Received: 11 May 2020 | Revised: 22 June 2021 | Accepted: 16 July 2021

DOI: 10.1111/sltb.12804

Suicide and Life-Threatening BEHAVIOR

ORIGINAL ARTICLE

How the helping process unfolds for clients in suicidal crises: Linking helping-style trajectories with outcomes in online crisis chats

Daniel W. Cox Ph.D.[1] | **Katharine D. Wojcik M.S.**[1] | **Agnieszka M. Kotlarczyk M.A.**[1] | **Minjeong Park M.A.**[1] | **Johanna M. Mickelson B.A.**[1] | **E. David Klonsky Ph.D.**[2]

[1]Counselling Psychology Program, University of British Columbia, Vancouver, BC, Canada

[2]Department of Psychology, University of British Columbia, Vancouver, BC, Canada

Correspondence
Daniel W. Cox, Counselling Psychology Program, University of British Columbia, Vancouver, BC, Canada.
Email: dan.cox@ubc.ca

Funding information
Myrne B. Nevison Professorship; American Foundation for Suicide Prevention, Grant/Award Number: YIG-0-032-16; Social Sciences and Humanities Research Council of Canada, Grant/Award Number: 430-2018-00425

Abstract

Objectives: Crisis counselors' active listening and collaborative problem-solving helping styles have been associated with outcomes for clients in suicidal crises. These associations have been based on static conceptualizations of helping (i.e., helping style for the entire session). Our aim was to further understand how the crisis counseling helping process unfolds (i.e., helping trajectory) and helping trajectories' association with clients' outcomes.

Methods: Online crisis chats ($N = 269$) with suicidal adults were coded for crisis counselors' helping styles (i.e., active listening and collaborative problem-solving) and clients' outcomes (i.e., resolved or unresolved). Each talk-turn was coded for helping style, which were used to examine helping-style trajectories.

Results: Growth-curve models indicated that helping styles varied over the course of chats and that helping trajectories were different for resolved and unresolved chats. In resolved chats, helping styles moved from primarily active listening to primarily problem-solving—with a deceleration in the middle of chats. In unresolved chats, helping initially moved from primarily active listening to primarily problem-solving, but this trajectory decelerated in the middle of chats and then turned back toward primarily active listening.

Conclusion: Our findings demonstrate that how the helping process unfolds is related to clients' outcomes. Implications for practice and research are discussed.

KEYWORDS

crisis, crisis center, crisis counseling, helping style, suicide ideation

INTRODUCTION

How do crisis-center counselors best help those who are contemplating suicide? Two crisis counselor helping styles that have been associated with outcomes for people in suicidal crises are active listening and collaborative problem-solving (Mishara et al., 2007b; Mishara & Daigle, 1997; Mokkenstorm et al., 2016). While these helping styles have been associated with outcomes, these associations have been based on static conceptualizations of

helping (i.e., helping style for the entire crisis counseling session). However, there is evidence that how the helping process unfolds over time (i.e., the helping trajectory) is paramount for understanding the associations between helping styles and outcomes (e.g., Althoff et al., 2016; Echterling & Hartsough, 1989; Tracey, 2002).

The aim of this study was to better understand crisis counseling with suicidal clients by examining the associations between helping-style trajectories and clients' outcomes. In the present study, we examined the helping process within text-based online crisis chats. Crisis chat is an increasingly popular crisis-counseling medium that has been championed because—relative to telephone crisis counseling—clients who use chats are more likely to be younger, from marginalized populations, perceive help-seeking as stigmatizing, and have greater levels of distress (Mishara & Cote, 2013; de Silva et al., 2015; Sinwelski, 2016).

Helping styles in crisis counseling

Two empirically and theoretically based crisis counselor helping styles are active listening and collaborative problem-solving (Mishara et al., 2007a, 2007b). When using active listening, crisis counselors emphasize empathy and reflection to empower clients toward resources and developing their own plans of action. When using collaborative problem-solving, crisis counselors collect information about clients and their problems to suggest potential plans of action.

Active listening and collaborative problem-solving have been linked to short-term outcomes in studies of chat and telephone crisis counseling with suicidal clients. However, a consistent understanding of which helping style is most beneficial remains elusive. While both helping styles have been linked with desired outcomes (Mishara & Daigle, 1997; Mokkenstorm et al., 2016), there is some evidence that active listening is *more* beneficial (Mishara & Daigle, 1997), and some evidence problem-solving is *more* beneficial (Mishara et al., 2007b).

Helping trajectories

A possible explanation for both active listening and collaborative problem-solving helping styles being associated with desired outcomes is that the effect of each style varies as the helping process unfolds. Within crisis contexts, there is some empirical support for helping trajectories being associated with outcomes. For example, in a small-sample study of telephone crisis counseling with mostly non-suicidal clients, the helping behaviors that were associated with success differed over the course of the conversations, with (a) assessment (e.g., identifying the cause of the crisis) in the first third of conversations, (b) assessment and affect integration (e.g., understanding and expressing feelings) in the second third, and (c) problem-solving in the final third (Echterling & Hartsough, 1989). Another example of crisis counselors' helping trajectories' being important comes from a linguistic study of crisis counselors responding to phone texts from mostly non-suicidal clients. Similar to the aforementioned study, counselors' language changed over the course of the texts—moving from primarily problem exploration language to primarily problem-solving language (Althoff et al., 2016).

