

Social Technology, Mental Health Support and Suicide Prevention in Veteran and Military Populations:



Social Technology, Mental Health Support and Suicide Prevention in Veteran and Military Populations: A Survey



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Introduction

More than half of the 5.2 million Veterans who have a mental health issue are not using mental health services, and one in four Service members has a mental health issue that could go untreated for fear of ending their careers. The Department of Veterans Affairs (VA), Department of Defense (DOD) and the White House continue to search for solutions to connect Veterans and Service members to treatment and services. Among them are the use of technological tools that may make it easier and faster for people to get the help they need.

Veterans are disproportionately impacted by mental health issues and suicide (the Veteran suicide rate was more than 57% higher than for non-Veteran adults in 2020); and over the past 15 years, the <u>suicide rate of Service members</u> has doubled. VA and DOD continue their work in understanding the possible causes of these higher rates, which could include lack of community and support, financial and employment challenges or coping with a physical injury, and unique to Service members and Veterans – <u>combat exposure and moral injury</u>. Access to mental health treatment and services is critically needed to work through these challenges.

DOD and VA are using social technology and other interventions to reach Veterans and Service members in need of mental health care and are testing and measuring the impact of various approaches. For example, DOD and VA increased access to telemental health services during the COVID-19 pandemic. VA also has an established chat line and text messaging services operated by the Veterans Crisis Line call center.

A study led by researchers at the VA Portland Health Care System and Oregon Health and Science University found that brief online video training may be a useful way to provide suicide prevention skills to friends and family of Veterans. The Stop Soldier Suicide Black Box Project uses artificial intelligence (AI) to identify and analyze data from digital devices of Veterans who died by suicide to develop machine learning models that can identify risk patterns. The project is funded through VA's Mission Daybreak initiative, part of VA's 10-year strategy to end Veteran suicide through a comprehensive, public health approach.

With people of all ages and backgrounds using social media, mobile apps and other technologies, integrating these approaches to assist those needing mental health support may make sense. The tools can enable information, resources and interventions to reach large numbers of people quickly and easily. Those seeking help can immediately talk with someone, which is especially important for Veterans and others who feel isolated or disconnected. For anyone uncomfortable speaking face to face, social technology may add a layer of anonymity that could feel invaluable to an active-duty Service member, increasing comfort in accessing help.

Another advantage of social technology is that those living in remote or rural areas, where there is a shortage of mental health providers, can connect virtually with a mental health professional. However, both patients and <u>providers</u> need to feel comfortable using these technologies for them to be beneficial.

Aptive Resources and Artemis ARC both work with VA and the Interagency Task Force on Military and Veterans Mental Health – which is addressing the White House suicide prevention strategy – and other federal agencies that support important mental health efforts. They saw a need to better understand the Veteran and military perspective on social technology applications in mental health care and conducted this study to gather information about the use of these technology tools – particularly AI – for mental health support. This report shares the study results and explores the potential for using social technology to expand availability of mental health support for Veterans and Service members.

The Challenge

Despite numerous public mental health and suicide prevention initiatives and programs over the years, suicide and other mental health issues persist as a serious public health problem.

Opportunities for <u>social technologies</u> and the extent to which Veterans and military members might be willing to use them for mental health support, especially for more recently developed technologies such as <u>Al</u>, need to be determined. Privacy concerns, fear of stigma, misconceptions about the nature of treatment, career impact and lack of access to or knowledge about certain technologies may pose potential barriers to receiving assistance this way.

The Survey

Aptive and Artemis ARC researchers surveyed Veterans, members of the National Guard, Reservists and active-duty Service members in May 2023 to better understand their preferences for, experiences with and use of social technology to support their mental health. Though primarily quantitative, the survey included qualitative questions to fill a gap in existing literature about perceptions regarding AI for mental health support. The survey addressed the following technologies:



Hotlines and phone-based support: Examples include the <u>Veterans Crisis Line</u> and 988.



