

Comparing Models of Helper Behavior to Actual Practice in Telephone Crisis Intervention: A Silent Monitoring Study of Calls to the U.S. 1-800-SUICIDE Network

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Models of telephone crisis intervention in suicide prevention and best practices were developed from a literature review and surveys of crisis centers. We monitored 2,611 calls to 14 centers using reliable behavioral ratings to compare actual interventions with the models. Active listening and collaborative problem-solving models describe help provided. Centers vary greatly in the nature of interventions and their quality according to predetermined criteria. Helpers do not systematically assess suicide risk. Some lives may have been saved but occasionally unacceptable responses occur. Recommendations include the need for quality assurance, development of standardized practices and research relating intervention processes to outcomes.

Every day, thousands of callers contact telephone helplines around the world, including significant numbers of callers who are seriously considering ending their lives. Despite the widespread use of helplines by suicidal persons and individuals in crisis, there has been relatively little development of theoretical models of telephone crisis intervention

and little hard data to describe how helpers actually react to callers in crisis situations. In this article we report on the development of theoretical models of telephone help in suicide prevention and the verification of the models in a silent monitoring study where the nature of the help provided was observed in 2,611 calls to an American network of sui-

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cide prevention centers, using standardized instruments.

TELEPHONE HELP IN SUICIDE PREVENTION

Telephone help in suicide prevention has its roots in voluntary and religious-based suicide prevention organizations that were established at the beginning of the twentieth century. In 1906, the Salvation Army opened an "anti-suicide bureau" in London. In the same year, a religious-based organization, The National Save A Life League, was founded in New York City. After World War II, in 1947, telephone help was available from a professional staff center at the Neuropsychiatry Clinic of the University of Vienna (Trowell, 1979). Contemporary helplines are generally based on one of two approaches. The first approach is exemplified by the Samaritan organization, which was founded in 1953 by the Reverend Chad Varah, and involves nondirective listening and befriending of suicidal and nonsuicidal callers. Today, there are over 300 volunteer-based Samaritan centers around the world and the Samaritans of the United Kingdom have over 30,000 volunteers and 203 branches.

In the United States, many suicide prevention and crisis centers were inspired by the Los Angeles Suicide Prevention Center, established in 1958 "for the evaluation, referral, treatment, follow-up and overall prevention of suicidal behavior" (Suicide Prevention Center of Los Angeles, 1966) using a more directive problem-solving approach. Although the Los Angeles center was established by a professional staff of physicians, psychologists, social workers, and nurses, the center eventually developed a large voluntary component.

Despite the proliferation of telephone helplines, some specializing in suicide prevention, others offering help for numerous problems and referrals, there are no standardized protocols describing how telephone helpers should interact with callers. Generally, those inspired by the Samaritan movement tend to engage in nonjudgmental active

listening as a primary method, whereas centers developed from the Los Angeles Suicide Prevention Center model tend to focus more on defining problems, finding solutions, and making referrals as part of what can be called a collaborative problem-solving approach.

Studies of the Process of Intervention

Investigations of what occurs in telephone help, that is, studies of the process of intervention, have been conducted according to two perspectives: technical aspects (accomplishing certain tasks during the call) and clinical aspects (qualities of interventions that are considered to be helpful according to a theoretical perspective).

Technical Aspects. Technical aspect studies are not derived from a theory of intervention, but are based on the assumption that doing certain things during a call will have beneficial effects. They focus on whether or not essential tasks in telephone interventions are completed, such as securing the communication with the caller, assessing the caller's condition, evaluating suicide risk, and developing a plan of action (e.g., Fowler & McGee, 1973; see Mishara & Daigle, 2000, for a more extensive review). More detailed studies of technical aspects, using rating scales, were conducted by Walfish, Tulkin, Tapp, Slaikev, and Russell (1976). An alternative approach in looking at technical aspects is to examine administrative standards that take into account the nature of the organization, its structure, training, and so forth based on the assumption that a well-run organization which contains essential procedures and infrastructures will provide good services.

Clinical Aspects. Studies of clinical aspects of telephone interventions are inspired by evaluations of professional psychotherapy (Bergin & Garfield, 2003; Goodman & Dooley, 1976; Greenberg & Pinsof, 1986; Hill & Corbett, 1993; Kiesler, 1973; Lambert, Christensen, & DeJulio, 1983). Most assess the presence of "facilitative therapeutic relationships" as described by Rogers (Rogers, 1951; Truax & Carkhuff, 1967), generally measuring empathy, warmth, and genuine-

ness. Several studies comparing volunteers to professionals found that nonprofessionals had higher levels of “facilitative characteristics” (Hirsch, 1981; Knickerbocker & McGee, 1973). D’Augelli et al. (1978) devised a “helping skills verbal response system” with three categories and eight subcategories to evaluate the content and affect in responses. They concluded that university helpline volunteers were “too directive” and did not use enough open questions. Crocker (1985) concluded that what they observed by listening to calls was not necessarily in accordance with the facilitative behaviors and the problem-solving approach that volunteers were trained to use.

The studies of clinical aspects are based on the hypothesis that if helpers do what they are expected to do according to a preconceived theory, then they should produce good results. However, this hypothesis is based on models of face-to-face psychotherapy involving multiple sessions with the same client. None were developed specifically for telephone crisis intervention with anonymous callers.

Mishara and Daigle (1997) conducted a study in which they related process measures to assessment of outcomes. They listened to 617 telephone calls from suicidal callers at two primarily French speaking suicide prevention centers in Canada, categorizing each statement by the volunteers according to a reliable 20-item Helper’s Response List, which yielded a total of 66,753 responses. Using cluster analytic techniques, intervention styles could be classified as either directive, which included more investigation and direct questions as well as giving advice and making suggestions, or nondirective “Rogerian” active listening (Rogers, 1951; Truax & Carkhuff, 1967).