While the research examining the unfolding helping process in crisis contexts is limited, there is substantial support for helping trajectories being associated with outcomes in other helping contexts. For example, in psychotherapy and mental health counseling, different helping styles are more or less beneficial over the course of treatment (Hill, 2014; Tracey, 2002). More specifically—and similar to the findings from the aforementioned linguistic study of crisis counseling (i.e., Althoff et al., 2016)—psychotherapy researchers have demonstrated that helpers attending to and establishing strong relationships with their clients early in treatment enable helpers' beneficial use of problem-solving later in treatment (Safran et al., 2009; Tracey, 2002).

The importance of helping trajectories is also consistent with findings from highly controlled laboratory studies examining how listener responses facilitate cognitive processing (i.e., reducing distress and making sense of unpleasant life events; see Rimé, 2009 for a review). Within a cognitive-processing framework, when people are at high levels of distress, effective listeners first use validating, empathic, supportive, and comforting responses. These responses facilitate reducing negative affect while increasing comfort and trust with listeners. Once severe distress is reduced and supportive connections are made, effective listeners use more directive responses, such as challenging and reframing, to facilitate different ways of thinking and feeling about the self and the stressors.

Present study

While crisis counselors' active listening and collaborative problem-solving helping styles—when working with suicidal clients—have been associated with outcomes, these associations were based on static conceptualizations of helping (i.e., helping style for the entire crisis counseling session). Research from crisis counseling

and other helping contexts has indicated that how the helping process unfolds over the course of sessions (i.e., the helping trajectory) is paramount for understanding the associations between helping styles and outcomes. We conducted the present study to extend our understanding of crisis counseling with suicidal clients by examining helping trajectories and their association with clients' outcomes. We examined helping trajectories within online crisis chats, a growing medium for conducting crisis counseling.

Our first aim was to examine whether helping-style trajectories would be associated with clients' outcomes. We had three specific hypotheses: (H1) There is more within-chat (i.e., over time) variance in helping styles than between-chat variance; (H2) Helping styles vary over the course of chats; and (H3) Outcome moderates helping trajectories—the helping process unfolds differently for resolved chats compared with unresolved chats.

Our second aim—if we observe different helping trajectories for resolved and unresolved chats—will be to examine (RQ1) how the helping process unfolds for resolved chats and (RQ2) how the helping process unfolds for unresolved chat.

METHODS

Inclusion and exclusion criteria

Similar to previous studies of crisis chats (e.g., Mokkenstorm et al., 2016), to be included, clients had to be suicidal (stated in the chat) and 18 years old or older. Further, the chats had to be 30 minutes or longer, this had to be the first time that clients had used the center's crisis services, and clients' presenting concerns had to be resolved or unresolved (see Measures for descriptions of resolved and unresolved).

Participants' characteristics

Upon signing on to the crisis-chat service, clients provided their age and gender on a non-compulsory questionnaire. In the total sample, the mean age was 29.0 years (SD = 8.97). Regarding gender, 69% reported being women, 29% men, 2% transgender, and 5.6% did not respond. The mean number of talk turns was 31.3 (SD = 13.8, range = 8–81). When we compared resolved and unresolved chats, there were no statistically significant group differences on age, gender, or the number of talk turns (see Table 1 for group comparisons).

Sampling

Chat sampling occurred in two steps. First, we used search filters in the clinical records system to identify chats that met the inclusion and exclusion criteria. Second, we randomly sampled (SAMPLE function in R) and then manually screened 360 of these chats for inclusion and exclusion criteria; resulting in the present sample of 269 chats. Data collection and coding were done at the crisis center, and no identifying information was taken off of the center's secure system. The affiliated research ethics board approved this study.

Measures

Outcome

We used a previously developed taxonomy of crisis counseling outcomes to code chats as *resolved* or *unresolved* (Britton et al., 2013). Indications of resolution included positive responses demonstrated via shifts from chatters' initial presentation (e.g., clear reduction in suicidality or

TABLE 1 Descriptive statistics and group comparisons between resolved and unresolved chats

	Resolved (n = 202)		Unresolved (n = 67)			
Variable	***M***	***SD***	***M***	***SD***	***t***	***p***
Age	28.5	8.8	30.5	9.5	1.355	.177
Chat length (# of talk turns)	31.9	13.6	29.6	14.4	1.182	.238
	n	*%*	***n***	*%*	χ^2	***p***
Gender						
Women	138	68.3	38	56.7	4.052	.256
Men	52	25.7	21	31.3		
Transgender	3	1.5	2	3.0		
Unknown	9	4.5	6	9.0		

Note.: Significant gender differences were also not observed when we excluded those with unknown gender, χ^2 (2, N = 269) = 2.170, p = .338.

psychological distress). Chats were coded as unresolved if clients' suicide ideation or psychological distress was clearly not reduced, they did not accept a referral, they stated that the chat or counselor was not helpful, or they ended the chat despite counselors protesting. Every chat was independently coded by two research assistants, there was 95.17% agreement, Kappa = .875, 95% CI [.810, .941]. All disagreements were discussed until consensus was reached between the research assistants and the project coordinator.

Crisis counselor helping styles

To measure active listening and collaborative problem-solving helping styles, we used the observer-rated Helping Skills System (HSS; Hill, 2009). The HSS is a taxonomy of 19 helping behaviors. Each counselor utterance (i.e., independent clause or meaning unit) received one helping behavior code, which labeled the behavior that the counselor used (e.g., closed question).

