Systematic Review

Systematic Review of Research and Interventions With Frequent Callers to Suicide Prevention Helplines and Crisis Centers

Brian L. Mishara[1,2], Louis-Philippe Côté[1,2], and Luc Dargis[1]

[1]Centre for Research and Intervention on Suicide, Ethical Issues and End-of-Life Practices (CRISE), Université du Québec à Montréal, QC, Canada

[2]Psychology Department, Université du Québec à Montréal, QC, Canada

Abstract: *Background:* Helplines worldwide have frequent callers who may occupy a large proportion of call volume. Therapeutic gain from frequent calling has been questioned. We conducted this review to identify the characteristics of frequent callers and to compile recommendations about how best to help them. *Method:* Using preferred reporting items for systematic reviews and meta-analyses (PRISMA) standards, we searched for all empirical research in English and French from inception to May, 2020 in PubMed, PsycInfo, and the CRISE library. *Results:* We identified 738 manuscripts and retained 27 for analyses. Nine provided no definition of frequent callers; nine mixed frequent callers with repeat callers (>1 calls); nine concerned frequent callers (≥8 calls/month). The limited data suggest frequent callers are similar to other callers and often experience mental health problems, loneliness, and suicide risk. From recommendations in all 27 studies, we identified 10 suggestions to better manage and help frequent callers that merit validation. *Limitations:* The small number of empirical investigations and the diversity of their goals and methodologies limit generalizations. Although recommendations for helping callers may have face validity, empirical data on their effectiveness are scarce. *Conclusion:* Rather than focusing on reducing call frequency, we should empirically evaluate the benefits of interventions for frequent callers with different calling patterns, characteristics, and reasons for calling.

Keywords: helplines, suicide, prevention, frequent callers, repeat callers, crisis centers

Helplines worldwide have a small proportion of callers who call quite often, called "frequent users," "frequent callers" or "repeat callers," and "chronic callers." For example, 3% of Australian Lifeline network users call 20 or more times per month, but their calls constitute 60% of all calls received (Spittal et al., 2015). The definitions of "frequent" vary, with many studies including infrequent callers. For example, Greer (1976) included people calling at least 19 times in 2 years, which averages to less than one call per month. Publications indicate concerns about the *management* of frequent callers. Frequent callers have been reported to occupy so much time that other callers are unable to reach the service. A second concern is the *emotional drain* on helpers (people answering the phone calls on helplines; e.g., Haycock, 1998). Helpers may feel that frequent callers' calls are difficult because of the complexity of their problems (Vivekananda, Bamford et al., 2019). Helpers have experienced a lack of competence in dealing with these callers (Brockopp et al., 2002; Haycock, 1998; Kinzel & Nanson, 2000), feelings of being manipulated (Kinzel & Nanson, 2000), frustration and resentment (Brockopp et al., 2002; Haycock, 1998), and sometimes burnout (Kinzel & Nanson, 2000). Third, since most helplines are designed for callers who are in crisis or currently suicidal, some think (e.g., Hall & Schlosar, 1995) that repeat callers are manipulating, bored, chatty, or needy of human contact, but not actually suicidal. Fourth, one may question whether the management approaches to frequent callers ignore their needs and the potential benefits from their calling often, and ask how helplines can better meet their needs. Helplines often have an objective of helping people who are in an acute crisis situation and persons at risk of attempting suicide. This objective implies that a crisis intervention approach should be used and that helpline activities should consist of a small number of brief interventions. This contrasts with more long-term intervention approaches, such as psychotherapy, which involve a sustained therapeutic relationship over a long period.

It is also possible, as suggested in the qualitative study by Middleton, Gunn et al. (2016), that different subgroups

of frequent callers may benefit from specific services and approaches tailored to address their needs. To help clarify these concerns, we present a systematic review inspired from scoping studies of empirical research in order to summarize (a) empirical data on the nature of frequent callers and (b) current evidence and proposals on how best to help them.

Rationale for This Review

Several systematic reviews reported that many callers call repeatedly (Hvidt et al., 2016; Middleton et al., 2014), although only a small proportion of repeat callers may be considered to be frequent callers. Callers who reuse services include people at high risk of suicide (Ramchand et al., 2017). When studying frequent callers, researchers have often included all repeat callers, usually defined as people who called more than once. For example, the review by Middleton et al. (2014) of research on frequent callers included all empirical studies of persons who called more than once. Thus, their conclusions concern an undifferentiated combination of truly frequent callers and low-frequency repeat callers. The present review initially cast a large net, seeking all studies that ostensibly concerned frequent callers. However, in our analyses of the characteristics of frequent callers, we limited our focus to research on more frequent callers, eliminating studies of an undifferentiated mix of frequent callers and low-frequency repeat callers. When all repeat callers are included in samples of frequent callers, anyone who calls as little as twice or three times in a month would be included in the sample. We adopted the definition of frequent callers as people who call eight or more times in a month, which is the lowest limit set in the empirical investigations we included. We recognize that some studies adopted the threshold of 20 or more calls per month (e.g., Bassilios et al., 2015; Spittal et al., 2015). In our analyses of the empirical data, we also excluded studies that did not indicate their inclusion criteria for being a "frequent caller." However, in our description of the recommendations of how helplines should react to frequent callers, we included all recommendations in the literature. We did so because the recommendations were based on clinical experiences, and have not been determined based on empirical data.