They found that, within a context where all calls were somewhat directive, having more nondirective Rogerian characteristics was related to a significantly greater decrease in depression, greater likelihood of making a contract with the caller at the end of the call, and greater likelihood of the caller keeping the contract. However, analyses on

new versus repeated callers indicated that a higher level of use of nondirective Rogerian categories was significantly related to reductions in suicidal urgency only for new callers; with repeated callers, there were significant benefits from using a more directive approach.

METHODS

Determining Theoretical Models of Intervention

In order to ascertain what to look for in our observations of helper behaviors, we first developed theoretical models of telephone intervention. We first interviewed 15 directors of centers in the Hopeline Network, a system with a central toll-free telephone number that transfers calls from anywhere in the United States to an accredited participating helpline. We asked the directors what they expect helpers to do at different stages of a call, what is most important to do and not to do during a call, what changes they expect in callers, and why they think their approach should work. Their responses were transcribed and analyzed and the synthesis was then mailed to all the centers ($N=91$) that were in the U.S 1-800-SUICIDE Hopeline Network at the beginning of the study. The mailing included descriptions of the two basic models described by different center directors: an active listening model and a more directive collaborative problem-solving model. The 91 center directors were then asked to verify if one of the models corresponded to practices in their center. They were also asked for suggestions to complete the model and validate the lists of qualities that telephone workers should have and things they should and should not do.

Fifty-nine centers completed the questionnaire. Generally, one of the two models proposed was said to be closest to the practices of the centers. These models were compared with our review of scientific and clinical research on the topic and minor adjustments were made. Finally, the models were sent to five internationally renowned experts in the

area of crisis interventions who were asked to validate the final result. Two final adjusted models (see Figure 1) were used as the basis of determining what to look for when listening to calls.

The essential characteristics of helper behavior according to the active listening and collaborative problem-solving models were operationalized in terms of items that could be rated while listening to live calls. We also observed behaviors that helpers “should” and “should not” engage in according to the respondents.

Participants. Of the 91 centers in the Hopeline Network at the start of the study, all accredited by the American Association of Suicidology (AAS) or an equivalent accrediting organization, we identified 22 centers that had average daily call volume of more than six calls per day over the Hopeline Network, a minimum threshold to justify the cost and effort of monitoring calls and to complete the study within a reasonable period. Within that group, 18 centers indicated that they currently identified with one of the two intervention models and were invited to

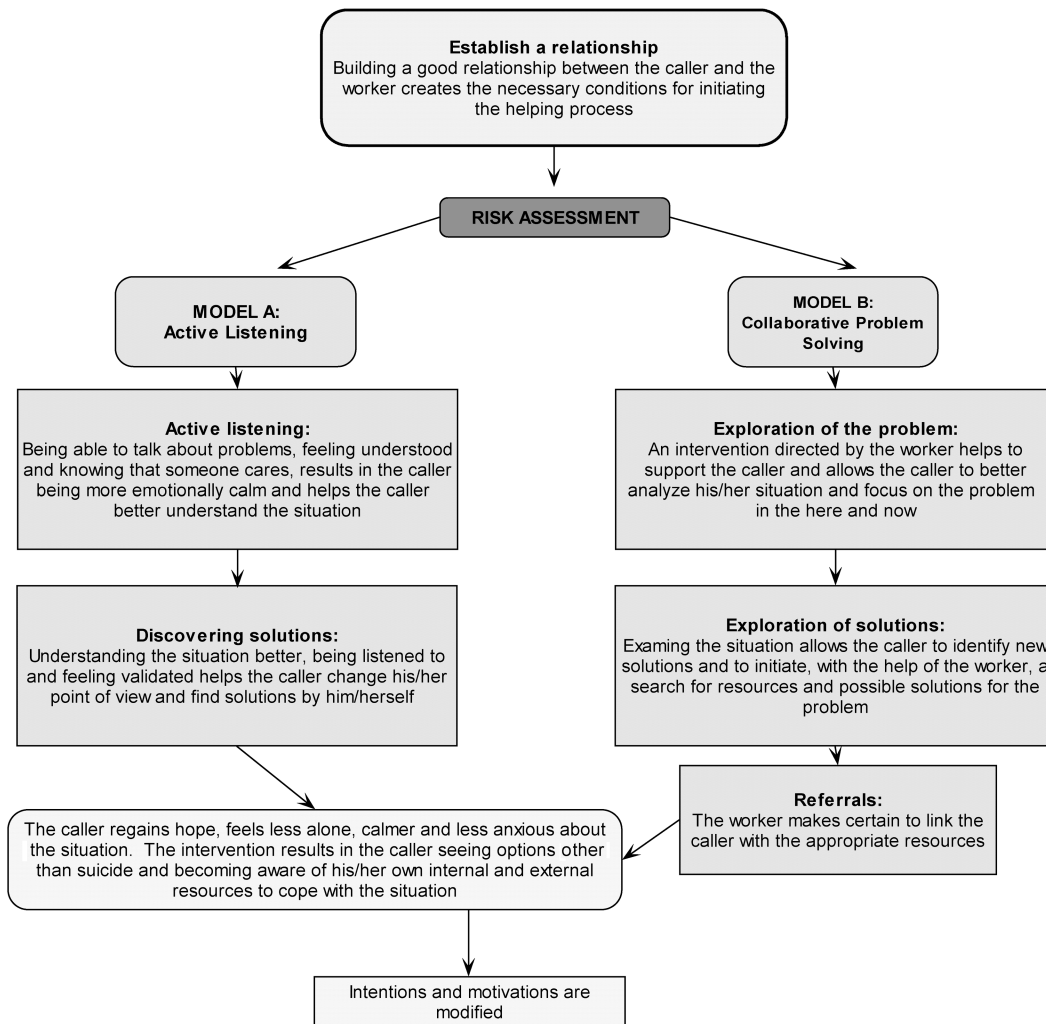


Figure 1. Explanations of how the telephone interventions are linked to the effects according to each model.