Telehealth: Two-way telecommunications technologies like computers, tablets or cellphones.



Social media: Social media tools such as Facebook, Twitter, Instagram and LinkedIn.



Online peer-to-peer support: Peer connection through text-based chat rooms, forums, discussion groups and bulletin boards.



Mobile applications (apps): Mobile apps may provide guided therapy exercises. Examples include <u>PTSD Coach</u> and <u>ACT Coach</u>.



Artificial intelligence (AI)/chatbots: Chatbots use AI to process information and provide responses. Examples include ChatGPT, MyAI, GRIT and Youper.

Of the 403 members of Aptive and Artemis ARC's <u>Veterans Experience Council (VXC)</u> who received the survey, 296 responded (a 72% response rate). The VXC is a group of Veterans, active-duty Service members, National Guard members and Reservists who serve as advisors to help Aptive and Artemis ARC improve services for the Veteran community through philanthropic, corporate and client engagements.

PARTICIPANTS INDICATED THEY WERE:

- Primarily between the ages of 25 and 44 (62% of participants)
- 65% male and 32% female (3% other or declined to answer)
- 52% White, 31% Black or African American, 11% Hispanic or Latino and 6% multiple races or ethnicities
- Enlisted in the Army (37%), Navy (25%), Air Force (21%), Marine Corps (8%), reserves (16%) and in multiple branches of the military (20%)
- Educated at the bachelor- or graduate-degree level (76%)
- No longer serving in the military (87%), with 38% responding that they have been separated from service for more than 10 years and 33% reporting they have been separated for less than five years
- Currently serving in the military (13%)

The Results

PERCEPTIONS OF TECHNOLOGY

Survey participants were asked about their familiarity with each of the six technologies, whether they are helpful in providing resources and mental health support, which technologies they would use themselves and which they would recommend to others.

Participants reported the most familiarity with hotlines (98%), closely followed by telehealth (90%) and the least familiarity with Al/chatbots (35%) for technology-based mental health support. As an early adopter of telehealth, and with high levels of telehealth use during the COVID-19 pandemic, VA treatment for Veteran health, mental health and chronic pain is now more commonplace, and survey responses may be reflective of this effort. Mobile apps are growing as a mental health support nationwide and more than 70% of survey participants were familiar with this modality.

Eighty-three percent of participants strongly or somewhat agree that telehealth provides helpful resources and information for mental health support and that telehealth is helpful (81%) for receiving mental health support (Exhibits A and B). Resources may include links to services, mental health articles or tools, whereas receiving mental health support refers to direct care.

Seventy-two percent of participants are extremely likely or likely to use telehealth themselves for mental health support (**Exhibit C**). They put more value and trust in telehealth than any other modality, including hotlines. A few participants cited the convenience and comfort of being at home, in addition to saving time traveling to a therapist's office, as reasons they prefer telehealth.

Eighty-one percent of the participants are extremely likely (50%) or likely (31%) to recommend telehealth to others over other technologies, followed by extremely likely (32%) or likely (40%) to recommend hotlines (Exhibit D). Some participants reported that they are extremely unlikely (42%) and unlikely (26%) to recommend Al/chatbots as mental health supports. Some participants indicated that they somewhat agreed that hotlines, mobile apps and peer-to-peer support are helpful resources for mental health support and that they are somewhat likely to use these modalities for their own needs (Exhibits A, B and C).