Some people consider the reuse of a calling service to indicate efficacy. Calling back could indicate that callers want to continue to use the service they think is helpful (Apsler & Hoople, 1976). Others see it as inconsistent with the crisis intervention model (Vattø et al., 2019). The review by Middleton et al. (2014) concluded that research on frequent callers was quite limited. Our review includes more recent research, but limits the scope of our summary of the empirical data to callers who could be considered to call frequently. However, in our summary of recommendations on how to manage calls and be of help to frequent callers, we include all studies where the authors make recommendations.

Method

Our methodology is inspired by scoping studies (Arksey & O'Malley, 2005; Levac et al., 2010; O'Brien et al., 2016; Tricco et al., 2016) and rapid reviews (Tricco et al., 2015). These reviews are exploratory, addressing various elements of a topic, not just one specific aspect, as in a systematic review. Scoping studies meet the same scientific criteria as systematic reviews and proceed with a logical set of identifiable steps. We used PRISMA standards (Shamseer et al., 2015), including the PRISMA-ScR extension for scoping reviews (Tricco et al., 2018) with the following methodology:

Populations

The only criterion that characterizes frequent callers consistently in the literature is the number of calls (Middleton et al., 2014). We used the most inclusive definition in the literature for our initial search, including all research on callers who called at least twice. We then classified studies into those including only callers who called at least eight times a month, studies using the threshold of more than one call per month, and studies that did not indicate how callers were classified.

Documents Retained

We included all research papers presenting original results, using qualitative, quantitative, or mixed methods, published in English or French from the inception of the databases we searched (see Sources of Information section) to May 1, 2020. We excluded manuscripts with no empirical data.

Context

All articles that present data from any type of call center likely to receive calls from suicidal people were included (i.e., helplines, crisis call centers, suicide prevention centers, distress centers, etc.). However, some form of the word "suicide" had to be included as an initial search criterion.

Intervention

When documents described an intervention, no criteria discriminating the types or the nature of the interventions were applied.

Outcomes

In accordance with the descriptive and exploratory approach, all outcome variables were permissible.

Sources of Information

PubMed and PsycInfo were chosen because of their low coverage overlap and their relevance to the research questions. We used natural and controlled vocabulary to increase the specificity and sensitivity (Sampson et al., 2008) and also searched the library of the Centre for Research and Intervention on Suicide, Ethical Issues and End-of-Life Practices at the Université du Québec à Montreal, which has over 35,000 documents.

Eligibility Criteria

No restriction on the study design or type of data (qualitative, quantitative, mixed-methods) was applied. Exclusion criteria were: no empirical data, non-telephone crisis services, and in languages other than French and English.

Research Strategy

Table A1 in the Appendix shows the terms used to identify the key concepts "frequent callers" and "call centers that may respond to suicidal people."

Selection of Studies

We identified 738 records after removing duplicates. We read the title and summary to assess eligibility against inclusion and exclusion criteria and initially included 38 peer-reviewed articles that were read entirely. Of these, 27 were retained for analyses (see Figure 1). L.-P. C. and L. D., who each have several years' experience in screening articles for published systematic reviews, screened the 738 records. When a record raised a doubt, B. L. M. decided on its inclusion according to the eligibility criteria, after discussion with the other authors.

Information Extracted

The information extracted from the articles comprised:

1. Objectives: as expressed by the authors
2. Sample selection: sampling method
3. Type of study: the methods described by the authors including records audit, intervention study, survey of helpline callers, and case or qualitative study
4. Variables: dependent variables
5. Frequent callers definition: definitions by the authors
6. Sample description: qualitative and quantitative information
7. Intervention description: nature of the intervention
8. Caller characteristics: comparisons with another group
9. Description of frequent callers: demographic, psychological, and suicide-related variables. The distinction between this category and *sample description* is that sometimes the sample is composed of frequent callers and other callers, without distinguishing between them.
10. Intervention outcome: effects reported in intervention studies
11. Main results
12. Limitations: stated by the authors
13. Discussion: issues presented
14. Methodology

Data extraction was coordinated by B. L. M. and executed by L.-P. C. and L. D.