participate. Fourteen centers agreed to participate and were then asked to have each of their telephone workers be invited to sign and return a consent form guaranteeing anonymity to centers and helpers. For centers in which all the workers did not agree to participate ($n = 6$), we monitored when only consenting workers were working on the lines. Overall 782 crisis intervention workers agreed to participate. Eight centers were monitored remotely from August 19 to December 31, 2003; four of these eight centers said they used a collaborative problem-solving model and the others an active listening approach. Statistical power analyses indicated a total of 400 calls per group would be the minimum necessary to compare the two models, thus our original goal was to monitor a minimum of 800 calls. We continued monitoring remotely a new group of five centers from January 1 to May 31, 2004. All calls to participating centers received an announcement that calls may be monitored. An additional center, which served as a back up for the entire network and received over 40% of all network calls, could not be monitored remotely so a team of three research assistants and a supervisor were sent to this center to monitor calls on site.

Research Assistants. Nine research assistants (RAs), all students in the social sciences, were recruited to monitor calls and received 12 weeks of practice on simulated calls before monitoring began.

Procedures. Two RAs independently monitored each call, one coding observations on the helper and the other coding observations of the caller's behaviors. This article reports on the observations of the helpers. Research assistants observed calls in real time and identified incoming calls from participating centers over a secure VPN (virtual private network). We could then listen to calls unobtrusively (silent monitoring) after entering an access code over a separate line. Data were entered during the call using a computer program that stored all coded information and comments, and the time since the start of the call was noted when each data entry was made. In the case of the center that

was monitored on location, RAs monitored calls from a remote location in the center using portable computers.

Instruments

Suicide Risk Assessment. RAs rated whether each of the items of the assessment of suicide risk according to AAS accreditation guidelines was asked and the response given. Also, it was noted when callers gave the information spontaneously without being asked. Questions included asking if the caller has any thoughts about killing him/herself, if an attempt is in progress, if caller feels able to control the thoughts about killing him/herself, if a specific plan has been made and its nature, the location the caller is calling from, the availability of means, if firearms are available, if the caller had made previous attempts, or if the caller had been drinking or taking drugs today.

Emergency Rescue. According to AAS certification standards and Hopeline emergency procedures, rescue should be sent when a caller has initiated a suicide attempt and his or her life appears to be in danger. We coded if rescue procedures were initiated, and what occurred (description of the situation, the nature of the helper's response, and the outcome).

Intervention Process. Items concerning the nature of the intervention process were coded in nine sections corresponding to the different steps in the telephone help process according to both the active listening and collaborative problem-solving models. Items were coded 0 if the helper behavior was absent, 1 if the helper behavior was present and used one or two times, and 2 when the helper behavior was present three or more times. This rating system was developed on the basis of extensive pilot testing and had high inter-rater reliability (see reliability analyses below).

Establishing good initial contact was an integral part of both the active listening and the collaborative problem-solving models. The second area, exploration of the situation, has three items indicated in the collabo-

rative problem-solving model: fact questions on the problem and related issues, direct questions on emotions and reframing. The active listening model includes "helper encourages and follows the caller in exploration of the problem and feelings." The items "validation of emotions" and "moral support" can be viewed as part of both approaches. "Reformulation" and "reflection" are most characteristic of the active listening approach. We included four items that all centers agreed should not occur during telephone intervention: "why questions," "challenges to commit suicide," "helper talks about his own experience," and "value judgments—preaches—moralizes."

Identification of resources and solutions was rated in the collaborative problem-solving approach as "helper offers resources, information and solutions" and "helper asks questions on resources." The corresponding method using an active listening approach was "empowers caller to develop his own resources and solutions." The alternative "helper tells caller what to do" was considered unacceptable according to all center directors.

Behavior Ratings at the Conclusion of the Intervention

Center directors felt that by the end of the call there should be one or more of the following elements observable at the end of the intervention: developing an action plan for the caller, referrals, agreement on follow-up and agreement on a contract to not harm oneself.

Following research by Carkhuff (1968) on psychotherapy, after the telephone call was completed, RAs coded the helper on two clinical aspects of the intervention: "empathetic understanding" and "respect of caller." These are crucial aspects of successful therapeutic intervention according to the Rogerian active listening model and these skills were used by Lester (1970) in his evaluation of crisis calls. The ratings are on a 5-point Likert scale with detailed definitions provided for each level. To complement these

data, we developed a similar 5-level rating scale of directivity, ranging from the rating of 1 when the helper "follows completely the rhythm of the caller" (the most nondirective style) to 5 "when the helper completely leads the course of the call" (the most directive method).

Observation of Caller Characteristics. Observations of the callers' behaviors included descriptive information on the callers, their age, sex, and the nature of the current problems that led to the call. The rater indicated if the caller was partially or severely incoherent, and indicated the suspected cause of the incoherence (delusions, alcohol, drugs, handicap, difficulty with English language, and other).

Inter-rater Reliability. The nine RAs independently coded 57 calls during two periods: the first after completing their training, and the second after final adjustments were made to the coding categories and their definitions during the first 2 weeks of actual call monitoring. This procedure was repeated later, but instead of having all nine raters simultaneously rate the calls, four persons were scheduled to listen independently to each call, two rating the helper behavior and two rating the caller behavior. No discussions of ratings were made and raters conducted their ratings independently. At the beginning of listening to calls, the percentage agreement was calculated for 99 calls. A little over half way through the study another 99 calls were monitored with two RAs again simultaneously rating the helpers and two others simultaneously rating the callers. Overall reliability was quite high throughout (see Table 1).