Exhibit A. Providing Resources Using Technology

Agree Technology Provides Helpful Resources and Information for Mental Health Support

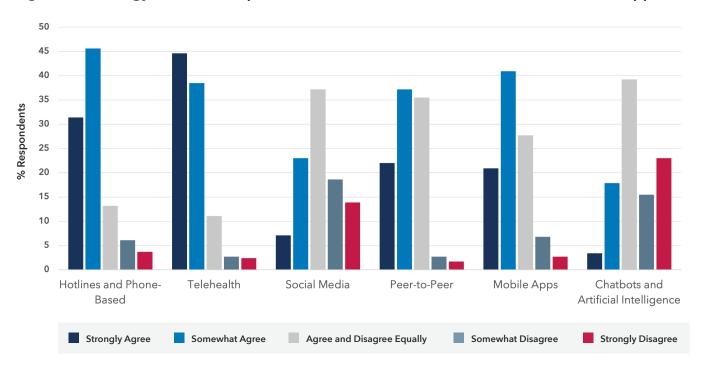
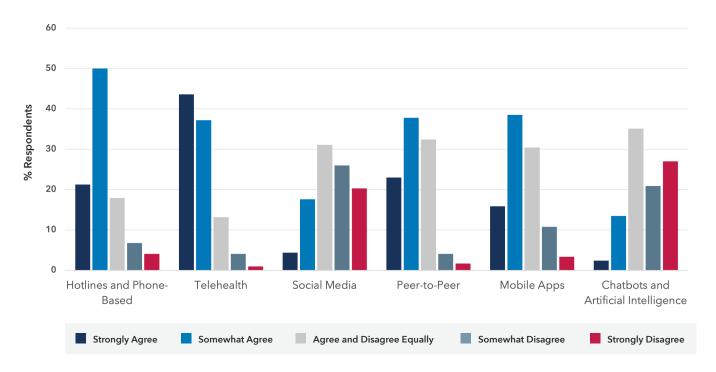


Exhibit B: Providing Mental Health Support Using Technology

Agree that Technology is Helpful for Receiving Mental Health Support



Likelihood of Using Mental Health Technology

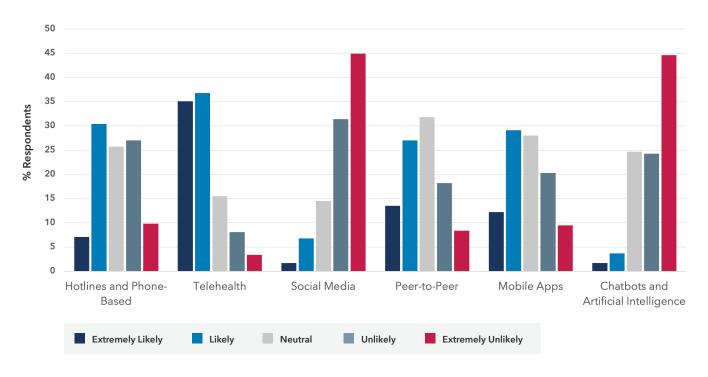
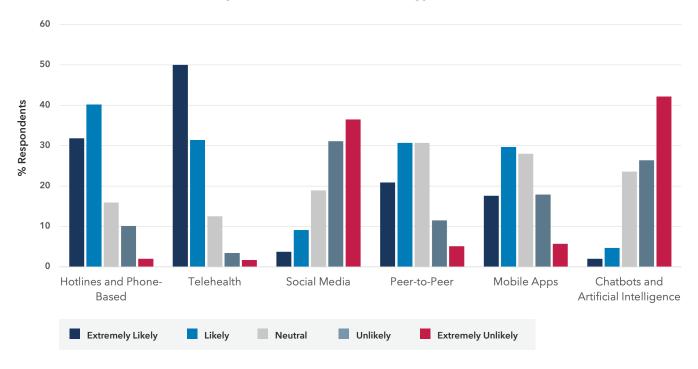
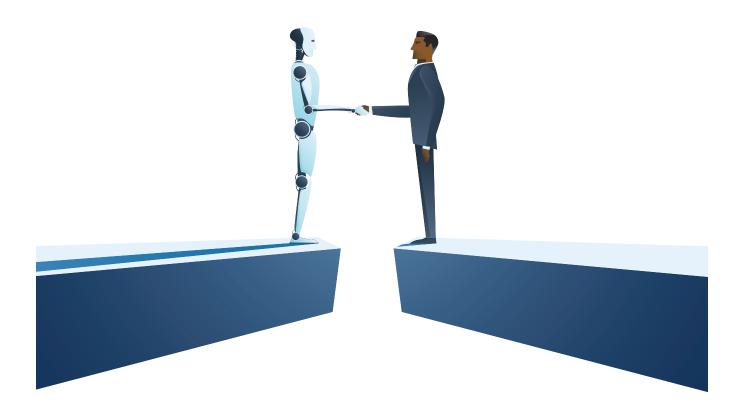