We were unable to evaluate systematically the methodological quality due to the heterogeneity of methodologies and the lack of sufficient information on the reliability and validity of the data (Tricco et al., 2016) reported in each study. However, it should be noted that several studies used interesting and relevant data sources whose validity and reliability may be difficult to establish (e.g., call logs, survey data).

Results

Nine of the 27 studies failed to provide a clear definition of frequent callers. Nine included all people who called more than once during the entire period under study. Nine studies clearly defined frequent callers, one defining them as eight or more calls a month; the others as 10 or more calls a month, with some using the criterion of 20 or more calls per month. Studies varied in their research methodologies and their data sources (see Table A2 in the Appendix). All of the results we report concerning the characteristics of frequent callers are based on the nine studies that included only persons who called eight or more times in the preceding month. However, the other studies that mixed frequent and infrequent repeat callers

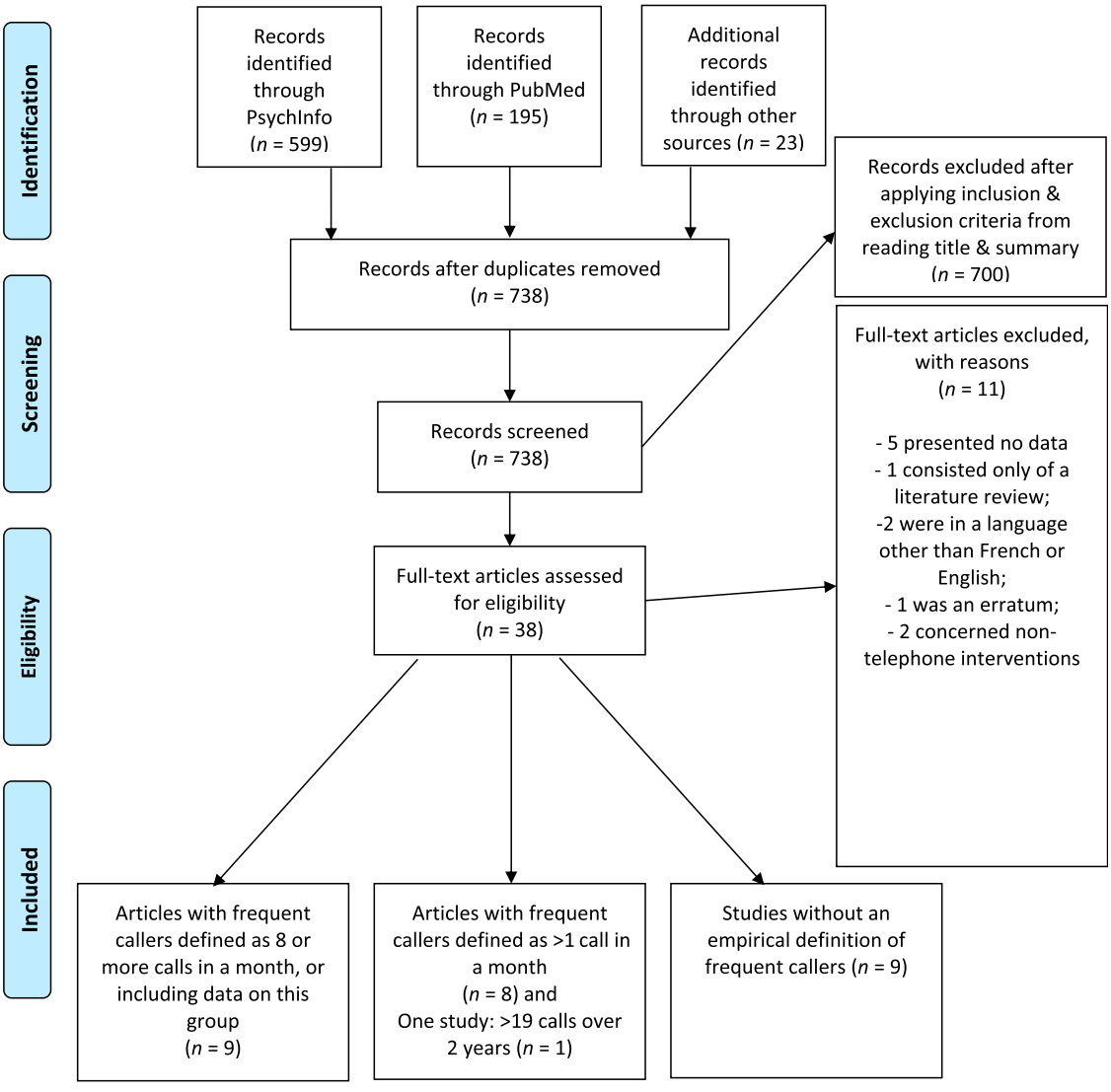

Figure 1. PRISMA flow diagram for frequent callers review.

and those that said they dealt with frequent callers, but failed to indicate how they identified callers as frequent, all appeared to include some very frequent callers in their sample. Although we could not use their data to describe frequent callers, because of the methodological issues, there is no reason to believe that their clinical insights on how to respond to frequent callers should not be considered and researched in the future.