Ethical Concerns

This research study was approved by the AAS Institutional Review Board (IRB) constituted at the University of Chicago as well as the IRB of the University of Quebec at Montreal. Callers were informed that the calls may be monitored with a recorded announcement. Some center directors originally were concerned that the announcement could increase the number of callers hang

TABLE 1
Reliability Analyses: Average Percentage of Interrater Agreement (9 raters)
on Observations of Helpers

Item	Average % of Agreement			
	Before study (<i>n</i> = 57 calls)	Beginning of study (<i>n</i> = 99 calls)	Middle of study (<i>n</i> = 99 calls)	
1a	Making contact	71	92.9	93.0
2b	Fact question on problem	82	69.6	92.9
2c	Direct question on emotion	73	89.4	91.8
2d	Reframing	60	85.9	93.8
2e	Validation of emotions	Abs*	92.9	90.9
2f	Moral support	69	85.9	88.8
3a	Why questions	83	98.2	97.0
3b	Challenge	94	100	100
3c	Own experience	98	96.4	96.7
3d	Reformulation	69	86.0	90.9
3e	Reflection	66	82.4	87.6
3f	Value judgment	87	100	100
4	Trigger event	57	87.5	81.0
5a	Empowers on resources	73	92.9	95.9
5b	Suggests ways to solve problem	67	77.1	84.8
5c	Questions on resources	73	87.7	86.8
5d	Tells caller what to do	69	98.2	95.9
5e	Reads information to caller	Abs*	100	92.9
6a	Suggests plan for action	66	92.9	93.9
6b	Empowerment action plan	87	98.2	95.9
6c	Agreement action plan	78	96.4	96.8
7a	Offers referrals	96	94.7	98.9
7b	Appointment	96	100	100
7c	Caller ask for referrals	92	98.2	97.9
7d	No referrals given	89	100	98.9
8a	No harm contract offer	80	100	100
8b	Seeks no harm contract	71	100	95.9
9a	Offers follow-up	96	100	100
9b	Agreement on follow-up	94	100	100
9c	Caller call back	92	89.4	90.9
9d	Helper interrupts call	Abs*	100	90.9
	Empathy Rating	73	77.1	93.1
	Respect Rating	76	79.2	91.1
	Directivity Rating	69	81.3	89.1

*This item was added after the pretesting of the Helper Form

ups. Although past experience has not shown that this is the case, we conducted a study of the effect of putting the announcement on the lines for six participating centers from August 17 to August 24, 2003. We compared hang-up rates between these six participating

centers and six centers with comparable call volume that served a neighboring geographical area comparable in urban-rural mix. Of the 469 calls routed to the participating centers who received the announcement, 262 (55.7%) hung up before or immediately after

being connected (in the first 15 seconds) compared to 193 of the 349 (55.3%) calls to the six centers without announcements. There was no significant difference between the hang-up rates for the two groups. While we found the overall hang-up rate to be high compared to hang-up rates observed in previous research (Mishara & Daigle, 1997) in which rates were near zero, the director of the Hopeline Network indicated that those were typical rates and that callers often hung-up immediately after a call was answered, perhaps to find a helper who appears to meet specific expectations. No recordings of any calls were made and all ratings were undertaken in real time. No personal information that could allow for identification of callers or helpers was coded.

One ethical issue that arose during the course of the study was the lack of a rescue procedure in the event that we observed that the caller risked dying and the helper did not do something to save the person's life. We originally had not planned to be able to do anything in this situation, since we guaranteed anonymity to the helpers and centers and had no direct access to caller information. However, an unplanned characteristic of the computerized monitoring system was that caller telephone numbers were available to us. After listening to two calls in which it appeared that the person could have died and the helper did not appear to do anything to try to save the person's life, we re-contacted the IRB and proposed an emergency rescue protocol: If a caller's life appeared to be in imminent danger without any active intervention being undertaken by the helper, the research assistants would immediately call the principal investigator, Brian Mishara, or the research coordinator, Sylvaine Raymond, on their cell phone and explain the nature of the situation. If the supervisor decided there was an imminent danger, he would call the local emergency service in the area code from which the call originated and inform them of our concerns that a person's life may be at risk. After the two initial incidents, we did not observe any situations where this procedure needed to be invoked. However, on two

occasions involving the protection of a minor, we contacted a center director to provide information.

RESULTS

Characteristics of Callers and Calls

For the purpose of this study, we retained 1,431 of the 2,611 calls monitored (54.8%). Table 2 shows the calls included and excluded by category with the reason for their exclusion. We excluded calls that were too short to monitor (lasting less than 3 minutes), calls from persons who were not in a crisis situation, calls consisting only of a request for a referral without any discussion of the person's problem, as well as 105 "irrelevant" calls such as the caller seeking the phone number of a good plumber or information on what night bingo was being held. In the 117 cases coded "missing data," the conversation did not contain enough information to conduct ratings. Although it is not supposed to happen over the Hopeline Network, in 72 instances the callers were put on hold when they reached the center and hung up before anyone got back to them and took the call. In 66 calls that were inadvertently interrupted, this was due to some technical difficulty, for example the caller's cell phone battery went dead or there was a problem with the connection. We also did not include calls where two callers were on the line at the same time since it was difficult to decide whom to assess.