The only modification that we made to the original 19-behavior HSS was adding two counselor behaviors: (a) Open question to solve a problem and (b) open question to give information. In the original HSS, open questions were conceptualized as indicating active listening. However, in the crisis chats, counselors sometimes used open questions in ways consistent with collaborative problem-solving (e.g., "What about going to the hospital right now?", "What about flushing the pills?"). This resulted in expanding the original 19-behavior HSS to the 21-behavior version that we used. Consistent with the original HSS, when counselors' behaviors were unrelated to the helping process (e.g., small talk), they were coded as *other*. In our sample, less than 1% of counselors' behaviors were coded as *other*, and consistent with the HSS, *other* codes were not included when deriving active listening and problem-solving scores.

After coding was complete, the helping behavior codes were used to derive active listening and collaborative problem-solving helping-style scores. Based on previous research examining crisis counselor helping styles (e.g., Mishara et al., 2007b; Mokkenstorm et al., 2016), active listening was conceptually defined as empathy and reflection to empower clients toward resources and developing their own plans of action; collaborative problem-solving was conceptually defined as collecting information about the client and problem to suggest potential plans of action. Each helping behavior was classified as indicating either active listening (e.g., approval and reassurance, reflection of feelings, and restatement) or collaborative problem-solving (e.g., direct guidance, provide information, and closed questions).

For each chat turn, we computed the percent active listening (# active listening behaviors/# total behaviors) and the percent collaborative problem-solving (# problem-solving behaviors/# total behaviors). Because all of the counselors' behaviors we categorized as active listening or collaborative problem-solving, the sum of percent active listening and percent problem-solving equaled 100% for each chat turn.

We examined the interrater reliability of the helping behaviors when the helping behaviors were categorized as active listing or collaborative problem-solving. Fifteen percent of the chats were independently coded by research assistants. There was 95.56% agreement on which behaviors were active listening and which behaviors were problem-solving, Kappa = .910, 95% CI [.890 to .929].

Coder training

The five coders were (a) two graduate students in counseling psychology, (b) two crisis counselors that were hired as research assistants, and (c) one who was both a counseling psychology graduate student and a crisis counselor. Coders were trained by the principal investigator (first author) and the project coordinator (second author). Training consisted of explaining and discussing the coding schemes, coding as a group, as well as coding individually and then discussing as a group. Following training, coders independently coded the chats and periodically met as a group to ensure consistent conceptualization and to prevent rater drift. Coding occurred over approximately two years and coders only coded one construct at any given time. Chats were redistributed to coders for each construct coded based on their availability to code and so that they coded different chats when coding outcomes and helping styles.

Statistical analyses

We used two-level multilevel models (MLM) for our primary analyses. MLM is a form of regression that takes into account the nested nature (i.e., time nested within chats) of data (Raudenbush & Bryk, 2002). In our study, we modeled within-chat (Level-1) and between-chat (Level-2) effects.

In all models, helping style (i.e., percent active listening and percent problem-solving) was the dependent variable. Because helping style was assessed at each timepoint (i.e., talk-turn), helping style had within-chat (i.e., Level-1) variability. Time (i.e., talk-turn) also had within-chat (i.e., Level-1) variance and was used to conduct a series of growth-curve models to examine how the helping

process unfolded over the chats. Outcome (i.e., resolved or unresolved) was the only between-chat (i.e., Level-2) predictor.

The final model used was as follows:

Level 1:

$$Helpingstyle_{ij} = \beta_{0j} + \beta_{1j} * (\overline{time}) + r_{ij}$$

Level 2:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} * (outcome) + u_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11} * (outcome) + u_{1j}$$

While all models were run twice—once with active listening as the dependent variable and once with collaborative problem-solving as the dependent variable—*p*-values and standard errors were identical because helping style equaled 100% for each time point. Therefore, we reported the active listening and collaborative problem-solving results cohesively to reduce redundancy and facilitate comparing the two helping styles.

To examine the significance of effects, in addition to examining *p*-values, when possible, we also compared the model fit of nested models. This allowed us to consider whether estimating the parameter improved the overall model.

RESULTS

Helping-style trajectories and outcomes

To examine whether helping-style trajectories were associated with clients' outcomes, we conducted a series of multilevel models. First, we ran a 2-level unconditional model to identify the amount of variance in helping style that was due to between-chat versus within-chat (i.e., over time) differences. Supporting Hypothesis 1, the intraclass correlation of .060 indicated that 6% of the variance in helping style was due to differences between chats while 94% of the variance in helping style was due to within-chat variance. The unconditional model also indicated that over the course of the chats, on average, counselors engaged in 64% active listening and 36% problem-solving (Table 2, Model 1).

To examine whether the helping styles for the entire crisis counseling sessions differed for resolved versus unresolved chats, we entered outcome as a Level-2 variable (Table 2, Model 2). Outcome status was significantly (p =.019) associated with overall helping style; further, adding outcome resulted in a significantly better model fit ($\Delta\ \chi^2(1) = 4.363$, $p = .037$). Results indicated that in the resolved chats, crisis counselors used 4.16% *more* problem-solving and 4.16% *less* active listening than in the unresolved chats—in resolved chats, counselors used an average of 63.01% active listening and 36.99% problem-solving; in unresolved chats, counselors used an average of 67.17% active listening and 32.83% problem-solving.