Exhibit D: Likelihood of Recommending Social Technologies for Mental Health Support

Likelihood of Recommending Mental Health Technology to a Fellow Veteran





Role of Al

The majority of participants were unlikely to consider using Al/chatbots for themselves or recommend their use to others, compared to other more familiar mental health supports. Seventy percent reported being unlikely or extremely unlikely to use Al/chatbots themselves and unlikely or extremely unlikely (68%) to recommend them to others (Exhibits A, B and C).

In qualitative comments describing that reluctance, some participants reported distrust with the tools due to unfamiliarity.



Al is very scary to me. I would not feel comfortable getting mental health services and potentially talking to chat AI.

A high proportion of participants disagreed that AI should be used as a direct support tool for mental health, reporting that it seems impersonal and because AI is not a trained professional. Participants report that empathy, connectivity, compassion and real-world experience are attributes critical to support mental health. Al/chatbots, however, lack the ability to perceive emotion, tailor support for individual needs and lived experiences and intervene in moments of crisis. Participants noted:



Artificial intelligence, while recently has shown it is capable of doing amazing things, is not fit to provide the emotional empathetic support needed to help people going through emotional and mental issues. A robot is incapable of feeling, and therefore would fundamentally lack the one capacity that I feel is extremely crucial to therapy.

Advice is typically based on real-life experiences and how to cope/handle things. AI hasn't been in those situations to offer real advice and techniques to help.

In contrast, a few participants felt that Al/chatbots are accurate and trustworthy and have unlimited capabilities. These participants recognize the advantages of this technology and its opportunities to play a primary role in mental health, especially given the dearth of mental health professionals.



I don't have any concern because I know the [AI] programming will be accurate.

Apps such as Chat GPT/Auto GPT have a vast amount of capabilities that can quickly locate services and tailor mental health support for seekers in need.

Al will be a great way to expand access to mental health care while reducing health care costs.

Some participants noted the anonymity provided by Al/chatbots could encourage some people to use mental health supports, particularly those who lack access or who are unwilling to access mental health supports via other means.



One can express themselves completely and not feel bad about the social or emotional responses from another person.

I haven't used a chatbot for mental health support, but with most things concerning mental health I believe that anything is better than nothing. If someone only feels that they can confidently speak to a chatbot as opposed to a person, then that is better than taking no action to address a mental health concern. I'm a firm believer that just talking about a situation will always help, even if it is a minimal effect.

While recognizing the benefits of AI technology, some qualitative responses indicated that participants believe it should only be used as a person-to-person augmentation tool.



Al bots would be useful in connecting Veterans to proper mental health resources. I believe AI bots should only be used as a search engine. They should not offer advice for mental health or any kind of treatment. I also understand the urge some people might have to use them as a chatting companion to bounce ideas off of or just to talk to. I believe this could be helpful but also harmful, as it enables them from seeking proper help from a mental health professional.

I would use chatbots/AI to find quick information, such as a hotline or nearby hospital, but not for therapy sessions and discussing my emotions.

