



# What twitter can tell us about user experiences of crisis text lines: A qualitative study

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## ABSTRACT

Mental health problems are the leading cause of disability worldwide. Despite the prevalence and cost of mental illness, there are insufficient health services to meet this demand. Crisis hotlines have a number of advantages for addressing mental health challenges and reducing barriers to support. Mental health crisis services have recently expanded beyond telephone hotlines to include other communication modalities such as chat and text messaging services, largely in response to the increased use of mobile phones and text messaging for social communication. Despite the high uptake of crisis text line services (CTLs) and rising mental health problems worldwide, CTLs remain understudied. The current study aimed to address an urgent need to evaluate user experiences with text-based crisis services. This study explored user experiences of CTLs by accessing users' publicly available Twitter posts that describe personal use and experience with CTLs. Data were qualitatively analyzed using thematic analysis. Six main themes were identified from 776 tweets: (1) approval of CTLs, (2) helpful counselling, (3) invalidating or unhelpful counselling, (4) problems with how the service is delivered, (5) features of the service that facilitate accessibility, and (6) indication that the service suits multiple needs. Overall, results provide evidence for the value of text-based crisis support, as many users reported positive experiences of effective counselling that provided helpful coping skills, de-escalation, and reduction of harm. Results also identified areas for improvement, particularly ensuring more timely service delivery and effective communication of empathy. Text-based services may require targeted training to apply methods that effectively convey empathy in this medium. Moving forward, CTL services will require systematic attention in the clinical research literature to ensure their continued success and popularity among users.

## 1. Introduction

Mental health problems are the leading cause of disability worldwide (Trautmann et al., 2016). In the United States, one in five adults experience mental illness each year (Centers for Disease Control and Prevention (CDC), 2016), while suicide is the second leading cause of death among people aged 10–34 (CDC, 2020). Mental illness and lack of appropriate support results in significant economic costs for society (Trautmann et al., 2016). In the U.S., serious mental illness results in \$193.2 billion in lost earnings annually (Kessler et al., 2008), while worldwide, depression and anxiety disorders alone cost \$1 trillion every year in lost productivity (Chisolm et al., 2016). Individuals with mental illness also have a significantly higher risk of developing physical health problems, with further downstream costs in both healthcare and quality of life (Firth et al., 2019). Despite the prevalence and cost of mental

illness, there are insufficient health services to meet this demand (Wang et al., 2007). In 2019, less than half of U.S. adults living with mental illness received treatment, and the average delay between symptom onset and treatment is 11 years (Wang et al., 2004). Available mental healthcare services are commonly plagued by long wait times (MacDonald et al., 2018) and insufficient funding (Robertson-Preidler et al., 2020).

The COVID-19 pandemic has further exacerbated mental health problems and disrupted mental health services in 93% of countries (World Health Organization, 2020). At the same time, the number of individuals seeking mental health support has increased, evidenced by both an increase in internet searches related to mental health (Jacobson et al., 2020) and increased demand for formal mental health services (National Council for Mental Wellbeing, 2020). This mental health crisis has occurred in the context of public health guidelines that have

Abbreviations: CTL, crisis text line.

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restricted in-person contact, reducing access to both formal and informal supports. As a result, people are increasingly turning to remote and online mental health services (Pierce et al., 2021).

Crisis telephone hotlines offer an immediate response to mental health concerns without requiring in-person contact. Unsurprisingly, the use of crisis hotlines has increased since the advent of the COVID-19 pandemic. A recent study conducted in Austria and Germany found that the number of calls made to crisis hotlines increased when governmental measures restricting social contact were implemented and decreased when restrictions were eased (Arendt et al., 2020). In China, 63 crisis hotlines existed prior to the COVID-19 pandemic; this number increased to 625 hotlines within the first few months of the pandemic (Wang et al., 2020).

Crisis hotlines have a number of advantages for addressing mental health challenges and reducing barriers to support. Since they are cost-effective, they help to alleviate the financial burden of mental health care on public health systems (Pil et al., 2013). From a user standpoint, they are typically free, widely accessible, and available 24/7. However, some barriers remain. For example, shame from the social stigma of mental illness is common and can interfere with individuals utilizing crisis phone lines (Gould et al., 2006). Placing a greater value on self-reliance (Gould et al., 2006) and concerns about anonymity (Campbell, 2015) are also associated with a lower likelihood of reaching out to telephone hotlines. Despite high rates of mental illness among adolescents, uptake is limited in this population (Evans et al., 2013), with one study indicating that only 2.1% of adolescents use crisis hotlines (Gould et al., 2006). Recent research suggests, however, that users of crisis chat lines are younger on average than users of telephone hotlines, suggesting text-based crisis services may be preferred among youth (Fukink and Hermanns, 2009; Lake et al., 2022).