Next, we added time (i.e., talk-turn [within-chat centered to reduce multicollinearity]) to the model (Table 2, Model 3). Consistent with Hypothesis 3, time was significantly associated with helping style ($p < .001$); further, adding time resulted in a significantly better model fit ($\Delta\ \chi^2(1) = 371.985$, $p < .001$). When we added the quadratic effect of time; it was not significant ($p = .291$) nor did adding quadratic time improve model fit ($\Delta\ \chi^2(1) = 2.363$, $p = .124$). Therefore, only the linear effect of time was retained. The Model 3 results indicate that for every talk-turn, active listening decreased by 0.9% and problem-solving increased by 0.9%.

To examine whether helping-style trajectories differed for resolved versus unresolved chats, we examined if outcome was associated with helping-style slopes (i.e., cross-level interaction; see Table 2, Model 4). Supporting Hypothesis 3, the interaction was significant ($p = .005$); further, adding outcome resulted in a significantly better model fit ($\Delta\ \chi^2(1) = 4.487$, $p = .034$). The cross-level interaction indicated that the helping process unfolded differently for resolved and unresolved chats.

Finally, to examine whether helping style differed at the beginning of chats, we uncentered time and re-ran Model 3. Findings did not indicate that helping styles began differently for resolved and unresolved chats ($B = .028$, $p = .131$).

In sum, our findings indicate that crisis counselors' helping styles did not begin differently for resolved and unresolved chats, but that they unfolded differently over the course of the chats.

Resolved and unresolved helping-style trajectories

Because helping-style trajectories were different for the resolved and unresolved chats, we further examined the trajectories of these two groups independently. First, as we did above with the total sample, we examined the intraclass correlations for resolved and unresolved chats. For the resolved chats, 5.9% of the variance in helping styles was due to differences between chats while 94.1% of the variance in helping styles was due to within-chat variance. For unresolved chats, 6.2% of the variance in helping styles was due to differences between chats while 93.8% of the variance in helping styles was due to within-chat variance.

Next, to examine helping-style trajectories for resolved and unresolved chats, we ran a series of growth-curve

TABLE 2 Multilevel models predicting crisis counselors' helping styles ($N = 269$)

Predictor	Dependent variable	Effect	*SE*	Effect	*SE*	Effect	*SE*	Effect	*SE*
		Model 1		**Model 2**		**Model 3**		**Model 4**	
Fixed effects									
Intercept γ_{00}	Active listening	64.00***	*0.76*	63.01***	*0.86*	63.00***	*0.86*	63.00***	*0.86*
	Problem-solving	36.00***		36.99***		37.00***		37.00***	
Level 1 (within chat)									
Time[a] γ_{10}	Active listening					−0.91***	*0.04*	−0.97***	*0.04*
	Problem-solving					0.91***		0.97***	
Level 2 (between chat)									
Outcome[b] γ_{01}	Active listening			4.16*	*1.77*	4.35*	*1.76*	4.33*	*1.76*
	Problem-solving			−4.16*		−4.35*		−4.33*	
Cross-level interaction									
Time X Outcome γ_{11}	Active listening							2.41**	*0.09*
	Problem-solving							−2.41**	
Random effects									
Variance components									
Level 1	Within-person, r_{ij}	0.159	0.152	0.152	0.152	0.135	0.135	0.010	0.010
Level 2	Intercept, u_{0j}	0.010	0.010	0.009	0.009	0.009	0.009	0.009	0.009
	Slope, u_{1j}					0.001	0.001	0.001	0.001
Goodness of fit									
AIC		8205.838		8203.112		7461.143		7450.169	
BIC		8233.932		8224.182		7517.329		7499.333	
Log-likelihood		−4098.919		−4094.556		−3722.571		−3718.084	

Note.: Separate models were run for active listing and problem-solving yet are presented simultaneously to facilitate comparisons. Coefficients can be interpreted as the percent of active listening and problem-solving.

AIC, Akaike information criterion; BIC, Bayesian information criterion; SE, Standard Error.

*$p < .05$; **$p < .01$; ***$p < .001$.

[a]Time = talk-turn; time is within-chat centered.

[b]Outcome: 0 = resolved, 1 = unresolved.

models. In these models, we did not center time, so the intercept represents the beginning of the chats (i.e., talk-turn one).

For the resolved chats, the linear, quadratic, and cubic effects of time were significant (see Table 3). Further, a model with linear, quadratic, and cubic time was a better fit than a model with only linear time ($\Delta\ \chi^2(2) = 60.322$, $p < .001$) or a model with only linear and quadratic time ($\Delta\ \chi^2(1) = 7.429$, $p = .006$). As visualized in Figure 1, resolved chats began with approximately 88% active listening and 12% problem-solving. The linear effect of time indicates that active listening initially decreased by 2.2% per talk-turn while problem-solving increased by 2.2% per talk-turn. The quadratic and cubic effects of time indicate that the decrease in active listening and increase in problem-solving first decelerate and then accelerate. The deceleration of active listening's decreasing trajectory and problem-solving's increasing trajectory occurred until talk-turn 50, when active listening was 34.1% and problem-solving was 65.9%. These trajectories then accelerated, ending at 8.7% active listening and 91.3% problem-solving.