Some participants indicated that Al/chatbots might be used by therapists to collect up-to-date, peer-reviewed science about different mental health diagnoses or help patients locate local or telehealth providers specializing in different therapy modalities. Participants' overall lack of enthusiasm for use of AI was highlighted by one commentator:



While AI can be a powerful tool for certain applications, I think it is far too young to play a critical role in the delicate subject of mental health. There is just not enough testing/ data available to say that AI can serve a substantial role in mental health at this point. I think it could be a decent starting point to gather information and resources, but I don't think it should serve a primary role in actual treatment.

Data Privacy

Although overall data privacy is a concern, seventy-six percent of participants indicated they strongly or somewhat agree that telehealth and hotlines (64%) could provide information privacy (Exhibit E). Participants indicated they somewhat disagree or strongly disagree that social media (78%) and Al/chatbots (65%) could provide data privacy. Some participants were concerned about data security breaches, unethical use of personal information and lack of oversight and regulation. These participants worried about Al/chatbots collecting, storing, selling and misusing personal and sensitive information. Others worried about the newness of this technology and its vulnerability to hackers who might disclose or steal personal information. Participants said:



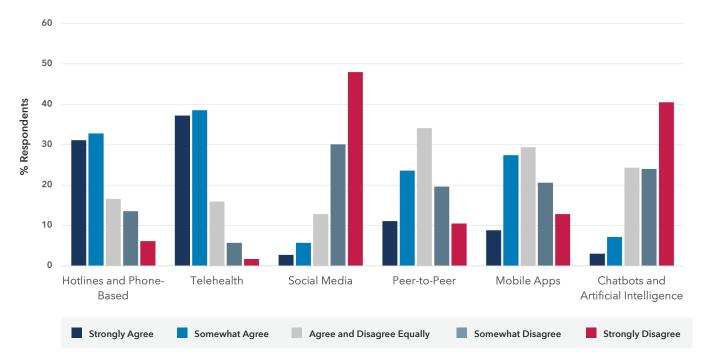
Because the data is being stored/saved, I would worry my private information would be stored/used.

Al/chatbots can be manipulated. Your health information may be sold to unscrupulous entities or used against you.

How do I trust that my personal information will be kept safe? Are there laws that guide the use of AI for mental health data to be protected? If there are, what are the penalties if there is a breach?

Exhibit E: Perceptions that Technology Will Keep Information Private and Safe

Agree that Technology Will Keep Information Private and Safe



Mental Health Stigma

The survey included questions about whether participants would feel inadequate using various modalities to seek mental health support. These questions aimed to evaluate the impact of mental health stigma on participants' choice to use in-person, virtual or more anonymous options available through technology. Fifty-five percent of participants reported they would not have feelings of inadequacy meeting an in-person therapist or seeking care via telehealth (38%) or hotlines (24%). Lower percentages of participants reported they would feel inadequate using social media (30%) and Al/chatbots (28%) for mental health support.

Technology in Suicide Prevention

The survey asked participants about the acceptability of each modality for suicide prevention support. As with other findings, telehealth (90%) was considered the most acceptable, followed by hotlines (86%). Peerto-peer modalities are also notable, participant-accepted suicide prevention methods, while social media and Al/chatbots were less desirable options.

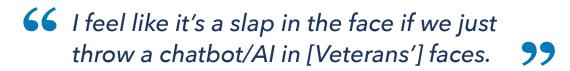
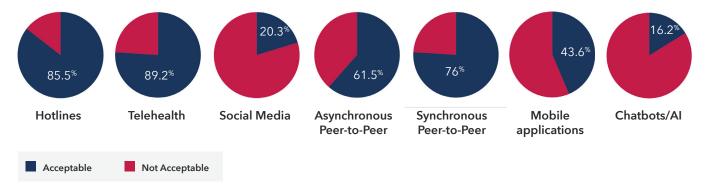


Exhibit F: Providing Suicide Prevention Support Using Technology

Acceptability of Technology-Based Mental Health Tools for Suicide Prevention Support



Participants were asked to share additional thoughts regarding the mental health and suicide prevention support tools included in the survey. Some participants said Veteran and Service member mental health and suicide prevention are not given adequate attention in both the public and private sectors – and noted there is an urgent need to make mental health a priority. One participant said, "[Veteran suicides] are a systemic issue that require a concerted effort from public health officials to stop it." Furthermore, participants said human interaction, rather than interacting with Al/chatbots, is the most beneficial way to support Veterans and members of the military. Another respondent said, "I feel like it's a slap in the face if we just throw a chatbot/AI in [Veterans'] faces."