As shown in Table 2, in about half (52%) of the crisis calls there was no indication that the caller was considering suicide; however, we only know if the caller is suicidal if this is discussed or if there are direct questions about suicide during the call (as we shall see later in the section on suicide risk assessment, very often helpers did not ask callers if they were considering suicide). Suicide crises accounted for 35.5% of monitored calls, of which 33 individuals were in the process of a suicide attempt during the call. Of these, 13 had just slashed their wrists, 11 had taken an

TABLE 2
Types of Calls Monitored (N = 2,611)

Calls Retained in the Sample (<i>n</i> = 1,431, 54.8%)		
Call Category	Number	%
Suicide crisis	503	35.15
Attempt in progress	33	2.3
Has attempt plan & intent	182	12.7
Expressed intent	288	20.1
Nonsuicide crisis	750	52.4
Total crisis calls	1,253	87.6
Third party calls about suicide crisis	178	12.4
Total Calls Included in Sample	1,431	100
Calls Not Retained in the Sample (<i>n</i> = 1,180, 45.2%)		
Exclusion Criteria*	Number	%
Less than 3 minutes duration	464	39.3
Missing data	117	10.6
Request referrals only	319	26.9
Hang up while waiting for helper	72	6.1
Irrelevant requests	105	8.9
Call inadvertently interrupted	66	5.6
Two callers on line	37	3.1
Total number of excluded calls	1,180	
Total Calls Monitored	2,611	

*Calls may be excluded for more than one reason.

overdose, one had a firearm wired to a string and pointing at him (that went off during the call but missed him), and one was on a bridge ready to jump. There were 182 calls in which the caller gave information, either spontaneously or in response to the helper, in which they said they intended to kill themselves and they had determined what method they were going to use. The remaining 288 suicidal callers spontaneously revealed that they were considering killing themselves or it was revealed in response from direct questions from helpers.

The average length of calls in the sample we retained was 18.8 minutes with a standard deviation of 16.3 minutes. Call lengths varied from 3 to 162 minutes. Calls from persons in suicidal crises lasted longer than calls from third-party callers and persons in crises that did not concern suicide ($F = 39.04$; $df = 4, 1369$; $p < .001$) and the longest calls were

with persons in an attempt and persons who had already planned what method to use.

The ratio of calls from women and men is about 3 to 2, except that the third-party callers had a ratio closer to 3 to 1. In this study, RAs did not monitor any call if there was an indication or suggestion that the person was below 18 years of age. Since the age was not always asked, it was not always possible to determine an accurate age. However, approximate age indication shows that 47% of callers were between 18 and 34, 44% between 35 and 54, 6% between 55 and 65, and only 1% 65 years and older.

Whenever information was available, RAs indicated whether or not the caller had called previously to the center or to the network. We found that 6.8% of callers said they had called previously. Overall, 24.5% of callers indicated during the call that they were receiving mental health services: for

third-party callers this was only 3.3%, and for those in a nonsuicidal crisis 22.4%, compared to 35% for those who were in a suicidal crisis.

Overall, 1.4% of callers were judged to be incoherent during the call and another 7% partially incoherent. Incoherence was attributable in 27.5% of the instances to mental health problems, 18.3% were under the influence of alcohol and/or drugs, 4.1% had a handicap that affected their speech, and 6.6% had difficulties communicating in English.

In Table 3 the presenting problems of callers are listed by call category (callers who had multiple problems have all their problems listed in the table). Overall, mental health problems were the most common, followed by relationship problems with family or partners. Women more often said their problems concerned their parents or children and they more frequently called about another person who was suicidal or in crisis. Men more often had relationship problems with friends and partners or school and professional problems.

*The Process of Telephone Intervention:
What Helpers Do*

Establishing Contact at the Beginning of the Call. Overall, in 81% of the calls, the helper was considered to have established a good initial contact; in only 5% of calls this was not the case. In the remaining 17% of calls, we could not say if the contact was good or not.

Suicide Risk Assessment. According to AAS accreditation standards, all callers should be asked if they are considering suicide and if an affirmative answer is given, a detailed risk assessment should be undertaken. All of the participating centers' directors indicated that their center's procedures concurred with the AAS guidelines. We found that in half ($n = 723$) of the 1,431 calls, no questions about suicidal ideation were asked nor was information about suicidal thoughts and intentions spontaneously given by the caller. Figure 2 reports some of the statistics on the evaluation of suicide risk and integrates the answers to the questions. In about half the instances where the informa-

TABLE 3
Nature of the Problem by Caller Gender (multiple problems included)

Nature of Problem	Female		Male	
	<i>n</i>	%	<i>n</i>	%
Mental illness	251	27.7	156	30.0
Family problem with parents or children	153	16.9	52	10.0
Third party	133	14.7	47	9.0
Relationship problem friends, partners	116	12.8	135	26.0
Financial problems	74	8.2	35	6.7
School or professional problem	62	6.8	54	10.4
Severe physical illness	57	6.3	23	4.4
Loneliness	56	6.2	42	8.1
Physical violence victim	27	3.0	5	1.0
Death of a close person—or related issues	24	2.6	12	2.3
Verbal violence victim	15	1.6	1	0.2
Trouble with police	7	0.8	7	1.3
Physical or verbal violence perpetrator	3	0.3	7	1.3
Abortion/pregnancy	4	0.4	0	
Other	189	20.9	123	23.6
Average number of problems by call category	1.29		1.33	