Mental health crisis services have recently expanded beyond telephone hotlines to include other communication modalities such as crisis chat and text messaging services (Predmore et al., 2017). As a means of accessing crisis support, text messaging may be particularly appealing because it is inexpensive, instantaneous, discreet, and private. Volunteers for a text-based service for Veterans identified that service users were often more comfortable with text messaging than speaking on the telephone (Predmore et al., 2017). Studies among youth indicate that text-based counselling is often preferred due to increased privacy (Evans et al., 2013), greater perceived anonymity and control, greater emotional distance from the counsellor, and ease of access (Navarro et al., 2020).

One prominent text-based crisis service is the Crisis Text Line. Launched in 2013, it was the first free, 24/7 texting service and now operates across North America, the United Kingdom, and Ireland. This non-profit service has facilitated over five million crisis conversations, consisting of more than 125 million text messages (Crisis Text Line, 2021). According to a 2018 study by Thompson and colleagues, the three most prevalent issues discussed in CTL conversations are depression (28% of conversations), suicidal thoughts (21%), and anxiety (18%). Usage of the service escalated drastically in the months after March 2020, highlighting the increased demand due to the COVID-19 pandemic (Runkle et al., 2021). There is some evidence that the Crisis Text Line is well-accepted among youth (Thompson et al., 2018), and a recent study of homeless youth showed that 33% of participants found this service to be moderately to very useful (Glover et al., 2019). However, the Crisis Text Line, and crisis text lines more broadly, remain grossly understudied (Hoffberg et al., 2020).

In light of the high uptake of crisis text line services (CTLs) and rising mental health problems worldwide (Pierce et al., 2020), the current study addressed an urgent need to evaluate user experiences with text-based crisis services. Difficulties with studying user experiences of text-based crisis services stem not only from the relative novelty of such services, but also from privacy protections and anonymity. Thus, the current study explored user experiences of CTLs by accessing users' publicly available Twitter posts that describe personal use and

experience with CTLs. To our knowledge, this is the only study to conduct a qualitative analysis of first-hand accounts of using text-based crisis services to date.

## 2. Method

### 2.1. Data collection

In May and June 2019, a search of tweets on Twitter was conducted. Because Twitter content is in the public domain, ethics approval was not required for this study. Twitter's TweetDeck function was used to search [Twitter.com](https://twitter.com) for publicly available tweets that: 1) matched the phrase "crisis text line" (not case-sensitive) and 2) were posted between January 2017 and December 2018. As "crisis text line" was the only search term used, it is possible that relevant tweets may have been missed and that some tweets were referring to crisis text lines other than the Crisis Text Line (although the vast majority of tweets appeared to refer specifically to this service). A team of trained volunteers conducted a manual search of the resulting tweets produced using the TweetDeck function. Volunteers received close training and supervision in how to conduct this search, including a document with examples of tweets that should be included or excluded. Tweets were included if the user directly referenced personal experience with CTLs (e.g., "I'm texting with a @CrisisTextLine representative and they're so good wow"). Volunteers were explicitly instructed to include all user tweets, regardless of whether the sentiment was positive, negative, neutral, or mixed. Tweets were excluded if they reflected: (1) general endorsement or promotion of CTLs ("We're here to help. Text 4HOPE to 741741 to reach a trained crisis counselor @CrisisTextLine"), (2) recommendations to use CTLs without clear indication that the poster had used the service themselves ("I also employ you to check out the crisis text line @CrisisTextLine. You don't have to call but they might help more than me"), or (3) comments by CTL volunteers (e.g., "Finally completed my counselor training for @CrisisTextLine"). Tweets that were part of a larger thread of comments were included and analyzed as individual tweets. *Re-tweets* were excluded. Weblinks were not analyzed, but quote tweets were retained if the user added their own original content indicating use of CTLs, and only this original content was analyzed. Each month of Twitter data was searched independently by two volunteers. The selected tweets were then reviewed by the second author and any discrepancies between the volunteers were resolved. This yielded a final sample of 776 tweets from 568 distinct users. The vast majority of users (95%) contributed 1 or 2 tweets to the study dataset. All users contributed 10 or fewer tweets to the dataset, with the exception of one user who contributed 36 tweets (none of which could be considered extreme or aberrant views).