Differences Between Characteristics of Frequent Callers and Infrequent Callers

Most of what we know comes from a few studies conducted in Australia. Burgess et al. (2008) found that frequent callers appeared to be older and were more likely to have never been married and to report concerns with loneliness, physical illness, and anxiety. Using the Goldberg Anxiety Scale, they found that frequent callers had higher anxiety scores, more panic attacks, as well as more social and simple phobias. Frequent callers were more likely to have seen psychiatrists in the past month but were less likely to have seen other mental health professionals. Middleton, Gunn et al. (2016) found that over half of the frequent users (55%) reported being unable to work due to sickness or disability, compared to 35% of episodic and 19% of one-off users. Frequent callers generally called for similar reasons to nonfrequent callers. However, they called more often to talk about their feelings. Spittal et al. (2015) found that being male or transgender, being older, never married, and having mental health issues were associated with frequent calling. Suicide and self-harm were also more often identified as safety issues by telephone crisis workers. De Carli (1988) found that frequent

callers were rated by helpers as being higher than "typical callers" on Dominant, Hostile, and Exhibitionistic of the Kiesler scales. They were also rated as more controlling, self-focused, and angry, and less tactful and accepting than typical callers.

Some studies found that frequent callers share common features with other callers (Burgess et al., 2008; Spittal et al., 2015). Considering the limited research to date, it appears that frequent callers could have much in common with other callers (see Table A3 in the Appendix). They usually have serious problems, and they have persistent mental and physical health problems (Burgess et al., 2008). Although there are indications that frequent callers are not a homogeneous group (Middleton et al., 2017), most of the studies compared all frequent callers with other callers, without considering that different subgroups of frequent callers may have different characteristics and needs. Furthermore, Spittal et al. (2015) observed that when frequent callers are defined by their call frequency, some barely attain the threshold of the number of calls needed to be classified as frequent callers and others call 10 or 20 times more often. Some frequent callers are long-term callers, calling often for years, while others call often for only a brief period. Frequent callers with different call patterns may have different characteristics.

Frequent callers may be more anxious, use more mental health services, and often have experienced traumatic events (Middleton, Gunn et al., 2016; Middleton, Pirkis et al., 2016; Pirkis et al., 2016). They generally call to talk about current mental health problems, loneliness, and other difficulties (Middleton, Gunn et al., 2016), and may be at twice the risk of suicidal behaviors as less frequent callers (Spittal et al., 2015).

Recommendations Made

To date, there are insufficient empirical data to indicate how to best be of help to frequent callers in general, or how to best help subgroups of people who call frequently. Still, the published literature includes several not mutually exclusive recommendations for their management, to reduce their frequency of calling and to help them better:

1. Encouraging frequent callers to stop or severely limit use of the helpline (Brockopp et al., 2002). This is based on the belief that crisis centers should only respond to acute crises, unlike other interventions, such as psychotherapy, which maintain an ongoing long-term relationship. Limiting calls may increase capacity and decrease difficulties experienced by personnel. This has been criticized because:
   a. Frequent callers often have serious physical and mental health problems, frequently experienced traumatic events, and are often at risk of suicide. This approach may be considered as abandoning callers who are in need of help (Apsler & Hoople, 1976).
   b. If frequent callers stop calling, it is inferred that there are other services better able to help them. However, research indicates that they often already use several other services, but feel that these services do not meet their needs (Middleton, Pirkis et al., 2016; Pirkis et al., 2016).
2. Limiting the number and duration of calls allowed to help frequent callers gain better control of their behaviors (Brockopp et al., 2002; Hall & Schlosar, 1995; Middleton, Gunn et al., 2016; Pirkis et al., 2016), accompanied by continued suicide risk assessment to ensure that help is provided when needed (Brockopp et al., 2002; Hall & Schlosar, 1995). The advantages and disadvantages of this approach are the same as for encouraging callers to stop calling.
3. Assigning a specific helper to respond to all calls from each frequent caller (Brockopp et al., 2002; Pirkis et al., 2016; Vivekananda, Bamford et al., 2019). The advantage of this is a more consistent approach tailored to each caller. The disadvantage is that it may foster dependency and may deprive callers of the benefits of interacting with other helpers with different and potentially more helpful approaches.
4. Creating individualized case management plans followed by all helpers (Brockopp et al., 2002; Pirkis et al., 2016; Vivekananda, Cuppari et al., 2019). The advantage is a more consistent approach tailored to each caller. A disadvantage is the amount of personnel time needed to develop, monitor, implement, and update the plans.
5. Initiating regular contacts rather than waiting for (or allowing) callers to contact the service (Barmann, 1980; Vivekananda, Bamford et al., 2019). Advantages of this approach are that it solves the problem of "overburdening" the lines, and may foster a more consistent approach and better continuity of care. A disadvantage is that when unable to call, help may not be available when most needed. Necessary resources may not be available. In some centers, calling callers is against the philosophy that callers must take the initiative as an indication of their motivation.
6. Having members of the caller's social support network involved in the interventions (Pirkis et al., 2016). This may include supporting family and friends in helping the caller (Apsler & Hoople, 1976). Family and friends have the advantage of being constantly available and thus better able to monitor the caller's needs. A

disadvantage is that some frequent callers lack supporters willing to help.