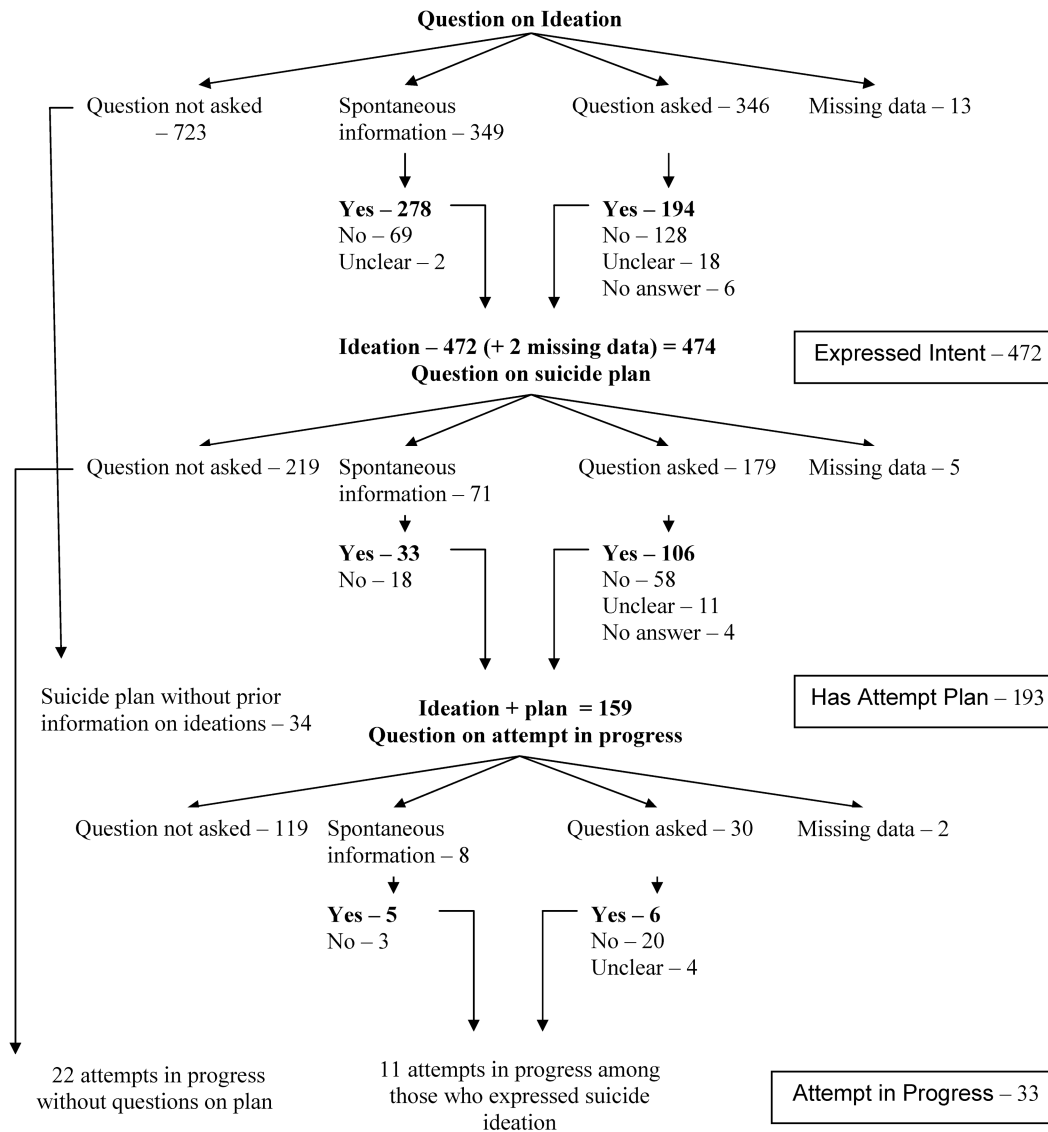


Figure 2. Frequency of Questions to Assess Suicide Risk Having Been Asked by Helpers Concerning Ideation, Plans and Progress (Sample $N = 1,431$)

Note. Bold type indicates number who should be asked the following question.

tion about suicide intentions was obtained ($n = 349$), this information was spontaneously provided by the caller without the helper asking questions. When questions were asked, 56% of the callers said that they were considering suicide.

Among the 474 persons with identified suicidal ideation, no questions were asked about how they were intending to kill them-

selves in 219 cases (46%). Helpers rarely asked about the availability of firearms, the most common suicide method in the United States. In the 18 instances where this question was asked, five callers said that they had a firearm available. An additional seven callers said they had a gun available without being asked. In one instance, a caller spontaneously said early in the call that he was

considering using a gun to kill himself but the helper did not ask if he had a gun available. We learned that he had a gun when the caller pulled the trigger attached to a string and fired the rifle (fortunately, the bullet missed).

Of the 159 instances where the helper was aware that the caller was considering suicide and had determined what method to use, only 30 of the helpers asked if the attempt was in progress. Of those who were asked, six callers told the helper that the attempt had been initiated and in four other instances the answers were ambiguous or unclear. Questions about prior attempts were asked only to 104 of the 1,431 callers (7.2%). Only 31 of the 472 callers who were considering suicide were asked if they felt they could control their suicidal thoughts, 64 callers (0.4%) were asked where they were located at the present time, 182 (12.7%) were asked if they were alone, and only 5 callers (0.3%) were asked if they took any substances (alcohol or drugs).

Emergency Rescues. According to AAS guidelines and center directors' descriptions of practices, in cases where a suicide attempt is in progress, the helper should either convince the caller to stop the attempt or send help. During this study, emergency services were sent to 6 of the 33 attempts in progress, and in three of these cases the helper stayed on the line until the emergency services arrived. Eight other calls ended with the callers changing their mind about the attempt and either stopping the attempt or not initiating an immediate action (e.g., putting the gun away). In the remaining ten instances, the helper did not engage in any emergency rescue behavior nor did the helper attempt to get the caller to stop the attempt or suggest a no-harm agreement. Four of these callers hung up on the helper, in three of the calls the caller was still in attempt (poisoning) at the end of the call, and in one of these three calls, the caller became unconscious during the call and the helper hung up (this was one of the two calls that prompted our seeking an emergency rescue procedure as part of the research protocol).