### 2.2. Analytic method

Data were analyzed qualitatively using inductive, reflexive thematic analysis, which identifies patterns across datasets and is well suited for investigating novel or under-researched areas (Braun and Clarke, 2013). This approach is compatible with the experiential orientation of this study highlighting the specific experience of CTL users, situating the thematic analysis within the theoretical framework of phenomenology, which emphasizes the subjective, lived experience of participants as the primary object of study (Smith et al., 2009). Reflexive thematic analysis recognizes the role of coders' unique perspectives in interpreting data and generating themes. To provide context about the coders, consistent with standards for reporting qualitative research (SRQR; O'Brien et al., 2014), the first author had previous experience with qualitative research but no history of contact with CTL users, while the second author had prior experience as a CTL volunteer, providing unique insights into the training and experiences involved in CTLs. The third and fourth authors specialize in social support and computer-mediated communication research and the fourth author is a registered psychologist.

Data was analyzed primarily by the first author, in collaboration with

the second author using NVIVO 12 software. Tweet content was initially identified with preliminary codes generated inductively using phrasing derived from the source tweets in order to remain as close as possible to their original voice and meaning. Consistent with thematic analysis guidelines, tweets could be coded in more than one theme, or different parts of a single tweet might contribute to different themes. Example tweets provided in the results section may be partial quotes of the full tweet in order to clarify which part of the tweet contributed to the represented theme. Codes were investigated for potential relationships and organized according to provisional, overarching themes that characterized patterns found in the data. Initial codes were agreed upon by the first and second author, and then presentations of explanatory codes and themes were reviewed and discussed by members of the research team iteratively until consensus was reached (Braun and Clarke, 2021a). The final stage involved team discussion and review of the overall picture portrayed by the themes. Consensus that the themes sufficiently captured the dataset in a useful manner provided the basis for the final number of themes, as opposed to a set “saturation” point (Braun and Clarke, 2021b). The first author then returned to the coded data to ensure appropriate coding of each tweet, and reviewed the entire dataset to confirm the fit of proposed themes. Following this process, final theme names and definitions were identified and agreed upon through consensus by all authors.

### 3. Results

Six themes were identified: (1) approval of CTLs, (2) helpful counselling, (3) invalidating or unhelpful counselling, (4) problems with how the service is delivered, (5) features of the service that facilitate accessibility, and (6) indication that the service suits multiple needs. Table 1 presents a summary of the six themes, associated subthemes, and the number of tweets in each subtheme.

#### 3.1. Theme 1: general approval of CTLs

Content under this most prominent theme (279 tweets, 35.9%) contained indications that users generally liked, and were satisfied with, CTL services. These tweets primarily took the form of explicit endorsements based on users' positive personal experience with CTLs. Additional tweets indicating approval conveyed general expressions of gratitude or positivity toward the service. Typically these tweets contained limited or no details regarding specific features that were perceived as beneficial.

**Table 1**  
Themes and subthemes.

Theme	Subtheme	Tweets
1. General approval of CTLs	–	279
	De-escalation and safety	88
	Helpful coping strategies	27
	Understanding and validation from good counsellors	62
2. Helpful counselling	It helped	177
	Non-specific responses	28
	Conversation rushed or abandoned	30
3. Invalidating or unhelpful counselling	Invalidation	34
	Unhelpful	50
	Long wait times	162
4. Problems with delivery of service	Technological barriers	42
	Limiting use	16
	Advantages of texting	92
	Ease of access	37
5. Facilitates accessibility	Positive waiting experience	19
	Psychological and emotional support	162
	Interpersonal support	65
	Repeat use	106
6. Serves multiple needs	Ambiguity about appropriate use	15

“@ anyone in crisis - the @CrisisTextLine is a PHENOMENAL resource. It's free and confidential and I can personally (and v v v emphatically) vouch for its effectiveness.”

“@CrisisTextLine is amazing. I'm so happy it exists.”