For the unresolved chats, the linear and the quadratic effects of time were significant (see Table 3). Further, a model with linear and quadratic time was a better fit than a model with only linear time ($\Delta\ \chi^2(1) = 17.548$, $p = .002$) and a model with linear, quadratic, and cubic time did not provide a better fit ($\Delta\ \chi^2(1) = 1.185$, $p = .276$). As visualized in Figure 2, unresolved chats began with approximately 84% active listening and 16% problem-solving. The linear effect of time indicates that active listening initially decreased by 1.5% per talk-turn while problem-solving increased by 1.5% per talk-turn. The quadratic effect of time indicates that the decrease in active listening and the increase in problem-solving decelerated over time. Active listening's decreasing trajectory and problem-solving's increasing trajectory flattened at talk-turn 60 with active listening at 39.7% and problem-solving at 60.3%. From this flattening point to the end of the chat, active listening decreased and problem-solving increased, ending at 46% and 54%, respectively.

DISCUSSION

When working with suicidal clients, crisis counselors' active listening and collaborative problem-solving helping

TABLE 3 Final growth-curve models predicting crisis counselors' helping styles for resolved and unresolved chats

Predictor	Dependent variable	Effect	*SE*	Effect	*SE*
		Resolved chats ($n = 202$)		**Unresolved chats ($n = 67$)**	
Fixed effects					
Intercept γ_{00}	Active listening	87.619***	*1.457*	84.248***	*2.090*
	Problem-solving	12.381***		15.752***	
Time: Linear γ_{10}	Active listening	−2.226***	*0.205*	−1.495***	*0.194*
	Problem-solving	2.226***		1.495***	
Time: Quadratic γ_{20}	Active listening	0.035*	*0.008*	0.013**	*0.004*
	Problem-solving	−0.035*		−0.013**	
Time: Cubic γ_{30}	Active listening	−0.001**	*0.001*		
	Problem-solving	0.001**			
Random effects					
Variance components	Within-person, r_{ij}	0.001	0.001	0.134	0.134
Level 1	Intercept, u_{0j}	0.134	0.134	0.012	0.012
	Slope, u_{1j}	>0.001	>0.001	>0.001	>0.001
	Slope, u_{2j}	>0.001	>0.001	>0.001	>0.001
	Slope, u_{3j}	>0.001	>0.001		
Goodness of fit					
AIC		5692.241		1701.351	
BIC		5759.919		1740.091	
Log-likelihood		−2836.121		−843.6755	

Note.: Separate models were run for active listing and problem-solving yet are presented simultaneously to facilitate comparisons. Coefficients can be interpreted as the percent of active listening and problem-solving.

AIC, Akaike information criterion; BIC, Bayesian information criterion; SE, Standard Error.

*$p < .05$; **$p < .01$; ***$p < .001$.