7. Providing brief structured interventions to reduce anxiety and depression, including coping with chronic stressors, using a *trauma informed care* model (Pirkis et al., 2016; Vivekananda, Bamford et al., 2019). This may help reduce anxiety and depression. However, it may be considered a substitute for psychotherapy, thus not following the crisis intervention mandate of helplines.
8. Continuing to accept calls from frequent callers whenever there are personnel available, without modifying practices (Brockopp et al., 2002). This has the advantage of not requiring additional resources. However, it does not address the negative feelings some helpers experience.
9. Providing regular clinical supervision and support for helpers in their interventions with repeat callers (Pirkis et al., 2016; Vivekananda, Cuppari et al., 2019). This addresses helpers' negative feelings and may assist helpers to meet callers' needs better. However, this may not limit the number of calls. If the supervision is only for calls from frequent callers, they may get better services than other callers, which may seem inequitable.
10. Having paid staff rather than volunteers respond to their calls (Pirkis et al., 2016; Vivekananda, Cuppari et al., 2019). This may ensure regular availability and better continuity and uniformity in approaches, and may protect volunteers from negative experiences. A disadvantage is the added costs. Furthermore, there is no empirical support for paid staff being better for the callers.

Cogent arguments, sometimes bolstered by case examples, have been made to support these recommendations. For example, Vivekananda, Bamford et al. (2019) reported on their Wellbeing Support Program, where callers received 12 calls from trained helpers. Semi-structured interviews with 20 participants and a study of written records indicated caller satisfaction and some caller improvements. However, without a comparison group, one cannot determine if the improvements were associated with program participation, or if there were more improvements than one would expect from "usual" responses. Furthermore, there was a retention rate of only 45% by the end of the program.

Discussion

At conferences worldwide and in training for helpline helpers, the management of frequent callers is a recurring topic. Frequent callers are of concern because of the large amount of resources needed to respond to this small percentage of service users. Furthermore, helpline workers often experience frustrations and negative feelings about frequent callers and concerns about their abilities to help them. Therefore, it would be useful to have empirical research to identify best practices with frequent callers.

Unfortunately, the small number of empirical investigations and the diversity of their goals and methodologies limit generalizations. Moreover, the variables included in the studies comparing callers who call at least eight times a month with infrequent callers are different in each study, which precludes the possibility of summarizing and assessing the reproducibility and generalizability of results. Although at least 10 recommendations on how to manage and help may appear to have face validity, there are few data on their effectiveness. Part of the problem is that researchers have often included infrequent repeat callers or those who call more than just once in their definition of frequent callers, making it impossible to draw conclusions about frequent callers. Furthermore, one third of the studies did not include any definition of frequent callers. It is impossible to confirm that their results are relevant to frequent callers.

Usually, frequent callers were identified by the number of calls they made during a specific period. This is simplistic. People who call the same number of times may have different calling patterns, which could indicate different presenting problems and needs, and may warrant different intervention techniques. It is important in future research to define frequent callers clearly. It is equally important to examine similarities and differences between people who have different patterns of frequent calling. Because of the limited data currently available, it is impossible to determine whether they are different from infrequent callers, regardless of how they are defined. We do know that frequent callers generally do not appear to be calling for trivial reasons. They often have serious difficulties, including health and mental health problems, and they appear to have at least a similar suicide risk to infrequent callers.

It would be useful to categorize frequent callers in terms of their problems and needs in order to determine how to offer better help. Pirkis et al. (2016) proposed a categorization based on analyses of 19 interviews conducted with frequent callers (Middleton, Gunn et al., 2016). They suggested there are three types of callers: addicted callers (who call out of habit and are unable to resist the urge to call), support-seeking callers (who call looking for emotional support to cope with life stressors), and reactive callers (who call when they become unsettled by an external trigger event). These categorizations may be a useful heuristic if corroborated in studies with larger samples.

Researchers have focused on reducing call frequency. They rarely investigated whether callers have improvements in symptoms, decreased suicide risk, or fewer problems that motivated their calls. When the mental health characteristics of frequent callers were investigated, only depression and anxiety were assessed. Future research should include assessment of other mental health issues, such as borderline personality disorder and traumatic events in the past. In addition, future research should include comparisons with infrequent callers, to determine how frequent callers may be similar to or different from others.