Other responses emphasized the importance of education and awareness about mental health options; creating an online community for Veterans, including peer-to-peer interactions; and increasing free or reduced-fee access to mental health support.

Survey Implications

- Twenty percent of participants reported being unable to see a mental health provider as soon as they needed to; another 20% reported being sometimes able; 18% usually able; and 15% always able. Thirty percent did not have a need for immediate mental health support in the past 12 months. Technology is a solution for providing immediate mental health support access, particularly modalities such as telehealth, given the familiarity and acceptance of respondents. VA and DOD have already implemented telehealth systems and continuing in their active steps will increase access to virtual mental health options for Veterans and Service members.
- Most participants recognized telehealth as a mental health support they will use. Partnerships with established telehealth platforms to augment existing services may be worth exploring for federal agencies such as VA and DOD. These platforms often provide access to a therapist within a day or two for messaging and a first live video, phone or chat session within a week. These platforms could link to hotlines, and research to understand the potential of these platforms in diverting police and emergency room interventions could be important. Participants mentioned that it's important for providers to be educated in and respectful of the unique nature of Veterans and Service members.
- Though most participants did not consider Al/chatbots acceptable for mental health support, some saw value in using Al/chatbots to provide mental health information and resources or serve as gatekeepers to resources and services, such as prescription refills, peer-to-peer support, locating and contacting a provider and quick access to a provider in times of crisis. Considering where AI would be most useful will be important. For example, primary care is often the throughway to mental health services for Veterans and Service members. Physicians may have limited time and possibly limited training in suicide assessment, lethal means safety and referral resources. Al/chatbots and mobile apps could provide the physician with suicide assessment information, prompt the physician to discuss lethal means safety and provide Veterans with mental health tools and referral sources.
- Ninety-two of the participants indicated the transition from military to civilian life was very difficult. Research refers to this period as the "deadly gap." Mental health technologies may provide transition tools and easy access to mental health support during this vulnerable time for Service members. Peer-to-peer online support, mobile apps and telehealth options could be made routinely available upon transition.
- Research indicates some Veterans and Service members may feel uncomfortable using mental health resources due to the stigma associated with meeting a therapist. Though this survey did not indicate high levels of concern about stigma, further research could evaluate more specifically how Veterans and Service members feel about using telehealth or mobile apps, versus in-person therapy, as it relates to stigma.
- Assurance of data privacy and information safety is critical for securing acceptance and use of all mental health technologies.

Conclusion

Social technology offers additional tools for government agencies, health care providers, technology companies and community organizations to use in their efforts to support mental health and reduce suicide. Although participants had reservations about Al/chatbots, they were comfortable with telehealth and mobile apps, which VA in particular has been using in mental health treatment for some time.

While providers can leverage the unique advantages of social technology - such as increased access, reduced stigma and greater peer support – to benefit Veterans, Service members and others, more research is needed to determine how to maximize the use of these technologies for suicide prevention and mental health support and what impact they will have.

With participants indicating that they are mostly open to technology-enabled mental health support, there are vast opportunities for technology organizations to create solutions that offer vital support to Veterans and members of the military, and the public and private systems that support them. It is important to keep Veterans and Service members' concerns, and the unique nuances of their experiences, in mind while developing technology-enabled support tools, and to work with them throughout the development process.

Participants believe that, at least for AI, technology should complement, rather than replace, traditional mental health care, which ideally incorporates experience, empathy, understanding, observation and other qualities that are distinctly human.



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