#### 3.2. Theme 2: helpful counselling

The second largest theme (249 tweets, 32%) contained indication that CTL counsellors were helpful, with many tweets offering insights into the most beneficial aspects of counselling.

##### 3.2.1. De-escalation and safety

Users (88 tweets, 11.3%) explicitly reported that CTLs were effective at de-escalation in crisis, especially in instances involving risk of harm or suicide. Most tweets within this subtheme detailed first-hand accounts of CTLs keeping users safe by preventing them from taking their own life or engaging in self-harming behavior.

“I started cutting myself and thank god that I texted Crisis Text Line and the person I was talking to helped me a lot and I stopped cutting myself.”

“tonight I was debating ending my life so I talked to these guys and now I'm feeling a lot better”

##### 3.2.2. Helpful coping strategies

Users (27 tweets, 3.5%) indicated that the benefits of using CTLs extended beyond their contact with the service. Specifically, some tweets suggested that CTLs provided users with coping skills and resources that they later applied to successfully manage stress in daily life.

“I'm having an amazing day because instead of texting @Crisis-TextLine... I asked myself what would they remind me or ask me? I totally kicked depression's ass this morning by doing that. I got out of bed, turned on music, took shower”

##### 3.2.3. Understanding and validation from good counsellors

Tweets highlighting positive counselling experiences (62 tweets, 8%) conveyed a subjective sense of feeling heard, supported, and validated. The importance of non-judgmental, compassionate, and understanding responses, were commonly emphasized in descriptions of effective counsellors.

“They were very kind and understanding, they truly cared about what I had to say.”

##### 3.2.4. It helped

Many users (177 tweets, 22.8%) reported that CTLs had directly helped them, but tweets within this subtheme did not provide details about what features of counselling had been beneficial.

“I love how everyone is doing livestreams for crisis text line! They've really helped me in the past”

“Used @CrisisTextLine for the first time today. It helped.”

#### 3.3. Theme 3: invalidating or unhelpful counselling

The third theme (97 tweets, 12.5%) captured user perceptions of unhelpful or even harmful counselling experiences, especially when users perceived responses as invalidating.

##### 3.3.1. Non-specific responses

CTL techniques were perceived as ineffective when responses

appeared insincere or unsuitable for the users' concerns (28 tweets, 3.6%). For instance, some tweets indicated that recommended coping strategies came across as recycled, unhelpful, or inappropriate for those in serious crisis. Counsellor responses perceived as cliché, robotic, parroted, or scripted were identified as especially unhelpful.

"You're there w/ suggestions of cloud watching, yoga, DRINK WATER??????, get some sun, this is sick. This helps no one at all that's suicidal."

"They're no more helpful than a prerecorded parrot."

### 3.3.2. *Conversation rushed or abandoned*

Occasionally (30 tweets, 3.9%), users expressed perceptions that counsellors were disinterested or eager to leave the conversation. Users described counsellors suddenly abandoning the conversation altogether, being left on "read," or left hanging in the middle of discussing their problem. For many, these experiences left users feeling as though they were not worth helping, exacerbating painful feelings.

"when every single person you could possibly reach out to is sick and tired of hear about what a depressed failure you are. this includes your crisis text line counselor, who is desperately trying to end their conversation with you."

### 3.3.3. *Invalidation*

Sentiments of invalidation underpinned many negative assessments of CTL counselling experience. Some users (34 tweets, 4.4%) described explicit instances of invalidation or shaming by counsellors, such as being blamed for their painful issues.

"@CrisisTextLine Your first counselor blamed me and treated me as a problem."

### 3.3.4. *Unhelpful*

Within this theme, most users (50 tweets, 6.4%) described CTLs in negative terms, indicating ineffectiveness without specifying which aspects of the service had been unhelpful. Some reported that CTLs had a net negative effect, leaving them feeling worse than when they had made initial contact to the service.

"@CrisisTextLine Well it didnt help. You made everything worse"

## 3.4. *Theme 4: problems with delivery of service*

Users (170 tweets, 21.9%) described a number of problems with how CTL services are delivered, resulting in reduced accessibility or potentially harmful outcomes.

### 3.4.1. *Long wait times*

Long wait times to reach a counsellor appeared to be the most common concern among CTL users (162 tweets, 20.9%). Many detailed experiences of waiting too long to reach a counsellor, while others reported never getting through to a counsellor at all.