Unfortunately, we lack sufficient data to provide empirical support for the advantages or disadvantages of the 10 recommendations we identified. If the main goal is to reduce call frequency, then any recommendation that achieves this goal could be considered a success. However, one must also ask: "Does the strategy help the frequent callers?" Several of the recommendations require the callers to lose their anonymity. There is an important distinction to be made between anonymity and confidentiality. Some helplines permit and encourage anonymity, without asking or retaining information allowing persons to be identified. Others guarantee confidentiality, but encourage callers to identify themselves and may (confidentially) retain a telephone number and identifying information in order to call back or ensure continuity of care.

One may question whether the negative feelings helpers report are associated with characteristics of the frequent callers and the nature of their calls, or if these feelings are a result of a limited mission and philosophy of helplines involved in suicide prevention. Helplines often describe their mandate as offering immediate crisis interventions. Helper training commonly insists on the helper's role in providing immediate help and not developing a continuing relationship with callers, as in psychotherapy. Providing longer-term continued emotional support or therapeutic interventions is often actively discouraged. However, there may be benefits from repeated use of helpline services that would be observed only after long periods of continued contacts. It is important to conduct research to better understand potential long-term benefits of frequent calling, as well as the role of helpline cultures and values in how helpers feel about their interactions with frequent callers.

Limitations

The small number of empirical investigations and the diversity of goals and methodologies limit the extent to which findings can be generalized. Although recommendations for managing and helping callers may have face validity, sufficient empirical data on their effectiveness are lacking.

Conclusion

The limited data suggest that frequent callers are similar to other callers in many ways, often having serious mental health problems, experiencing loneliness, and being at least as suicidal as infrequent callers. Helpers may experience negative emotions concerning their calls: frustration, being manipulated, and feeling incompetent. The source of these negative feelings may be the focus of many helplines on immediate crisis intervention, rather than on longer-term supportive or therapeutic interventions involving frequent contacts with the caller. If this is the case, the solutions involve modifications of the organizational philosophy and approach, rather than attempting to "manage" the frequent callers.

It is important that future research clearly define the criteria for being identified as a frequent caller. Care should be taken to analyze data from repeat callers who have low call volume separately from data on more frequent callers. We identified 10 suggestions to better manage and help frequent callers that merit validation. There is a need for more research to identify characteristics of subgroups of frequent callers, each with different motivations for calling and needs, who may need to be studied independently. Rather than focusing mainly on reducing call frequency, we should empirically evaluate the benefits of different intervention approaches for subgroups of frequent callers.

Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at https://doi.org/10.1027/0227-5910/a000838

ESM 1. Details of syntax used in searches

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ORCID
Brian L. Mishara
https://orcid.org/0000-0003-2449-6269

Brian L. Mishara
Centre for Research and Intervention on Suicide
Ethical Issues and End-of-Life Practices (CRISE)
Université du Québec à Montréal
C.P. 8888, Succ. Centreville
Montréal, QC H3C 3P8
Canada
mishara.brian@uqam.ca

Brian L. Mishara, PhD, is Director of the Centre for Research and Intervention on Suicide, Ethical Issues and End-of-Life Practices (CRISE) and professor in the Psychology Department at the Université du Québec à Montréal, Canada. His diverse research interests include studying best practices in helplines.

Louis-Philippe Côté is a psychology doctoral candidate and research coordinator at the Centre for Research and Intervention on Suicide, Ethical Issues and End-of-Life Practices (CRISE), Université du Québec à Montréal, Canada. His research focuses on best practices in text and chat, and new technologies in suicide prevention.

Luc Dargis is the documentation center director at the Centre for Research and Intervention on Suicide, Ethical Issues and End-of-Life Practices (CRISE), Université du Québec à Montréal, Canada, and co-researcher in several suicidology studies.

Appendix

Table A1. Concepts and keywords used in database searches

Concepts and keywords to search the CRISE database	
Concept A: frequent callers	Concept B: helplines
APPELANT-HABITUÉ	LIGNE-TÉLÉPHONIQUE
	CENTRE-PRÉVENTION-SUICIDE
	• TÉLÉPHONE

Concepts and keywords to search the PsychInfo database	
Concept A: frequent callers	Concept B: helplines
Crises	Hot line services
Help seeking behavior	Crisis intervention services
Relapse (disorders)	Counselors
Repetitive self-harm	Suicide prevention centers
Repeat* NEAR/3 (call* OR user*)	Telephone systems
Repetit* NEAR/3 (call* OR user*)	Cellular phones
Recidiv* NEAR/3 (call* OR user*)	Mobile phones