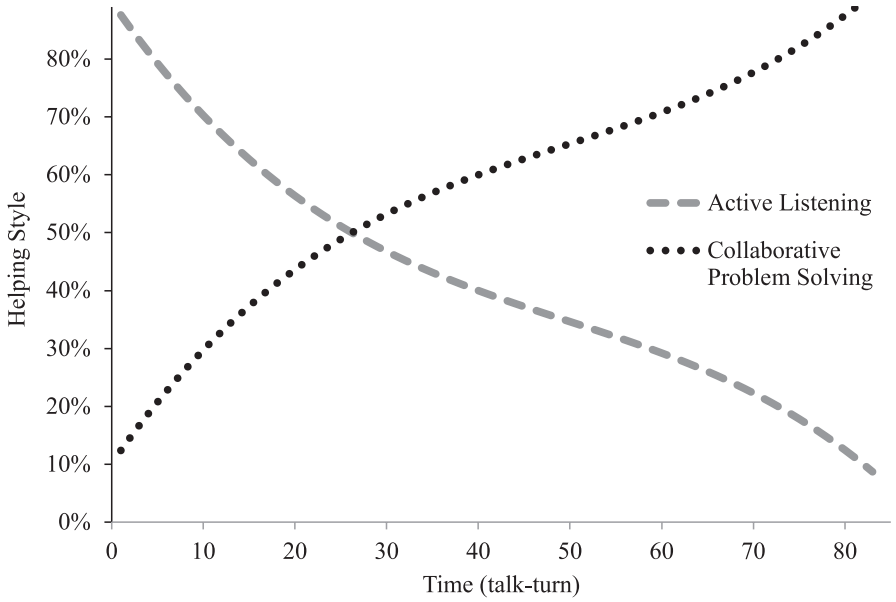

FIGURE 1 Helping-style trajectories for resolved chats

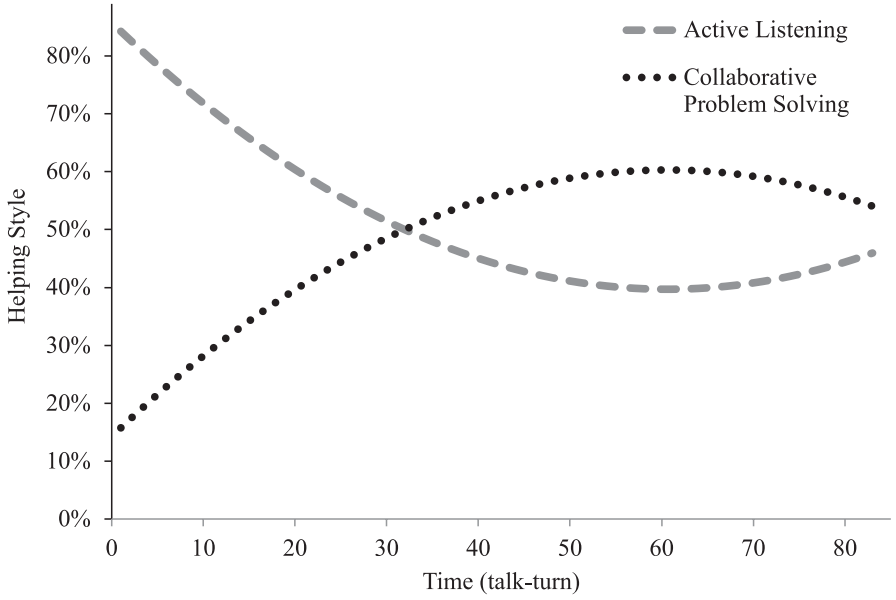

FIGURE 2 Helping-style trajectories for unresolved chats

styles have been associated with clients' outcomes. Our study extends this work by demonstrating that how helping styles unfold over crisis chats (i.e., their trajectories) is associated with clients' outcomes. When we explored these different trajectories, in the first half of resolved and unresolved chats, the trajectories were similar, beginning with primarily active listening and moving toward primarily problem-solving. In the resolved chats, counselors' progression toward primarily problem-solving persisted, despite a slight deceleration in this progression in the middle of chats. However, in the unresolved chats, counselors' trajectories toward primarily problem-solving rapidly decelerated in the middle of the chats, their trajectories leveled off, and then, their trajectories turned back toward primarily active listening.

Helping-style trajectories and outcomes

In resolved chats, counselors progressed from primarily active listening to primarily problem-solving via a curvilinear path (see Figure 1). This path is consistent with listener responses that have been found to facilitate cognitive processing (i.e., reducing distress and making sense of unpleasant life events; see Rimé, 2009 for a review). Using the cognitive-processing framework to interpret our findings: crisis counselors progress from (a) primarily active listening—which reduces clients' distress and facilitates collaborative client-counselor relationships—to (b) primarily collaborative problem-solving—which helps clients modify their beliefs and perceptions. Within this framework, helping behaviors are functional and ordinal;

they serve specific functions for clients, and the latter functions can only be served if the former have already been served. While research is needed to better understand the nuanced fit or misfit of cognitive processing for conceptualizing crisis counseling with suicidal clients, it provides a useful framework for interpreting our findings.

When we compare the trajectories of the resolved and the unresolved chats, their most prominent difference is that in the second half of the unresolved chats, crisis counselors reverted back to primarily active listening, while in the resolved chats, crisis counselors continued to move toward primarily problem-solving. In unresolved chats (Figure 2), this reversion to primarily active listening may be indicative of counselors realizing that they moved too quickly from primarily active listening to primarily problem-solving and never established a strong relationship with their clients. Research on the therapeutic relationship in mental health counseling has demonstrated that initially establishing strong relationships enables clients' engagement in more challenging tasks (Safran et al., 2009; Tracey, 2002). However, when relationships are weak, clients are more resistant and more likely to drop out when faced with more challenging or proscriptive tasks. Thus, the trajectories of unresolved chats may be indicative of crisis counselors' realizing that relationships were strained, and while counselors attempted to re-establish relationships via increasing active listening, this attempt was ultimately unsuccessful.

We can also interpret the trajectories of resolved chats (Figure 1) via counselors' awareness of the relationship. It may be that the deceleration in progressing from primarily active listening to primarily problem-solving represents counselors' responsiveness to strains in the helping relationship. Once this relationship strain is resolved, counselors again progress toward greater problem-solving.

While our discussion of helping-style trajectories and clients' outcomes has emphasized crisis counselors' influence, clients are surely influencing trajectories and outcomes as well. In studies of crisis interventions, clients' intent to die, lack of future plans, and persistence of suicidal thoughts have been associated with outcomes (e.g., Britton et al., 2013; Gould et al., 2007). In other contexts, characteristics that are common among those who frequently experience suicide ideation, such as hopelessness, depression, and personality disorders have been associated with slowed treatment progress and undesired outcomes with suicidal clients (e.g., Choi et al., 2016; Gould et al., 2016; Sokero et al., 2006). It may be that these and other client characteristics impede counselors' progression from active listening to problem-solving *and* contribute to their unsuccessful conclusion. Regarding the most successful and the least successful clients, it is important that we better understand how clients impact the helping process, and then relate these helping trajectories to outcomes. Better understanding of how client characteristics predict process-outcome associations will help the field move toward developing interventions that are increasingly responsive to the heterogeneous needs of the heterogeneous people who experience suicide ideation and reach out to crisis centers.

Practical implications

While there is evidence that crisis centers orient their services around primarily active listening, or primarily problem-solving (e.g., Mishara et al., 2007a), our findings highlight the value of crisis counselors conceptualizing their practice as a process—accentuating different helping styles as conversations unfold. Therefore, rather than conceptualizing the helping style as static—applying a general helping style to the entire counseling conversation—we encourage crisis counselors to consider their clients' present needs and use a helping style that best responds to those needs. For example, if a client is highly distressed, their counselor's use of primarily active listening would likely facilitate the client's reduced distress and increased comfort with the counselor. Once the client's distress is reduced and the helping relationship is strengthened, increased problem-solving would likely facilitate the client's understanding of the situation and help the client identify next steps.

