on digital platforms.

Conclusion

The results of this exploratory study indicate that trained volunteers managed to perform outreach in a way that

users could find positive and helpful. However, at the same time, the results suggest several challenges of this approach. This study also highlights the value of real-life data for learning about the feelings and experiences of suicidal social media users. The findings create the basis for developing further questions that should be examined in future studies using complementary research methods.

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Conflict of Interest
Vered Keasar is an active volunteer in Sahar's outreach program. The other authors declare they have no competing interests.

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