Concepts and keywords to search the database PubMed database	
Concept A: frequent callers	Concept B: helplines
Self-injurious behavior/prevention and control	Crisis helplines
Suicide/prevention and control	Crisis intervention/statistics and numerical data
Recurrence	Crisis intervention
Help seeking behavior	Telephone
“Relapse disorders”	Hotlines
“Repetitive self-harm”	Health services misuse
Repeat*	“Mobile applications”
Repetit*	“Cell phones”
Re-present*	
Repetition	
Recur*	
Recidiv*	

Table A2. Characteristics of all studies of frequent callers and repeat callers (N = 27)

Reference	Frequent callers definition from article	Sample size Country	Type of study
Apsler and Hoople (1976)	More than one call	11,703 United States	Records audit
Barmann (1980)	Five times a day for a period of 1 month or longer	14 United States	Intervention study
Bassilios et al. (2015)	More than one call	Noncallers: n = 8,751; single callers: n = 44; repeat callers: n = 46 Australia	Helpline questions from a national mental health and wellbeing survey
Berman (1990)	No clear definition provided	1 United States	Single case study
Brockopp et al. (2002)	More than 10 calls in 9 months	Frequent callers: n = 24; nonfrequent callers: n = 378 United States	Records audit, no comparison with nonfrequent callers
Brunet et al. (1994)	More than 10 calls/month	5 Canada	Intervention study
Burgess et al. (2008)	More than 10 calls/month	The center answered a total of 1,404 calls in the study period. Of these, 439 calls met the inclusion criteria (i.e., not crisis and not short referral), 270 callers agreed to participate and 71 declined participation. The remaining 98 calls were from repeat callers Australia	Survey of helplines crisis callers
De Carli (1988)	Twice a week for at least one month	9 United States	Survey of helplines crisis callers
Greer (1976)	At least 19 contacts over 2 years	Frequent callers: n = 37; random sample of single-call callers: n = 26 United States	Survey of helpline callers
Hall and Schlosar (1995)	No clear definition provided	13,510 calls Canada	Intervention study; no comparisons
Haycock (1998)	At least 10 calls over 12 months, very frequent callers at least 50	Callers chosen from people with 6 or more contacts with a mental health service during 1 year. Compared frequent callers (n = 30) with very frequent callers (n = 10) United States	Survey of helpline callers who were in contact with a mental health service
Hirsch (1981)	No clear definition provided	Listened to 100 calls, no indication how many were frequent callers Canada	Records audit and clinical impressions from listening to calls
Johnson and Barry (1978)	Total number of calls studied (some were more than 10/month)	100 callers categorized by frequency of calls United States	Records audit relating overall number of calls to nature of problems
Kinzel and Nanson (2000)	Nonapplicable	Nonapplicable Not available	Literature review on crisis line volunteers' impressions
Lester and Brockopp (1970)	More than 10 calls in 9 months	24 United States	Records audit
Middleton, Gunn et al. (2016)	≥20/month Australia	19 Australia	Semistructured telephone interviews with frequent callers
Middleton et al. (2017)	≥20/month	315 Frequent callers: n = 69; repeat callers: n = 162; unique callers: n = 79	Survey of helplines crisis callers

(Continued on next page)

Table A2. (Continued)

Reference	Frequent callers definition from article	Sample size Country	Type of study
Middleton, Gunn et al. (2016)	≥4/month	789 participants Australia	Records audit of frequent use of telephone helplines and health service use over time in general practice attendees with depressive symptoms
Mishara and Daigle (1997)	Multiple calls/same problem	617 calls from 263 callers, of which 25% of callers repeatedly called and had a dossier as a "chronic caller" at the center Canada	Intervention study
O'Neill et al. (2019)	Cluster analyses identified two clusters of "prolific" callers: those who call thousands of times and hundreds of times	A total of 3.449 million calls (= 725 calls per 1,000 population), with a cluster of callers who have a pattern of calling thousands of times, generally with calls under 10 minutes, and others who call hundreds of times with longer calls. Ireland	Records audit of call frequency and duration data
Pirkis et al. (2016)	≥20/month	Nonapplicable Australia	Review and document audit and survey
Sawyer and Jameton (1979)	Multiple calls for same problem	67 United States	Records audit
Speer (1971)	Listed total calls over 2 months	Found that 17 of 418 callers called 20 or more times over 2 months, no further descriptive data on frequent callers United States	Records audit
Spittal et al. (2015)	0.667 calls per day in any period from 1 week to 549 days (4.7 in 7 days, 20 in 30 days, etc.)	*N* = 98,174 individuals (411,725 calls) *n* = 75,362 single callers (75,362 calls) *n* = 22,818 repeat callers (336,365 calls) *n* = 2,595 frequent callers (247,547 calls) Australia	Records audit
Torop and Torop (1972)	No clear definition provided	Nonapplicable United States	Intervention study
Vivekananda, Bamford et al. (2019)	No clear definition provided	33 Australia	Intervention study
Vivekananda, Cuppari et al. (2019)	No clear definition provided	Nonapplicable Australia	Semistructured telephone interviews with 10 senior clinical supervisors at four helplines