Since we only have information about what we observed on the telephone, we do not know what occurred after the callers hung up and we cannot validate if callers who said they were in attempt were actually in danger. However, very conservative criteria was used in identifying these 33 cases of attempts; in all instances the observers were convinced that an attempt was in progress.

The Nature of Helper Behaviors. We performed an exploratory factor analysis of all the observations of helper behaviors, using the principal component method, with varimax rotation. The variables included 26 items describing helper behavior, eliminating only items that occurred infrequently (e.g., making an appointment for the caller). When there were several interrelated items, we selected the item describing the behavior that occurred most frequently; for example, we retained "offers no-harm contract" but we did not also include "insists on no-harm contract," which occurred in less than 2% of calls and only in calls where a no-harm contract was offered. In Table 4 the rotated component matrix for the six principal factors, ignoring saturations under .30, is displayed. The first factor, which we called positive attitude and good contact, had the highest saturation in the six items: validation of emotions, moral support, good initial contact, offers call back, reframing, and talks about own experience.

The second factor, collaborative problem solving, had the highest saturation in: fact questions on the problem, questions on resources, suggests ways to solve the problem, questions on the precipitating event, and proposes no-harm contract. The third factor, active listening, had highest saturations in reformulation, reflection of feelings, and questions on emotions. The fourth factor includes four behaviors that the center directors felt helpers should never do: tell caller what to do, read information, make value judgments, and challenge the caller to commit suicide. The fifth factor includes two active listening techniques that occur at the end of the call: empowers caller toward finding their own resources and empowers caller to

TABLE 4
Factor Analysis Rotated Component Matrix on Helper Observations

	Component					
	1	2	3	4	5	6
Rotated Component Matrix ^a						
contact	.580					
fact questions on problem		.695				
questions on emotions			.619			
reframing	.340					
validation of emotions	.680					
moral support	.663					
why questions challenge				.506	.355	
talks about own experience	.338					
reformulation			.740			
reflection of feelings			.668			
value judgment				.522		
precipitating event		.405				
empowers—resources					.693	
suggests ways to solve problem		.545				
questions on resources		.685				
tells caller what to do				.717		
reads information				.664		
suggests plan for action						.789
empowers plan for action					.703	
offers referrals						.653
callers asks for referral						
does not give referrals						
proposes to harm contract		.311				
offers follow up						
offers caller call back	.369					
helper interrupts call						

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

^aRotation converged in 22 iterations.

develop a plan of action. The sixth factor is the collaborative problem-solving counterpart to Factor 5 and has two items that occur at the end of the call: suggests plan of action and offers specific referrals. These six factors explained a cumulative variance of 38.1%. We created four new variables based on these factors to describe interventions by adding scores for their component items, combining the two active listening factors (3 and 5) and the two collaborative problem-solving factors (2 and 6). The resulting variables describe what can be called styles of intervention.

1. Supportive approach and good contact: moral support, good contact, offers call back, reframing, talks about own experience.
2. Collaborative problem solving: fact questions on the problem, questions on resources, suggests ways to solve the problem, questions on the precipitating events, proposes no-harm contract, suggests plan for action, offers referrals.
3. Active listening: reformulation, reflection of feelings, questions on

emotions, empowers toward resources, empowers to develop plan of action.

4. Negative style (things not to do): tells caller what to do, reads information, challenges, value judgments.

The only unanticipated result from the factor analysis was that "talks about own experiences," something the center directors agreed helpers should never do, loaded on "supportive approach and good contact." Qualitative analyses of when this occurred indicate clearly that helpers told of their own experiences to show that they had had similar problems in their own lives but had found solutions. In this context, sharing one's own experience can be seen as having been used to try to increase the confidence of the caller and developing a better relationship.

There was a strong and significant correlation between the supportive approach and good contact variable and ratings of empathy ($r = .44, p < .01$) and respect ($r = .39, p < .01$) that were made at the end of the call. Collaborative problem solving was significantly correlated with ratings of directivity ($r = .33, p < .01$). Active listening was not significantly correlated with ratings on directivity, but was significantly correlated with ratings of empathy ($r = .35, p < .01$) and respect ($r = .23, p < .01$). Negative style was negatively correlated with empathy ($r = -.15, p < .01$) and respect ($r = -.19, p < .01$). These correlations are consistent with what one would expect and suggest some concurrent validity to our factor labels.

Calls Which Fail to Meet Minimum Standards

On the basis of interviews with center directors, we established predetermined criteria of what would be considered to be an absolute minimum standard of helper behavior and examined calls that were rated below these minimum standards. A total of 223 calls or 15.6% of the sample had at least one

helper rating that was considered to be below the minimal level of acceptability:

1. Empathy Level 1: Helper shows no awareness of feelings of caller. Definition: the helper does not express that he is listening, understanding, or being sensitive to even the most obvious feelings of the caller in such a way as to detract significantly from the communications of the caller. (87 calls)
2. Respect Level 1: Helper shows lack of respect for the caller. Definition: In many ways the helper communicates a total lack of respect for the feelings, experiences, and potentials of the caller. The helper communicates to the caller that his feelings and experiences are not worthy of consideration. (31 calls)
3. Poor initial contact: Helper was not able to establish a good initial contact with the caller. (73 calls)
4. Challenge the caller to commit suicide: Helper told the caller to go ahead and kill himself. (4 calls)
5. Helper does not reply to the caller's request for help or expresses inability to help the caller. (87 calls)
6. Helper interrupts the call to take another call or interrupts call and asks caller to call back later. (46 calls)
7. Helper is aggressive, rude, or has abnormal behavior (e.g., screaming at caller, saying nonsense). (76 calls)
8. Helper does not discuss the problem with the caller at all and refers elsewhere. (37 calls)

DISCUSSION AND CONCLUSIONS

Limitations

The advantage of using a silent monitoring approach is that this methodology permits observations of what actually occurs during telephone interventions without any modifications of the intervention process. Al-

though callers and helpers are aware that someone may be monitoring the call, our previous experiences with focus groups indicate that they quickly forget that someone may be listening once the call begins. However, this methodology relies upon real time coding of all data, with no opportunity to go back and listen again to see if something was missed or misunderstood. We compensated as best we could for the lack of recordings or transcriptions of the calls by establishing relatively high inter-rater reliability of the measures, yet this remains a limitation when one compares a silent monitoring study with investigations, such as in the field of psychotherapy research (Bergin & Garfield, 2003), where recordings of the interventions are often available.