"one time I sent a message to the crisis text line telling them I wanted to kill myself and they never got back to me"

Notably, what users identified as an acceptable wait time varied widely, with some describing waiting 10–15 min when in crisis as untenable, while others described waiting for hours. Tweets indicated that extended wait times could compound already heightened feelings of worthlessness and negative perceptions of self.

"I texted once and it took three hours to get a response... I'm just not worth it."

"So I text the crisis line and get ignored....just proves I should kill myself"

### 3.4.2. *Technological barriers*

Tweets (42, 5.4%) identified technological barriers to using CTLs. Connectivity issues were the most prominent, including glitches that resulted in misunderstandings or excessive repeat automated messages. Other technological barriers included a lack of a phone or cell service, as well as a small character limit for initial contact.

"@CrisisTextLine how do I text this it's not working says error"

"I texted y'all and the system didn't register any of my replies and terminated the conversation."

### 3.4.3. *Limiting use*

Tweets (16, 2.1%) described challenges with CTL service policies of limiting use or blocking certain users from access. These users expressed confusion about why they were barred, or increased feelings of rejection and shame.

"Just can't use your site anymore so clearly I'm a burden"

## 3.5. *Theme 5: facilitates accessibility*

Tweets in this theme (97, 12.5%) highlighted features that enhanced accessibility to support.

### 3.5.1. *Advantages of texting*

Users identified the texting platform as a significant advantage in and of itself (92 tweets, 11.9%). There was clear indication that users shared a common preference for texting over phone calls. In particular, users indicated that texting made crisis support more accessible for those with diverse needs and challenges such as social anxiety, difficulty with speaking or verbal communication, or deafness. Many users identified texting as more discrete, allowing them to access support privately in times and spaces where it might be uncomfortable or even potentially unsafe to speak aloud.

"It can be really hard and stressful actually talking on the phone and if it's late at night. From personal experience, the text line is really helpful. Especially if you are scared of someone hearing you."

There was also indication that texting was less embarrassing or intimidating than making a phone call, facilitating greater comfort with contacting support and expressing personal concerns.

"Admitting you need help can be scary. During my own #mental-health #crisis several months ago, I was WAY too panicked to pick up a phone and make a call. @CrisisTextLine was such a great way for me to make that important connection while alleviating some of my uneasiness."

The text-based format also increased accessibility by enabling contact through diverse access points, such as Youtube or Facebook Messenger. Some users reported getting around technological glitches or connectivity problems by using these alternative access points.

### 3.5.2. *Ease of access*

Users (37 tweets, 4.8%) referred positively to other features of CTL services that made them accessible, such as 24/7 availability. The confidentiality of CTLs also appeared to increase perceptions of accessibility, by diminishing concerns about stigma, judgment, or personal privacy. Some users noted that eliminating financial barriers made CTLs more accessible than a regular therapist, and that they used the service when they did not have the financial means to access formal counselling.

"I've used the @CrisisTextLine numerous times and it's been so helpful... it's nice knowing this FREE service is available 24/7 pls RT"

"Try crisis text line. They help me a lot when I can't get to a counselor."

### 3.5.3. Positive waiting experience

A handful of tweets (19, 2.4%) reported a positive or brief waiting experience. Although far more users reported long wait times, some users noted that they were able to access a counsellor almost instantly, while others identified some helpful measures implemented by CTLs to mitigate the frustration of waiting, such as activities to do while waiting to connect.

"@CrisisTextLine I love the coping quiz while waiting for the texts"

## 3.6. Theme 6: serves multiple needs

The final theme (203 tweets, 26.2%) suggested that people used the service for a wide range of needs. This theme captures reasons and patterns of use of CTLs, as well as some uncertainty among users about appropriate use.

### 3.6.1. Psychological and emotional support

Users (162 tweets, 20.9%) primarily reported contacting CTLs for support related to emotional or mental health concerns, including anxiety, panic, post-traumatic symptoms, obsessive-compulsive disorder, eating disorders, depression, suicidality, and self-harm. A handful of tweets were from "third-party" users who contacted CTLs to get help with supporting a loved one with mental health concerns.

"I have also personally used @CrisisTextLine and found them to be very helpful when I was engaging in self harm"

### 3.6.2. Interpersonal support

Users also reported using CTLs when they felt lonely or had no one to talk to (65 tweets, 8.4%), emphasizing CTLs as a useful alternative especially when they lacked available social support resources or felt that they did not want to burden their loved ones.