Table A3. Characteristics of frequent callers and differences between frequent callers and other users in studies defining frequent callers as persons calling eight or more times in a month

Study (sample description)	A: Demographic variables	B: Differences in usage patterns of callers (days/week and frequency)	C: Helpline services delivery	D: Presenting problems	E: Psychosocial variables
Burgess et al. (2008) Minimal frequency over 4 weeks for very frequent users ≥ 10 (N = 39); frequent users ≥ 3–9 (N = 77), less frequent users = 1/2 (N = 151). Of 1,404 calls, 439 met the inclusion criteria (i.e., not crisis and not short referral calls), 270 callers agreed to participate. Note: significant findings were between all 3 groups only.	Since statistical tests compared all 3 groups, only visual inspection of mean data could be used to estimate which group(s) had more/less or scored higher/lower. More frequent callers appeared to be older. Very frequent callers were more likely to be never married.			Frequent and more frequent callers seemed to be more likely to report concerns with loneliness, physical illness, and anxiety.	Goldberg Anxiety Scale very frequent callers have higher anxiety scores, more panic attacks. Social and simple phobias. Less likely to not drink alcohol. More likely to have seen psychiatrists in past month. Perhaps less likely to have seen other mental health professionals.
De Carli (1988) Selected "chronic" callers who called twice a week for at least 1 month, excluding contacts "of an improbable sexual nature"; 9 chronic callers were rated by 18 volunteers and paid staff, who also rated "typical callers" who were the third call they received on their shift.	Lack of comparison to other callers.	Identified 2 patterns of "chronic" caller: "regulars" who continue to call repeatedly and people who call often for a limited period of time. This study included only "regulars."			Chronic callers were rated higher than "typical callers" on dominant, hostile, and exhibitionistic of the Kiesler scales. Typical callers were higher in agreeable scale. Volunteers rated chronic callers as more controlling, self-focused, and angry, and they rated typical callers as more tactful and accepting.
Johnson and Barry (1978) Collected using a caller frequency category system on 100 calls to a telephone crisis intervention center.		Only 1 caller in their sample called 10 or more times; however, calls from center personnel to callers constituted 44% of calls, leading a staff member to state, "We are the chronic callers around here."		Calls categorized by number of calls and having either the same problem for each call or multiple problems in 6 categories.	

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Table A3 (Continued)

Study (sample description)	A: Demographic variables	B: Differences in usage patterns of callers (days/week and frequency)	C: Helpline services delivery	D: Presenting problems	E: Psychosocial variables
Middleton, Gunn et al. (2016) Minimum ≥ 20 calls/month (N = 19) (subsample who participated in phone interview). Middleton et al. (2017) Minimal frequency over a month = ≥20 calls/month. Of 328 survey respondents, 69 were frequent callers. See also Pirkis et al. (2016), which includes data on the same study.	Overall, 45% of frequent users were male compared to 31% of episodic and 37% of one-off users. Over half of the frequent users (55%) reported being unable to work due to sickness or disability, compared to 35% of episodic and 19% of one-off users.			Interviews found they call for someone to talk to, for help with mental health problems and dealing with negative life events. In survey results: More frequent use was associated with regularly calling to talk about their feelings. This was the only reason that was significantly associated with crisis helpline user category in both the univariate and multivariate analysis.	
Mishara and Daigle (1997) Minimal frequency over a month, probably over 8 calls: N = 617 calls from 263 callers, of which 25% of callers repeatedly called and had a dossier as a "chronic caller" at the center, which generally requires "frequent" calls over a period of several weeks (generally well over 10 per month, although no exact calculations of call numbers are reported).			There was no significant relationship between use of Rogerian categories during calls and changes in urgency (immediate risk) among chronic callers; however, a high level of use of Rogerian categories was related to significantly greater reductions in urgency among nonchronic callers.		
Pirkis et al. (2016) Summarized literature review and data from 4 empirical studies.	Frequent callers are more isolated with less social support.			Have major health and mental health problems, are frequently in crisis.	
Spittal et al., (2015) Records audit of the 2,584 callers who made 667 calls per day in any period from 1 week to 549 days (7.7 in 7 days, 20 in 30 days, etc.) compared to 95,580 nonfrequent callers.	Frequent callers when compared to infrequent callers are more often male or transgender, older, never married.	Longer call durations was associated with odds of being a frequent caller.		Frequent callers more often had suicide identified as a safety issue by telephone crisis workers. Safety assessments for self-harm were more frequent. Frequent callers, more often had mental health issues.	