Because clients have different needs and their needs vary over the course of conversations, it is important that crisis counselor training programs emphasize case conceptualization. For example, by training counselors to integrate relevant psychological states into their conceptualizations—such as clients' level of hopelessness, external versus internal locus of control, or perceived burdensomeness—counselors can target their interventions to those psychological states, while simultaneously monitoring changes in those states. It is also important that conceptualization training includes client readiness for change. In other single-session counseling contexts, integrating clients' readiness for change has been emphasized, so that counselors can tailor their work, such that it will be productive, rather than provoking resistance (Slive et al., 2008).

The complexity of training crisis counselors to conceptualize clients in ways that facilitate effective counselor interventions requires substantial training. Borrowing from other counselor training models, we suggest considering training as a developmental process (e.g., Stoltenberg, 1981). Earlier in training, more clear-cut decision rules may be appropriate. However, as crisis counselors progress

in their development, training will facilitate counselors' flexibility and responsiveness to the unique needs of their clients.

Limitations & future directions

Our findings—and the implications of our study—should be considered within its limitations. First, we only included chats where clients stated that they were suicidal. Therefore, clients who were suicidal, yet did not disclose their suicidality, were not included. Future research that uses more controlled methods to ensure consistent suicide assessment, follow-up suicide assessment, or other proactive ways of identifying suicidal thoughts and behaviors would attenuate excluding clients who do not disclose their suicidality. Another limitation is that we restricted our sample to chats that were 30 minutes or longer to facilitate enough within-chat observations to examine change over time. Future research that uses briefer chats will facilitate better understanding of rapidly resolved and rapidly unresolved chats. Another limitation is that our outcome categories of resolved and unresolved were relatively broad. This was useful because we were able to be somewhat ideographic when assessing outcome. However, this broad conceptualization of outcome limited our ability to understand associations between helping styles and more precise outcomes (e.g., psychache, belongingness). Future work that examines helping trajectories with different client outcomes will facilitate understanding how to better respond to clients' heterogeneous needs. Further, while we found that helping trajectories were different for resolved and unresolved chats, it remains unclear if there are different trajectories within resolved and unresolved chats. Whether due to clients, counselors, or both, it is reasonable to assume that there are different ways to help those in suicidal crises. If there are different helping trajectories within outcome groups, understanding the client and counselor factors that are associated with those trajectories could facilitate identifying helping processes that are more and less effective with different clients.

Finally, while our two-level multilevel models allowed us to examine within- and between-chat effects, there would be substantial value in examining crisis-counselor effects. By adding this third level—chats nested within counselors—we can better understand within-counselor effects (e.g., crisis counselor development) and between-counselor effects (e.g., characteristics of the most effective crisis counselors). By considering crisis counseling's multilevel nature, we can more accurately attribute effects, which will facilitate a better understanding of how to help those in suicidal crises.

ACKNOWLEDGEMENTS

We would like to thank the staff at the Crisis Intervention & Suicide Prevention Centre of British Columbia; in particular, Akhila Blaise, Liz Robbins, Sandy Biggerstaff, and Stacy Ashton for supporting this project.

AUTHOR CONTRIBUTION

Daniel W Cox: Conceptualization (lead); Data curation (equal); Formal analysis (lead); Funding acquisition (lead); Investigation (lead); Methodology (lead); Project administration (equal); Resources (lead); Supervision (lead); Visualization (equal); Writing-original draft (lead); Writing-review & editing (lead). **Katharine D Wojcik:** Conceptualization (supporting); Data curation (lead); Investigation (supporting); Project administration (lead); Supervision (equal); Writing-original draft (supporting). **Agnieszka M Kotlarczyk:** Conceptualization (supporting); Data curation (supporting); Investigation (supporting); Project administration (supporting); Supervision (supporting); Writing-original draft (supporting). **Minjeong Park:** Formal analysis (supporting); Methodology (supporting); Project administration (supporting); Visualization (lead); Writing-original draft (supporting). **Johanna M Mickelson:** Conceptualization (supporting); Data curation (supporting); Project administration (supporting); Writing-review & editing (supporting). **David Klonsky:** Conceptualization (supporting); Formal analysis (supporting); Funding acquisition (supporting); Investigation (supporting); Methodology (supporting); Supervision (supporting); Writing-original draft (supporting); Writing-review & editing (supporting).

ORCID

Daniel W. Cox https://orcid.org/0000-0002-4082-7243

REFERENCES

Althoff, T., Clark, K., & Leskovec, J. (2016). Large-scale analysis of counseling conversations: An application of natural language processing to mental health. *Transactions of the Association for Computational Linguistics*, *4*, 463–476. https://doi.org/10.1162/tacl_a_00111.

Britton, P. C., Bossarte, R. M., Thompson, C., Kemp, J., & Conner, K. R. (2013). Influences on call outcomes among veteran callers to the national veterans crisis line. *Suicide and Life-Threatening Behavior*, *43*(5), 494–502. https://doi.org/10.1111/sltb.12033.

Choi, N. G., Marti, C. N., & Conwell, Y. (2016). Effect of problem-solving therapy on depressed low-income homebound older adults' death/suicidal ideation and hopelessness. *Suicide and Life-Threatening Behavior*, *46*(3), 323–336. https://doi.org/10.1111/sltb.12195.

de Silva, J. A., Siegmund, G., & Bredemeier, J. (2015). Crisis interventions in online psychological counseling. *Trends in Psychiatry and Psychotherapy*, *37*(4), 171–182. https://doi.org/10.1590/2237-6089-2014-0026.