"They say to reach out to loved ones if you are feeling depressed or not wanting to live. Well i reached out to 3 people and no response smh. Good news is i texted the @CrisisTextLine"

"I text with the @CrisisTextLine a lot because I don't have any friends"

### 3.6.3. Repeat use

Many tweets indicated repeat, ongoing use of the service (106 tweets, 13.7%), with some users even noting that they had a CTL saved in their phone contacts as part of their safety plan.

"I keep 741-741 crisis text line logged in my phone. When I need to talk, I usually have no one but a stranger. So that's where I go."

"I've used the crisis text line time and again when I've hit low spots."

### 3.6.4. Ambiguity about appropriate use

Some users (15 tweets, 1.9%) expressed confusion about when it is appropriate to use CTL services. Some tweets suggested that these services should only be used by those in crisis, while others highlighted CTLs' availability to anyone suffering as a positive feature.

"...one of the things I love about @CrisisTextLine is that people don't have to be suicidal to use the service"

"I keep 741-741 crisis text line logged in my phone. When I need to talk, I usually have no one but a stranger. So that's where I go."

For some, this ambiguity about who the service is for resulted in anxiety and guilt about whether they should be using it.

"Sometimes I worry that my reason for texting you guys isn't a crisis."

## 4. Discussion

### 4.1. Principal results

The goal of the current study was to utilize the public forum of Twitter to learn how CTL users characterize the service and its effectiveness. Our study suggests that CTLs are a promising, accessible, and versatile platform for providing mental health support, with some need for improvement in targeted areas. Approval of CTLs was the largest theme, with over 35% of tweets reflecting gratitude for CTLs and unsolicited endorsement of these services as a viable and valuable resource for those facing distress. These public endorsements are even more compelling given that they required users to divulge their own mental health struggles and that users did not stand to personally gain from posting positive reviews. Adding to this positive picture is that more than 10% of tweets mentioned repeated use of CTLs, consistent with recent evidence that roughly 39.5% of Crisis Text Line users contacted the service more than three times, indicating common repeat usage (Szyk et al., 2020).

The second largest theme provided insight into helpful aspects of CTL services, such as responses perceived as caring, validating, and non-judgmental. Our findings support the notion that empathetic understanding and genuine validation are essential for text-based crisis counselling, which parallels past research demonstrating that counsellors' perceived empathy and respect are significant predictors of positive outcomes for telephone and text crisis hotline users (Mokkenstorm et al., 2017). Individuals frequently credited CTLs for preventing self-harm and suicide, suggesting that CTLs are especially effective at their primary purpose of providing de-escalation in a crisis situation. This is consistent with nascent work suggesting the usefulness of text messaging for safety, especially among youth at risk of suicide (Czyz et al., 2020). CTLs were also described more generally as a place to learn adaptive coping skills. This lends tentative support to the notion that at least some CTL users may experience improved distal outcomes. Taken together, the two largest themes identified in the current study are consistent with emerging empirical evidence that text-based crisis services appear to be effective in reducing distress and that the majority of users find such services helpful (Gould et al., 2021; Williams et al., 2020).

Findings from the current study highlight the rising popularity of mental health support provided via text and online chat platforms (Crisis Text Line, 2021). Many tweets expressed a preference for texting over telephone hotlines because it is more discrete, confidential, and anonymous, and less embarrassing than calling. These findings are consistent with stigma being a well-known barrier to seeking mental health support (Corrigan et al., 2014), and recent research demonstrating greater comfort with texting over calling, especially among youth (Trub and Barbot, 2020). These results also lend support to the social compensation hypothesis (McKenna and Bargh, 2000), which suggests that computer-mediated communication (CMC) may be less threatening compared to telephone and in-person communication, especially for those who have weak communication skills. The text format was lauded by users for increasing access to mental health support for diverse and at-risk populations, including those who are non-verbal or have hearing impairments, those with specific privacy concerns (e.g., interpersonal violence, abuse), and those that cannot afford therapy from a registered mental health professional.

Despite prominent positive themes, long wait times were the most common and pressing problem expressed by CTL users. Some users



reported waiting for hours when contacting CTLs with suicidal thoughts, indicating that the triage system may not always successfully connect suicidal users in a timely manner. Long wait times appeared to exacerbate feelings of worthlessness or negative self-perceptions that can be so prevalent among hotline users (Spittal et al., 2015). While wait times for any support service may be frustrating, long wait times for a crisis service come with potentially serious risks. Whether slow or no responses are because of a technical glitch or overcapacity, an individual met with silence when reaching out for help can be left feeling more distressed and alone.