There is always the possibility of a sampling bias. We only monitored calls at centers that agreed to participate, and we only included centers with at least a moderate level of call volume. Thus, we only have a partial picture of what occurs over the Hopeline Network. We do have a representative sample of calls to the 14 participating centers, which constituted over 40% of all the calls received on the network during the time of the study. We noted why centers declined to participate. Some said they were afraid that the announcement about monitoring would result in more callers hanging up (which we found to not be the case), but most simply said that they were not interested.

Conclusions

The Hopeline Network receives a substantial proportion of its calls from suicidal persons and individuals in crisis situations. This fact may attest to the need for such services. As with most forms of help, fewer men than women call. Although we did not monitor calls from people who may have been under age 18, few young people call. This may be because of the availability of dedicated youth helplines. Relatively few elderly persons call. However, this may be a cohort ef-

fect: the present generation of elders may not be accustomed to telling their problems to a stranger over the telephone.

Center directors provided us with detailed descriptions of what helpers at their centers should and should not do over the telephone and their desired outcomes. These descriptions were quite useful in validating the models of intervention and the variables we observed in this study. However, when we attempted to relate center directors' descriptions of their model of intervention to what helpers at their center actually do, there was no significant relationship. This does not imply that helpers were not doing a good job. But it does indicate that what goes on in telephone interventions is not necessarily what center directors think their workers are doing. It would be useful in future studies to compare the content of training sessions for telephone helpers at different centers to determine if differences between centers reflect differences in training programs. It is also possible that intervention styles are more likely to be a personal characteristic of helpers rather than an acquired technique.

According to AAS accreditation standards, all helpers should evaluate suicide risk with callers and all center directors surveyed indicated that suicide risk assessment is an integral part of all crisis calls. Our study found that most helpers do not ask even the most basic question about suicidal ideations. When callers do indicate that they are considering suicide, the helpers usually do not proceed to ask about means; when callers tell how they are planning to commit suicide, helpers rarely ask if they have the means available or if they are in the process of an attempt. In 46% of the calls in which the callers said they were considering suicide, the helper did not ask the callers what method they planned to use and in 75% of the calls in which the callers told how they were going to commit suicide, the helper did not ask if an attempt was in progress. Clearly suicide risk assessment is in need of improvement.

There were a number of things that center directors all agreed helpers should not

do. These included telling caller what to do, reading information about suicide from a prompt sheet, challenging the caller to commit suicide, making value judgments, and moralizing. These behaviors all occurred sometimes, although infrequently.

There were six calls where an ambulance was sent to a caller during a suicide attempt and it may very well be that the callers' lives were saved. However, there were ten instances when a caller appeared to be in the process of a suicide attempt and the helper did nothing, and in at least one case the helper encouraged the caller to complete the attempt. Emergency rescue practices are a Hopeline policy and a criterion for AAS certification. A better implementation of these policies is imperative, as well as a surveillance mechanism to ensure that emergency rescues are undertaken when attempts are in progress.

In 15.6% of calls we observed behavior that was considered to be unacceptable by center directors. The most serious behavior, telling a suicidal caller to go ahead and kill himself, occurred four times. Other behaviors observed with greater frequencies include showing no empathy or consideration for the caller and being aggressive or rude to callers. All helpers may sometimes make mistakes or not relate well to a specific caller. There are no predetermined criteria for what constitutes a tolerable level of unacceptable behavior; however, the authors of this report feel that there were enough indications of poor quality interventions to warrant better quality assurance.

Some centers assessed suicide risk twice as often as other centers; some had double the rate of caller hang-ups during the call than others; some proposed a referral or agreement about follow-up to the majority of callers and some rarely did. One center frequently suggested religious practices as a way of getting help for problems. Clearly, centers differ greatly. This study was not specifically designed to understand these differences. Nevertheless, it is important for future investigations to determine if these differences are

related to differences in training and supervision practices.

Recommendations

Our findings highlight the need for better quality control of the nature of telephone interventions over the Hopeline Network. There is currently no monitoring or control to determine if calls meet minimal standards of good practice. One of the most simple and effective means of guaranteeing that callers receive good and appropriate help would be to require that calls are monitored randomly or systematically for quality assurance. This is already a current practice in most commercial services offered over the telephone.

AAS accreditation procedures involve an administrative audit of center procedures and practices during a visit by certification examiners. At the time of this study there were two clear AAS guidelines that concern directly and specifically what should occur during telephone interventions: there should be a suicide risk assessment and rescue should be undertaken whenever a life is at risk. In our study involving 14 AAS accredited centers that volunteered to participate, we found that risk assessments were not systematically being conducted by these centers and when there was some risk assessment, it was usually incomplete. Furthermore, emergency rescue was not always initiated with suicide attempters. These findings suggest that accreditation should include more observations of center practices and validation that standards are being met.

One of the greatest challenges in future research on telephone help is to assess the relationship between the process of telephone intervention and outcomes to determine if some qualities of telephone help or models of intervention are more likely to produce positive outcomes than others. Future analyses of the data from the present study may help shed some light on this issue.

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