Echterling, L. G., & Hartsough, D. M. (1989). Phases of helping in successful crisis telephone calls. *Journal of Community Psychology*, *17*(3), 249–257.

Gould, M. S., Kalafat, J., Harris Munfakh, J. L., & Kleinman, M. (2007). An evaluation of crisis hotline outcomes Part 2: Suicidal callers. *Suicide and Life-Threatening Behavior*, *37*(3), 338–352. https://doi.org/10.1521/suli.2007.37.3.338

Gould, M. S., Lake, A. M., Munfakh, J. L., Galfalvy, H., Kleinman, M., Williams, C., Glass, A., & McKeon, R. (2016). Helping callers to the National Suicide Prevention Lifeline who are at imminent risk of suicide: Evaluation of caller risk profiles and interventions implemented. *Suicide and Life-Threatening Behavior*, *46*(2), 172–190. https://doi.org/10.1111/sltb.12182.

Hill, C. E. (2009). *Helping skills system (HSS)*. American Psychological Association.

Hill, C. E. (2014). *Helping skills: Facilitating exploration, insight, and action*. , 4th edn. American Psychological Association.

Mishara, B. L., Chagnon, F., Daigle, M., Balan, B., Raymond, S., Marcoux, I., Bardon, C., Campbell, J. K., & Berman, A. (2007a). 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. *Suicide and Life-Threatening Behavior*, *37*(3), 291–307. https://doi.org/10.1521/suli.2007.37.3.291.

Mishara, B. L., Chagnon, F., Daigle, M., Balan, B., Raymond, S., Marcoux, I., Bardon, C., Campbell, J. K., & Berman, A. (2007b). Which helper behaviors and intervention styles are related to better short-term outcomes in telephone crisis intervention? Results from a silent monitoring study of calls to the U.S. 1–800-SUICIDE Network. *Suicide & Life-Threatening Behavior*, *37*(3), 308–321. https://doi.org/10.1521/suli.2007.37.3.308.

Mishara, B. L., & Cote, L.-P. (2013). Suicide prevention and new technologies: Towards evidence based practice. In B. L. Mishara, & A. J. F. M. Kerkhof (Eds.), *Suicide prevention and new technologies: Evidence based practice* (pp. 1–23). Palgrave Macmillan.

Mishara, B. L., & Daigle, M. S. (1997). Effects of different telephone intervention styles with suicidal callers at two suicide prevention centers: An empirical investigation. *American Journal of Community Psychology*, *25*(6), 861–885. https://doi.org/10.1023/A:1022269314076.

Mokkenstorm, J. K., Eikelenboom, M., Huisman, A., Wiebenga, J., Gilissen, R., Kerkhof, J. F. M., & Smit, J. H. (2016). Evaluation of the 113Online suicide prevention crisis chat service: Outcomes, helper behaviors and comparison to telephone hotlines. *Suicide and Life-Threatening Behavior*, *47*(3), 282–296. https://doi.org/10.1111/sltb.12286.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods*. , 2nd edn. Sage Publications.

Rimé, B. (2009). More on the social sharing of emotion: In defense of the individual, of culture, of private disclosure, and in rebuttal of an old couple of ghosts known as "cognition and emotion". *Emotion Review*, *1*(1), 94–96. https://doi.org/10.1177/1754073908099132.

Safran, J. D., Muran, J. C., & Proskurov, B. (2009). Alliance, negotiation, and rupture resolution. In R. A. Levy, & J. S. Ablon (Eds.), *Handbook of evidence-based psychodynamic psychotherapy: Bridging the gap between science and practice* (pp. 201–225). Humana Press. https://doi.org/10.1007/978-1-59745-444-5_9.

Sinwelski, S. (2016). *Lifeline crisis chat*. http://www.sprc.org/system/files/private/event-training/Monday BH Tech plenary - Sinwelski presentation.pdf

Slive, A., McElheran, N., & Lawson, A. (2008). How brief does it get? Walk-in single session therapy. *Journal of Systemic Therapies*, *27*(4), 5–22. https://doi.org/10.1521/jsyt.2008.27.4.5.

Sokero, P., Eerola, M., Rytsälä, H., Melartin, T., Leskelä, U., Lestelä-Mielonen, P., & Isometsä, E. (2006). Decline in suicidal ideation among patients with MDD is preceded by decline in depression and hopelessness. *Journal of Affective Disorders*, *95*(1–3), 95–102. https://doi.org/10.1016/j.jad.2006.04.028.

Stoltenberg, C. (1981). Approaching supervision form a developmental perspective: The counselor complexity model. *Journal of Counseling Psychology*, *28*(1), 59–65. https://doi.org/10.1037/0022-0167.28.1.59.

Tracey, T. J. G. (2002). Stages of counseling and therapy: An examination of complimentarity and the working alliance. In G. S. Tryon (Ed.), *Counseling based on process research: Applying what we know* (pp. 265–267). Allyn & Bacon.

How to cite this article: Cox, D. W., Wojcik, K. D., Kotlarczyk, A. M., Park, M., Mickelson, J. M., & Klonsky, E. D. (2021). How the helping process unfolds for clients in suicidal crises: Linking helping-style trajectories with outcomes in online crisis chats. *Suicide and Life-Threatening Behavior*, 51, 1224–1234. https://doi.org/10.1111/sltb.12804