While positive counselling experiences were more than twice as common in the current study than negative ones, the most frequently mentioned problem with CTL counselling was the perception of invalidating responses. Some users characterized responses from CTL volunteers as being non-specific, seemingly scripted, invalidating, dismissive, or even shaming, consistent with recent survey data from an Australian SMS crisis service that a minority of users found responses “formulaic” (Williams et al., 2020). These experiences may partly stem from counsellors' use of “parroting,” which involves repeating or rephrasing a user's problem with the goal of conveying understanding. While this is a common counselling practice, text counsellors cannot use vocal cues to convey understanding or compassion, which may result in responses coming across as cold or robotic (Moylan et al., 2021). Text counsellors also lack nonverbal cues from users, which are extremely valuable in helping counsellors gauge users' emotional distress and reactions to counselling strategies, and allow them to adjust their approach as needed (Mokkenstorm et al., 2017). Lastly, and not specific to the text-based platform, crisis counsellors have the difficult job of responding on-the-fly to a wide variety of mental health crises from diverse and novel service users. This may result in counsellors providing overly broad or seemingly scripted responses, which are then perceived as invalidating or unhelpful.

Lastly, some users expressed confusion about what constitutes appropriate use of CTLs, which may have contributed to feelings of invalidation. For example, some users felt they were “wasting counsellors' time” or were not sufficiently in crisis to receive attention (e.g., “the crisis text line literally just said ‘sounds like you're not in a crisis’ and closed the convo after 2 messages..ok.”). In addition, according to common CTL policies, users can be blocked for a range of reasons, such as disrespectful behavior (Crisis Text Line, 2021). Our findings suggest that users sometimes lack clarity about these policies and terms of use, which can lead users to feel frustrated, misled, or ashamed.

#### 4.2. Clinical implications

Findings from the current study suggest that individuals searching for information about CTLs on Twitter are likely to encounter largely positive user experiences, which may increase their own likelihood of seeking help from CTL services (Fan and Lederman, 2018). However, even a small number of highly negative reviews may unduly influence prospective users' likelihood of using CTLs due to negativity bias (Baumeister et al., 2001), which may drive away potential users who may have benefitted from the service. That said, the influence of negative reviews may vary depending on temporal factors (Chen and Lurie, 2013) and online context (Wu, 2013), and further research is needed.

Results further suggest the need for enhanced training of CTL counsellors in effectively developing rapport, active listening, expressing understanding and empathy, and interpreting cues that indicate poor user engagement or satisfaction during text conversations. However, the rapidly growing popularity of CTLs has far outpaced the scientific literature on how to best support people via text message during times of distress (Holtzman et al., 2017). We suggest that text-based crisis services integrate recommendations from the small but emerging scientific literature on strategies to communicate empathy via CMC (Grondin et al., 2019; Powell and Roberts, 2017). This might include increasing the sensitive use of socioemotional cues (e.g., more emotional language,

affirmations, emojis, GIFs) to reflect back users' emotional experience, and to consider users' own texting style when doing so (Grondin et al., 2019). We also highlight the need to ensure clients are afforded the time they need to share their experiences, without feeling rushed. Indeed, past research has found that longer text message interactions are associated with greater perceptions of empathy (Powell and Roberts, 2017). Interjecting brief statements while the client is sharing (e.g., “yes, tell me more,” “please go on,” “I hear you”) may help to mimic the verbal strategies of active listening in voice communication, and to help compensate for the lack of nonverbal cues that are used in in-person communication (e.g., nodding, eye contact, leaning forward). In addition, crisis text lines may benefit from training volunteers to address a wide range of psychological and emotional health concerns and conditions, as recent evidence suggests that the effectiveness of text support is strongest among users with depression, but less effective for users with different presenting concerns (Gould et al., 2021). Training to respond to diverse conditions may reduce volunteers' reliance on formulaic, cliché, or parroted responses identified in the current study. For example, counsellors may need to make more explicit, concerted attempts to clarify the nature and intensity of a client's emotional experience (e.g., “sounds like you are feeling pretty hurt and ignored”), rather than simply reflecting the content of what was said (e.g., “so your boyfriend has been ignoring your messages”). Overall, more research is needed on effective text-based counselling strategies and methods.

Lastly, our results highlight a pressing need to ensure effective and timely CTL support, including effective communication of expectations for time limits (Mokkenstorm et al., 2017). A multi-pronged, long-term approach to address wait times is also warranted. This may include increasing funding for CTLs, increasing volunteers (especially during high traffic periods), and offering supportive, therapeutic activities while users are waiting to be connected.

#### 4.3. Limitations

The use of publicly available Twitter posts was a novel approach to capturing user experiences with CTLs. However, this restricted our analysis to only those who use Twitter and who are comfortable disclosing personal use of such services in a public forum. Since Twitter is more popular among younger individuals (Pew Research Center, 2021), our sample may also overrepresent the experiences of younger people who use this service. That said, CTLs attract younger users, with approximately three-quarters of users being under the age of 25 (Crisis Text Line, 2021). Our data may also overrepresent extreme views about CTLs. Indeed, prior research indicates that people are more likely to post an online review after a particularly positive or negative experience (Koh et al., 2010). However, recent research suggests qualitative studies using Twitter data can capture additional viewpoints that may be omitted in traditional qualitative research (Chilman et al., 2021).

In using the search term “crisis text line,” we may have missed tweets referring to CTLs by a different name (although our search was robust to spelling errors and other minor deviations). While the vast majority of tweets in our sample explicitly referred to the U.S.-based Crisis Text Line, our broad search strategy likely captured user experiences with other CTLs and in other English-speaking countries, which can vary in their training practices and policies. Additionally, because we collected tweets related to CTLs rather than surveying users directly, we were not able to collect demographic information such as location, age, and gender, or other individual difference factors that may impact users' reported experiences, such as personality or attachment style. As our study included only tweets produced in 2017 and 2018, we also cannot rule out the possibility that CTL experiences may have changed in the context of COVID-19. While we do not have reason to believe that themes expressed in tweets about CTLs would differ, some (such as long wait times) may be even more prevalent in the context of increased usage of CTL services. We are also unable to provide the precise number of tweets yielded from the original Tweetdeck search, or the proportion

of total tweets that came from users (versus counsellors or third party endorsements). Finally, because we did not collect user experiences with telephone crisis lines, it is difficult to ascertain which themes are unique to, or more prominent within, texting platforms. More broadly, it is worth noting that the use of a qualitative design means that we cannot draw conclusions regarding user experiences of CTLs compared to other forms of crisis support, peer support, support from a mental health professional, or receiving no support at all.

#### 4.4. Future directions

Future research on CTLs would benefit from a broader, more representative sample of users using more diverse recruitment strategies (e.g., posts on multiple social media platforms) and data collection methods (e.g., online surveys, qualitative interviews) and assessment of outcomes that are both proximal (e.g., satisfaction with service, reduced distress) and distal (e.g., engagement in mental health treatment, self-harm, hospital visits; Hoffberg et al., 2020). Greater attention to the perspective of CTL counsellors would also offer rich information regarding the benefits and challenges of providing crisis support via text message. Research that investigates common and unique factors that contribute to user satisfaction and outcomes following text-based and phone-based crisis support is also warranted. This should include user and counsellor characteristics, counselling strategies and techniques, effective strategies for conveying empathy in text-based mediums, as well as broader service policies and procedures. Taken together these findings will help establish a set of best-practices for providing text-based crisis support. Lastly, further research is needed into barriers to accessing CTLs, who benefits most from CTLs, and CTLs' suitability for populations with diverse identities, experiences, and mental health concerns. For example, some have recently called for crisis services that are specific to vulnerable populations, such as LGBT youth, as recent evidence suggests such individuals are more likely to reach out to LGBT-specific crisis services (Goldbach et al., 2019) and may prefer text-based over telephone-based crisis services (Haner and Pepler, 2016).

#### 4.5. Conclusions

CTLs provide rapid access to mental health support for millions of users every year, across the globe. The current research offers novel and clinically important insights into the subjective experiences of CTL users. Overall, results provide evidence for the value of text-based crisis support, as well as a need for improving timely service delivery and effective communication of empathy and support. Moving forward, CTL services will require systematic attention in the clinical research literature to ensure their continued success and popularity among users.

#### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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